



**ORDINARY MEETING OF COUNCIL
TO BE HELD ON TUESDAY, 6 DECEMBER 2005 AT 7.00PM
LEVEL 3, COUNCIL CHAMBERS**

A G E N D A

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NOTE: For Full Details, See Council's Website –
www.kmc.nsw.gov.au under the link to Business Papers

APOLOGIES

DECLARATION OF PECUNIARY INTEREST

CONFIRMATION OF REPORTS TO BE CONSIDERED IN CLOSED MEETING

ADDRESS THE COUNCIL

NOTE: Persons who address the Council should be aware that their address will be tape recorded.

DOCUMENTS CIRCULATED TO COUNCILLORS

CONFIRMATION OF MINUTES

Minutes of Ordinary Meeting of Council

File: S02131

Meeting held 22 November 2005

Minutes numbered 480 to 512

MINUTES FROM THE MAYOR

GENERAL BUSINESS

- i. *The Mayor to invite Councillors to nominate any item(s) on the Agenda that they wish to have a site inspection.*
- ii. *The Mayor to invite Councillors to nominate any item(s) on the Agenda that they wish to adopt in accordance with the officer's recommendation and without debate.*

GB.1 1533 Pacific Highway & 2A Woodville Avenue, Wahroonga - Demolition of Existing Structures and Construction of a Residential Flat Building, Containing 17 Apartments, Basement Parking & Strata Subdivision 1

.
File: DA 676/05

Ward: Wahroonga

Applicant: Mr John Briggs, Advocate Developments

Owner: Andrew Wilson, Siang Foo

To determine development Application No 676/05 which seeks consent for the demolition of existing dwellings and the construction of a residential flat building containing 17 apartments, basement car parking, landscaping and strata subdivision.

Recommendation:

Approval.

GB.2 657 to 661 Pacific Highway, Killara - Construction of a Residential Flat Building & Townhouses Comprising a total of 49 Units & Basement Car Parking for 127 Vehicles & Strata Subdivision 79

.
File: DA0677/05

Ward: Gordon

Applicant: Thiessen Architects

Owner: Afafura Property Pty Ltd and Sankilt Pty Ltd

To determine development application No. 677/05, which seeks consent for the construction of a residential flat building and townhouses comprising a total of 49 units and basement car parking for 127 vehicles and strata subdivision.

Recommendation:

Approval

GB.3 **25A, 27 & 29 Lorne Avenue, Killara - Demolition of Existing Dwellings & Construction of Two Residential Flat Buildings Comprising 40 Units, Basement Car Parking, Landscaping & Strata Subdivision** **144**

.
File: DA0425/05

Ward: Gordon
Applicant: Paul Barber c/- Greencliff (CPL) Developments Pty Ltd
Owner: R S Curtis, J Koo, S M McAdam

To determine Development Application No.425/05 which seeks consent for the demolition of existing structures, the construction of two residential flat buildings comprising 40 dwellings, basement car parking and associated landscaping.

Recommendation:

Approval.

GB.4 **1, 3, 5 & 7 Bruce Avenue & 6 Greengate Lane, Killara** **226**

.
File: DA0514/05

To respond to issues raised at the Council site inspection and seek Council's determination of the development application.

Recommendation:

Approval.

GB.5 **Christmas/New Year Recess Delegations** **340**

.
File: S02017

To grant appropriate Delegations during the Christmas/New Year recess period.

Recommendation:

That appropriate Delegations of Authority be granted to the Mayor, Deputy Mayor and General Manager.

GB.6 **Council Meeting Cycle for 2006** **343**

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File: S02355

To consider amending the Council Meeting Cycle for 2006 because of school holidays, public holidays and the Christmas Recess.

Recommendation:

That Council's Meeting Cycle for 2006 be amended.

GB.7 Early Childhood Centre Agreements 347

.
File: S04526

To consider the granting of a licence for occupation of the premises at 11-21 Cowan Road, St. Ives, and a lease for Unit 1, 12-18 Tryon Road, Lindfield to Northern Sydney Central Coast Health (NSCCH) for the continued operation of Early Childhood Centres.

Recommendation:

That appropriate agreements be made with NSCCH for the continued occupation at the Early Childhood Centres at Lindfield and St Ives.

GB.8 Proposed Drainage Easement over Council Land at 5 Morris Avenue, Wahroonga (Eldinhope Green) - Applicant at 42 Westbrook Avenue, Wahroonga 354

.
File: P63149

For Council to consider granting a drainage easement over Council land known as Eldinhope Green to the applicant at 42 Westbrook Avenue, Wahroonga.

Recommendation:

That Council approve the granting of the proposed drainage easement over Council land know as Eldinhope Green to the applicant at 42 Westbrook Avenue, Wahroonga, subject to the terms and conditions of this reports and public notification in accordance with the Local Government Act (1993).

GB.9 District Park Landscape Master Plans 428

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File: S04471

To advise Council of the process of District Park Landscape Master Planning being commenced during 2005/2006.

Recommendation:

That the District Parks Landscape Master Planning process be commenced for St Ives Village Green, Kissing Point Village Green and Swain Gardens during 2005/2006 and that the District Parks Landscape Master Planning process be commenced in future years for the other sites as outlined in the report.

GB.10 Bushwalking Tracks for Seniors 438

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File: S03488

To report to Council on the recreational opportunities in Council bushland for seniors.

Recommendation:

That Council notes the report and endorses the track grade and management hierarchy.

GB.11 Application for Rezoning 3 to 5 Water Street (Prouille School), 33 to 41 Billyard Avenue (Holy Name Church) & 39 Chilton Parade, Wahroonga (Convent) 473

.
File: S03746

To inform Council of further information provided and to consider the preparation of a Draft Local Environmental Plan for the rezoning of Church / School / Convent lands at 3 to 5 Water Street (Prouille School), 33 to 41 Billyard Avenue (Holy Name Church and Seminary) and 39 Chilton Parade, Wahroonga (Convent).

Recommendation:

That Council resolve to prepare a Draft Local Environmental Plan to rezone the subject lands to Residential 2(c) and place it on public exhibition in accordance with statutory requirements.

GB.12 2 Wirra Close, St Ives - Consideration of Heritage Status 547

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File: P63399

For Council to consider the heritage status of 2 Wirra Close, St Ives in Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance, following a site inspection held on 5 November 2005.

Recommendation:

That 2 Wirra Close, St Ives remain listed as a property of heritage significance in Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance.

GB.13 Greengate Precinct - Traffic Assessment 613

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File: 88/05502/03

To consider the likely cumulative impact of traffic of all proposed developments under LEP194 within the 'Greengate' precinct.

Recommendation:

That the proposal for one way flow in Greengate Lane (eastbound) and one way flow (northbound) in the north-south section of Bruce Avenue be referred to the Ku-ring-gai Traffic Committee for consideration.

GB.14 Turramurra Town Centre Preferred Land Use Options

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File: S04038

Report to be circulated under separate cover.

EXTRA REPORTS CIRCULATED AT MEETING**MOTIONS OF WHICH DUE NOTICE HAS BEEN GIVEN****NM.1 Options for Council Ward Changes, Councillor Numbers & Method of Mayoral Election 621**

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Files: S03733, S03662

Notice of Motion from Councillors I Cross, N Ebbeck & T Hall dated 23 November 2005.

"We, the undersigned, hereby rescind that part of the Council's Resolution "C" of Item GB.19 which resolved to conduct the constitutional referendum at the next Local Government Elections and is hereby rescinded."

NM.2 SEPP53 Exemption for St Ives 622

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File: S03309

Notice of Motion from Councillor L Bennett dated 25 November 2005.

When LEP 194 was gazetted streets within the Stage 1 area received exemption from SEPP 53. Although St Ives contributed over 900 dwellings under LEP 194 and LEP 200 not a single street in St Ives received such an exemption. St Ives is the first town centre to be rezoned under Stage 2 and it will provide in excess of a further 900 dwellings. This is in addition to the dual occupancies and SEPP 5's approved since 2000. This suburb has done its bit for urban consolidation. When Council submits the DLEP for the town centre a request for exemption from SEPP 53 for St Ives should be included and justified with

reference to the amount of development which has occurred in St Ives and which will occur under the rezonings.

I move:

- "A. That when Council submit the DLEP for St Ives Town Centre to the Minister it also request exemption from SEPP 53 for the suburb of St Ives.
- B. that this request be supported with accurate figures of the number of dual occupancies and SEPP 5's approved since 2000 (inclusive), the number of additional dwelling rezoned for by LEP 194, LEP 200 and the DLEP for the St Ives Village Centre
- C. that maps showing the exemption granted under Stage 1 of the RDS and the lack of any such exemption for St Ives be added as supporting documentation."

BUSINESS WITHOUT NOTICE - SUBJECT TO CLAUSE 14 OF MEETING REGULATION

QUESTIONS WITHOUT NOTICE

INSPECTIONS COMMITTEE - SETTING OF TIME, DATE AND RENDEZVOUS

** **

Environmental Planning & Assessment Act 1979, (as amended)

Section 79C

1. Matters for consideration - general

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

a. The provisions of:

- i. any environmental planning instrument, and*
- ii. any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority, and*
- iii. any development control plan, and*
- iv. any matters prescribed by the regulations,*

that apply to the land to which the development application relates,

- b. the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
- c. the suitability of the site for the development,*
- d. any submissions made in accordance with this Act or the regulations,*
- e. the public interest.*

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DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	1533 PACIFIC HIGHWAY & 2A WOODVILLE AVENUE, WAHROONGA - DEMOLITION OF EXISTING STRUCTURES AND CONSTRUCTION OF A RESIDENTIAL FLAT BUILDING, CONTAINING 17 APARTMENTS, BASEMENT PARKING AND STRATA SUBDIVISION
WARD:	Wahroonga
DEVELOPMENT APPLICATION N^o:	676/05
SUBJECT LAND:	1533 Pacific Highway & 2A Woodville Avenue, Wahroonga
APPLICANT:	Mr John Briggs, Advocate Developments
OWNER:	Andrew Wilson, Siang Foo
DESIGNER:	Wolski, Lycenko and Brecknock Architects
PRESENT USE:	Residential
ZONING:	Residential 2(d3)
HERITAGE:	No
PERMISSIBLE UNDER:	KPSO - LEP 194
COUNCIL'S POLICIES APPLICABLE:	KPSO - LEP 194, DCP 31 - Access, DCP 40 - Waste Management, DCP 43 - Car Parking, DCP 47 - Water Management
COMPLIANCE WITH CODES/POLICIES:	Yes
GOVERNMENT POLICIES APPLICABLE:	SEPP 1, SEPP 55, SEPP 65, SREP 20
COMPLIANCE WITH GOVERNMENT POLICIES:	Yes
DATE LODGED:	29 June 2005
40 DAY PERIOD EXPIRED:	8 August 2005
PROPOSAL:	Demolition of existing structures and construction of a residential flat building, containing 17 apartments, basement parking and strata subdivision
RECOMMENDATION:	Approval

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DEVELOPMENT APPLICATION N^o 676/05
PREMISES: 1533 PACIFIC HIGHWAY & 2A WOODVILLE
AVENUE, WAHROONGA
PROPOSAL: DEMOLITION OF EXISTING STRUCTURES
AND CONSTRUCTION OF A RESIDENTIAL
FLAT BUILDING, CONTAINING 17
APARTMENTS, BASEMENT PARKING AND
STRATA SUBDIVISION
APPLICANT: MR JOHN BRIGGS, ADVOCATE
DEVELOPMENTS
OWNER: ANDREW WILSON, SIANG FOO
DESIGNER WOLSKI, LYCENKO AND BRECKNOCK
ARCHITECTS

PURPOSE FOR REPORT

To determine development Application No 676/05 which seeks consent for the demolition of existing dwellings and the construction of a residential flat building containing 17 apartments, basement car parking, landscaping and strata subdivision.

EXECUTIVE SUMMARY

Issues:

- Setbacks
- Privacy and residential amenity

Submissions: Five (5) submissions received

Land & Environment Court Appeal: No

Recommendation: Approval

HISTORY

Site history:

The site is used for residential purposes. There is no development history of relevance to the proposal.

Development application history:

22 December 2005, Local Environmental Plan No. 194 gazetted, rezoning the site to Residential 2(d3).

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21 April 2005, pre-development application meeting. Issues raised included setbacks, streetscape response and requirement to comply with the interface zone setback provision of LEP 194.

29 June 2005, development application lodged.

19 July 2005, surrounding property owners notified of the development.

18 August 2005, meeting held at Council between applicant and objectors to discuss issues raised in objections.

THE SITE

Zoning:	Residential 2(d3)
Visual Character Study Category:	1920 -1945
Lot Number:	10 and 11
DP Number:	608144
Area:	1,772.8m ²
Side of Street:	Eastern side of Pacific Highway, northern side of Woodville Avenue
Cross Fall:	4.4 metres to the east
Stormwater Drainage:	
Heritage Affected:	No
Required Setback:	10-12 metres to Pacific Highway and Woodville Avenue
Integrated Development:	No
Bush Fire Prone Land:	No
Endangered Species:	No
Urban Bushland:	No
Contaminated Land:	No

SITE DESCRIPTION

The development site comprises two parcels of land described as Lot 10 in DP 608144 (1533 Pacific Highway) and Lot 11 in DP 608144 (2A Woodville Avenue), Wahroonga. The site is trapezoidal in shape with an area of 1,772.8m², 33 metres frontage to the Pacific Highway and a 37 metres frontage to Woodville Avenue.

1533 Pacific Highway, measures 862.3m² in area and is occupied a single storey detached dwelling. 2A Woodville Avenue measures 910.5m² in area and is developed with a two storey detached dwelling. 1533 and 2A Woodville Avenue are within an isolated pocket of land zoned Residential 2(d3) which is adjoined directly to the north and east by residential properties zoned Residential 2(c2).

The senior school campus of Knox Grammar, zoned Special Uses (School) is located opposite the site on the corner of Woodville Avenue and Pacific Highway. Land located opposite, along the Pacific Highway is zoned Residential 2(d3).

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Development along Woodville Avenue generally comprises large, free standing dwellings located on large, landscaped, landholdings.

Wahroonga Railway Station and shopping area is located within walking distance of the site, at the northern end of Woodville Avenue.

THE PROPOSAL

The proposal involves the demolition of existing structures and the construction of a residential flat building containing 17 units, with 2 levels of basement car parking for 26 cars below. Driveway access is provided along Woodville Avenue, at the south-eastern corner of the site.

The building contains 8 x 1 bedroom units, 7 x 2 bedroom units and 2 x 3 bedroom units.

Specifically, the floor plan of the development comprises the following:

Lower basement level:

Driveway, lift, 4 storage rooms, 2 fire stairs and parking for 14 units (including 1 disabled space).

Upper basement level:

Loading area, garbage storage area, 7 resident car spaces (including 1 disabled), 6 visitor spaces, 13 store rooms, a toilet, disabled/visitor/car wash parking bay, 2 fire stairs, 1 lift.

Ground floor:

Courtyard Units 1, 2, 3 and 4 which contain 1 bedroom each and Units 5, 6 and 7 contain 2 bedrooms.

First floor:

Units 8, 9, 10 and 11 (1 bedroom) and Units 12, 13 and 14 with 2 bedrooms.

Second floor:

Units 15, 16 and 17 which contain 3 bedrooms each.

Landscaping is provided within the side, front and rear setbacks and a 1500mm high timber screen fence is proposed along the Pacific Highway and Woodville Avenue boundaries.

CONSULTATION - COMMUNITY

In accordance with Council's Notification Policy, owners of surrounding properties were given notice of the application from 22 July to 21 August 2005. The following comments have been received:

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In response, submissions from the following were received:

- *Glendinning Minto and Associates on behalf of Mr and Mrs Nouri, 4-6 Woodville Avenue, Wahroonga*
- *Gary Rodney, 1537 Pacific Highway, Wahroonga*
- *Lynette Irwin, 9 Boondah Place, Warrawee*
- *Margaret Kindl, 10 Woodville Avenue, Wahroonga*
- *Lance Tinney, 8 Woodville Avenue, Wahroonga*

The following issues were raised:

Visual and acoustic privacy loss

Objection was raised with respect to the affect of a three storey development on the existing privacy enjoyed by adjoining residential properties to the north and east.

The site is located at the interface of two contrasting residential zones (residential 2(d3) and 2(c2)). Some impact is therefore anticipated.

However, LEP 194 and DCP 55 contain special provisions for interface sites. Clause 25I(5) of LEP 194 sets a 3 storey height limit for development on a site less than 1800m² to minimise the affects of building bulk. Clause 25I(7) limits the top storey to 60% of the floor area below, setting the top floor back from the general envelope of the building. Clause 25L(2) requires the top floor of the building to be set back 9 metres from any property within a different zone, to reduce visual bulk and allow a transition between the scale of buildings in contrasting zones.

The proposal complies with the 3 storey height limit and provides a transition between properties, generally consistent with LEP 194. Sufficient area is provided surrounding the building to mitigate privacy impacts and screen overlooking via medium sized and tall tree plantings.

Some sections of the proposed second storey breach the 9 metres interface setback by a maximum of 700mm. A SEPP 1 objection has been lodged in this regard (refer to *LEP 194*). The building envelope is largely compliant with the required setback. The areas of breach are not considered to directly impact on privacy or unreasonably compromise the current amenity enjoyed by adjoining dwellings. Any direct visual privacy impacts can be effectively mitigated through the planting of advanced tree species along the boundaries and other screening measures (refer to *Urban Design Consultant* and *SEPP 65*). Acoustic impacts are not considered unreasonable, given the zoning of the site as medium density residential.

Non-compliance with LEP 194 and DCP 55 in relation to deep soil landscaping, building separation, floor space ratio and setbacks

Refer to discussion of *LEP 194* and *DCP 55* and *Compliance Tables*. The proposal is generally consistent with applicable development standards and controls, with the exception of some minor breaches of the interface setback control. As discussed within this report, the proposal is consistent

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with the objectives of LEP 194 and DCP 55 and does not unreasonably impinge on the amenity of surrounding properties.

Traffic/safety impacts

Objection was raised in relation to an increase in traffic and potential traffic and pedestrian conflicts, particularly with the existence of a school opposite.

The proposed development has been considered by Council's Development Engineer in relation to traffic. The following comment was provided in this regard:

The traffic report estimates a net traffic generation of 5 vehicles per peak hour. This is a low traffic generation and is not expected to affect the flows in Woodville Avenue or the performance of the intersection. The subject site is the only 2(d3) in the vicinity, so cumulative impacts are not at issue.

Sight distance at the exit is adequate and complies with the requirements of AS2890.1:2004. The driveway enters the building at an angle due to the slope of Woodville Avenue. There is room for two vehicles to pass at critical locations on the ramp, so this is acceptable.

The report assesses the number of parking spaces under DCP 43. This is incorrect. LEP 194 requires 19 resident and 5 visitor spaces. The development includes 26 spaces altogether and fortunately complies.

Sufficient provision is made for car parking on site. The access point provided is located at the south-eastern corner of the site (2A Woodville Avenue) maximising visibility, preventing queuing near the Pacific Highway and preventing conflicts between the development and the nearby school.

Substantial alterations and additions have recently been approved for the Knox campus (Woodville Avenue) under Development Applications 29/05 and 30/05. Works include the construction of a new boarding house and changes to the school access and car parking along Woodville Avenue. The approval includes a drop-off bay and car park along Woodville Road. The construction of this car park will alleviate existing parking pressure along Woodville Avenue. A condition relating to traffic changes during construction (Work Zone) is included in the recommendation to ensure appropriate traffic management during construction (refer **Condition No's. 51 and 52**).

The proposed development is not considered to result in unreasonable traffic conflicts and is acceptable, subject to conditions.

Pedestrian safety impacts

Refer to above discussion. The development will marginally increase the vehicular and pedestrian traffic in the area. The proposed driveway location is considered to be suitable for allowing maximum visibility. The development is not considered to result in unreasonable pedestrian safety impacts.

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Streetscape impact

One objector raised concern in relation to the design of the development and the impact on the existing Woodville Avenue streetscape.

The streetscape of Woodville Avenue is mixed due to the combination of school and residential uses. School buildings and housing are generally characteristic of the 1920-1945 period of architecture. With the exception of Know Grammar, built elements are visually recessive behind established landscaping.

The proposed building provides a higher density of residential development, permissible under the Residential 2(d3) zoning. The building is designed in accordance with Council's controls in relation to siting, density and landscaping. Sufficient curtilage is provided for landscaping and tall tree planting to provide consistency with the established landscaped character of the area. The proposed architectural style and materials are in context with surrounding styles.

Each elevation of the building is stepped and varied, providing visual relief. Balconies are off-set from the street and are glazed and recessive. The bulk of the development will be diminished by peripheral landscaping. The development is not considered to adversely impact upon the streetscape.

Stormwater run-off

Council's Development Engineer has assessed the proposal in relation to stormwater. On-site detention pits are provided to collect surface water. Sufficient absorptive area is provided within the deep soil zones around the periphery of the development to detain water on site.

Subject to recommended **Conditions No. 31-35, 42, 79, 97-98**, the development will not generate unreasonable watershed or disturbance across any adjoining properties.

Affect on services/utilities//water pressure

Concern was raised in relation to the cumulative impact of increased residential densities on existing services in the area such as electricity and water.

Existing services will be upgraded as part of the development. Refer to **Conditions No. 44 and 80** in the recommendation.

Driveway location and proximity to Knox access arrangements/traffic impacts

Refer to earlier discussion relating to traffic.

Conflicts arising from interface zone

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Concern was raised in relation to the impact of the development on the adjoining low density (Residential 2(c2)) zones, particularly with respect to visual bulk and scale and acoustic and visual privacy loss.

Refer to discussion above in relation to privacy. The proposal is consistent with the 3 storey height control and is generally consistent with the required building separation/setback controls.

The building generally complies with the setback controls contained within LEP 194 and DCP 55, in relation to separation between properties. The separation provided allows sufficient opportunity for establishing tall trees and dense shrubs along the northern and eastern boundaries for screening.

In addition, Council's Urban Design Consultant has recommended additional measures of privacy screening along balcony areas. Refer to **Conditions No. 65 and 66** in the recommendation which require sliding, adjustable privacy/sun screens along the northern and eastern balcony areas and continuous, 1.2m wide, in-built planter boxes along the edges of the top floor terrace.

Subject to conditions, the proposal will not unreasonably impact upon the privacy of adjoining dwellings and is consistent with the objectives of LEP 194 and DCP 55.

CONSULTATION - WITHIN COUNCIL

Urban Design Consultant

Council's Urban Design Consultant, Mr Russell Ollsson, made the following assessment of the proposal against SEPP 65 (Design Quality of Residential Flat Buildings):

Principle 1: Context

SEPP 65: Good design responds and contributes to its context....Responding to context involves identifying the desirable elements of a locations' current character, or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies.

Comment:

The site is zoned 2(d3), whereas sites to the east and north are zoned 2(c2). Consequently a zoning transition is required across the eastern and northern boundaries in accordance with LEP 194.

This section of the Pacific Highway is characterised by having very large eucalyptus primarily in the front setback of existing houses. It is important to retain this feature in future development. The LEP 194 and DCP 55 objectives are to create buildings that are placed within a landscaped setting. This has been achieved through the provision of large scale trees within the 10-12 metre setbacks from the Pacific Highway and Woodville Avenue and the provision of the driveway ramp under the building, rather than in the landscaped open space adjacent to the building.

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Principle 2: Scale

SEPP 65: Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of the existing development. In precincts undergoing transition proposed bulk and height needs to achieve the scale identified for the desired future character of the area.

Comment:

The scale of this proposal is acceptable, as it complies with the LEP 194 height controls and the DCP length of building control of 36 metres. The building height of 2.6 storeys will relate reasonably well to the adjoining 2(c2) building heights.

Principle 3: Built form

SEPP 65: Good design achieves an appropriate built form for a site and the buildings purpose, in terms of building alignments, proportions, building type and the manipulation of building elements.....

Comment:

The sites to the north-east are zoned 2(c2). Zoning transition development controls apply to the northern and eastern boundary of the site. The proposed development complies with these controls. These controls relate to the building scale, and do not resolve privacy issues in themselves. See Amenity below for recommendations regarding the retention of privacy.

The front boundary setbacks are acceptable in terms of creating sufficient space and landscape to provide a landscaped setting for the building.

Compliance with setback from all boundaries creates a relatively wide and square building form with the potential for relatively poor environmental performance. This has been overcome by the apartment layouts and the creation of a naturally lit and ventilated lift lobby – see Principle 5 below.

Principle 4: Density

SEPP 65: Good design has a density appropriate to its site and its context, in terms of floor space yields (or numbers of units or residents)...

Comment:

The site cover by the building is 35% and the area of deep soil is greater than 50% of the site. The development density complies with LEP 194.

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Principle 5: Resource, energy and water efficiency

SEPP 65: Sustainability is integral to the design process. Aspects include... layouts and built form, passive solar design principles,... soil zones for vegetation and re-use of water.

Comment:

Greater than 70% of the apartments achieve 3 hours sunlight to living areas. 65% of apartments have natural cross ventilation. The lift lobby is naturally lit and ventilated on each floor. A water retention/detention tank is provided.

The building is approximately 25m x 25m, which exceeds the recommended building depth of 18 metres in the SEPP 65 Residential Flat Design Code. The objective of this guideline is to achieve natural ventilation and sunlight to building interiors. This building is able to meet the other standards regarding percentage of cross ventilated apartments and sunlit living areas/balconies, as the building is not excessively long. Therefore, while the building depth exceeds the guideline, and the building does not excel at natural ventilation and solar access, it meets the minimum standards for percentages of naturally lit and ventilated apartments.

Principle 6: Landscape

SEPP 65: Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain.

Comment:

The landscape in the front setbacks is sufficiently well planted with a range of vegetation species and sizes to provide an acceptable landscape setting for the building. The landscape in the site setbacks should be made more dense to provide screening for privacy between properties.

Principle 7: Amenity

SEPP 65: Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts, and service areas, outlook and ease of access for all age groups and degrees of mobility.

The building overlooks neighbours to the north and east. While the building complies with the LEP 194 zone transition setbacks, these are based on reducing building in larger developments with a 9 metre setback to the third and fourth floors, and are not based on resolving privacy issues. On this 2.6 storey building, the first floor is set back only 6 metres from the side boundaries and there is an existing in-ground swimming pool in the yard of the house to the north, and a yard in the house to the east, which would be overlooked by the first and second floors in this proposal. It is recommended that the balconies on the first floor are

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to be provided with sliding, adjustable privacy/sun screens, which will provide some additional privacy. In addition, the 6 metre setbacks to the northern and eastern boundaries are to be planted with more substantial, continuous screen planting. Also, continuous in-built planter boxes 1.2 metres wide are to be provided to the northern and eastern edges of the top floor terrace, so that overlooking of the neighbouring properties will be restricted, without compromising distant views from the terrace.

It is recommended that a window is provided to kitchens in apartments 1, 3, 8 and 10.

Otherwise, the amenity of the apartments is reasonable as access to sunlight and natural ventilation meets SEPP 65 guidelines.

Principle 8: Safety and security

SEPP 65: Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising activity on the streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses lighting appropriate to the location and desired activities, and clear definition between public and private spaces.

Comment:

No issues of safety and security are perceived.

Principle 9: Social dimensions

SEPP 65: Good design responds to the social context and needs of the local community in terms of lifestyles, affordability and access to social facilities. New developments should optimize the provision of housing to suit the social mix and needs in the neighbourhood, or, in the case of precincts undergoing transition, provide for the desired future community.

Comment:

The apartment size and mix is acceptable in this area.

Principle 10: Aesthetics

SEPP 65: Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

Comment:

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The relatively square and block-like building plan has been broken down by its architectural expression. The façade articulation of the building is emphasised by changes in materials and colours. The stepped building form and projecting steel framed pergola create a roof level silhouette. These are acceptable architectural compositions.

Recommendations:

It is recommended that:

- *The balconies on the first floor are to be provided with sliding, adjustable privacy/sun screens, which will provide some additional privacy. In addition, the 6 metre setbacks to the northern and eastern boundaries are to be planted with more substantial, continuous screen planting. Also, continuous in-built planter boxes 1.2 metres wide are to be provided to the northern and eastern edges of the top floor terrace, so that overlooking of the neighbouring properties will be restricted, without compromising distant views from the terrace.*
- *A window is to be provided to kitchens in apartments 1, 3, 8 and 10.*

The development is consistent with the requirements of SEPP 65 and is considered to constitute good design. The landscaping proposed along the boundaries and the fixed, moveable/sliding sun screens will effectively address the issues of privacy and amenity raised by the objectors. Refer to **Condition No.'s 57, 65 and 66** which incorporate the abovementioned recommendations.

Engineering

Council's Engineering Assessment Officer, Ms Kathy Hawken, has commented on the proposal as follows:

Stormwater management

The plans submitted show 21m³ of rainwater retention and 30m³ of on site detention provided in a combined tank adjacent to the basement. This is satisfactory and complies with DCP 47. Re-use of retained roofwater for toilet flushing, clothes washing and irrigation is proposed.

Gravity drainage from the retention tank to the street gutter is available. To collect runoff from the low north eastern corner of the site, the designing engineer has provided a grated pit. The outlet for the site drainage is shown as downstream of the vehicular crossing to 4-6 Woodville Avenue. It is considered that this proposal is satisfactory for this site in that overland flow will not enter the downstream property. The recommended conditions require that the pipe under the crossing either be installed by boring (minimal disturbance) or that the crossing be reconstructed.

Waste collection

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The architectural plans show a waste collection area on the upper basement level, which is accessible by the small waste collection vehicle. The security door is beyond the manoeuvring area.

Traffic generation and parking

The traffic report estimates a net traffic generation of 5 vehicles per peak hour. This is a low traffic generation and is not expected to affect the flows in Woodville Avenue or the performance of the intersection. The subject site is the only 2(d3) in the vicinity, so cumulative impacts are not at issue.

Sight distance at the exit is adequate and complies with the requirements of AS2890.1:2004. The driveway enters the building at an angle due to the slope of Woodville Avenue. There is room for two vehicles to pass at critical locations on the ramp, so this is acceptable.

The report assesses the number of parking spaces under DCP 43. This is incorrect. LEP 194 requires 19 resident and 5 visitor spaces. The development includes 26 spaces altogether and fortunately complies.

The report contains the curious statement that “the designer indicates that the parking layout complies with AS2890.1-2004” – in other words, the report does not fully provide the service which it claims to. Development Engineers have assessed the layout against AS2890.1:2004, and it is generally acceptable. A one way ramp is proposed between the basement levels, with two traffic mirrors shown. This is acceptable given the low traffic generation.

The site is within the 40km/hr zone associated with Knox Grammar School opposite. It is considered that restricted hours for construction traffic are justified at this location, and the traffic management plan will be required to include a prohibition on deliveries to the site during school pick up and drop off hours.

Geotechnical investigation

Two boreholes were drilled for the investigation, and encountered silty clay over weathered shale to depths below expected basement level. Groundwater was measured at 4.2 metres depth. The report contains a recommendation for further work after demolition.

Dilapidation surveys of neighbouring buildings are recommended. The residence at 1537 Pacific Highway and the residence, garage and boundary retaining wall at 4-6 Woodville Avenue, should all be surveyed.

Bulk excavation is not expected to require unusual effort, however stronger bands of shale may necessitate hammering, and vibration trials are recommended. These can only be undertaken when excavation has actually commenced. The engineering conditions require that excavation proceed in accordance with the recommendations made in the geotechnical report.

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The report states “We do not consider that there is a likelihood of the construction of the basement causing significant interference to the groundwater flow due to its limited footprint and relatively impermeable nature of the subsurface profile...”.

Recommendations are made for battering, and for shoring where insufficient space is available. Rock anchors may extend beneath the Pacific Highway boundary, so the procedure for obtaining approval is outlined in the recommended conditions.

Refer to recommended **Condition No.’s 30-53, 72-81, 94-101, 104-112.**

Landscape

Council’s Landscape and Tree Assessment Officer, Mr Geoff Bird, has commented on the proposal as follows:

The site

*It is proposed to demolish the existing dwellings and associated structures and construct a three storey residential flat building, with basement car parking on the amalgamated corner site of 1 772.8sqm with vehicular access from Woodville Ave. The site is characterised by a mature landscape setting with established trees and shrubs within formal garden beds and lawn areas. The site frontage to Woodville Ave is dominated by a mature *Platanus x hybrida* (London Plane Tree) and a *Lophostemon confertus* (Brushbox), while the Pacific Highway frontage is characterised by a mix of trees and shrubs behind an existing brick wall.*

Impacts on trees/trees to be removed/tree replenishment

*The proposed development will result in clearing of the site of the existing trees and shrubs through the core of the site to accommodate the development. The largest tree to be removed is a *Cedrus deodar* (Himalayan Cedar) centrally located on site that is in moderate condition. Its central location on site, if retained, would sterilise the site from development as zoned, no objection is raised to its removal. Other trees on site that are healthy and in good condition are to be retained. It is required that tree #23 *Ulmus parvifolia* (Chinese Elm) be retained. Tree #23, although identified as being in poor condition provides valuable amenity to the adjoining property, and as it is located outside of the proposed building footprint is capable of being retained in the short to medium term while the new landscape establishes. Subject to adequate tree replenishment around the site no objection is raised to the nominated tree removal.*

As proposed the development will result in an additional nine (9) canopy trees being planted on site. These in addition to existing trees being retained will result in a total of fourteen (14) tall’ canopy’ trees being accommodated on site. This exceeds council’s minimum tree replenishment requirements.

Deep soil

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By the applicant's calculations the proposed development will result in a deep soil landscape area of 931sqm or 52% of the site area. Landscape Services agrees with the areas shown as deep soil landscaping included by the applicant, however, it is noted that this area does not include an energy substation if required by the energy authority. If a substation is required, its area is to be excluded from the deep soil area calculation. Having said this, if the substation is required, the development by the applicant's calculations, will comply with the minimum deep soil requirements as defined by LEP194.

Landscape plan

Subject to some minor changes, the submitted landscape plan can be supported by Landscape Services. The proposed changes include the addition of tall 'canopy' trees adjacent to the northern and eastern site boundaries to facilitate screening and privacy to the development and neighbouring properties.

Drainage plan

Subject to the proposed drainage line adjacent to the eastern site boundary being relocated so that it is adjacent to the building, Landscape Services raises no objections to the proposed drainage works subject to conditions.

Setbacks

Landscape Services can support the proposed setbacks as the intent of the LEP and DCP controls are satisfied regarding landscape.

Landscape Services can support the application with conditions.

Refer to recommended **Condition No.'s 54-63, 82-89 and 102-103.**

PROVISIONS OF RELEVANT LEGISLATION

State Environmental Planning Policy No 65 - Design quality of residential flat development

SEPP 65 aims to improve the design quality of residential flat building across New South Wales and provide an assessment framework and design code for assessing 'good design'.

Part 3 of the SEPP institutes a 'design review panel' to provide an independent, open and professional review of designs submitted to councils for approval.

Part 2 sets out design principles against which design review panels and consent authorities may evaluate the merits of a design. As a design review panel has not yet been constituted, the application has been referred to an independent urban design consultant, Russell Ollsson of Ollsson Architects for comments under SEPP 65 (refer to comments above).

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The proposal is assessed against the heads of consideration as follows:

Principle 1 - Context:

Good design responds and contributes to its context which is defined by existing built and natural features and 'desirable elements' attributed to an area.

The building is located within an area characterised by low density residential development in the form of large, free standing residences within landscaped settings. A high school, occupied by large two and three storey buildings is located opposite. Buildings within the school campus are generally set well back from the street.

Residential flat development is not characteristic of the locality, however, the area is under transition as a result of the recent rezoning to Residential 2(d3) which envisages and allows for the construction of a 3 storey residential development.

The proposal complies with the provisions of LEP 194 with respect to density, bulk, landscaping and desired future character. The development responds appropriately to its context. Refer also to comments of Council's Urban Design Consultant.

Principle 2 - Scale:

The scale of new development should suit the scale of the street and surrounding development and should be in keeping with the 'desired future character of the area'.

The following heads of consideration are contained within LEP 194 in relation to the desired future character of residential zones: setbacks which allow for deep soil landscaping, tree protection, replenishment of locally endemic species, building separation, minimal impact of car parking on the streetscape and the preservation of solar access, safety in the public domain and accessible housing.

As detailed in the compliance tables, and discussion of *LEP 194* and *DCP 55*, the development generally complies with the applicable development standards and controls. The proposal is consistent with Principle 4 of SEPP 65.

Principle 3 - Built form:

Design should be appropriate for a site and the purpose of a building. Building alignment, proportions, types and elements should define the public domain, contribute to visual character and provide internal amenity and outlook.

The proposed building alignment proportions and architectural style appropriately address the site constraints. The building is well set back from the Pacific Highway and Woodville Avenue so as not to appear bulky within the streetscape. The building is recessive behind landscaping and the style adopted represents good urban design. Subject to conditions, the building is considered to adequately respect the amenities currently enjoyed by adjoining properties and the proposal is assessed as satisfactory against Principle 3.

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Principle 4 - Density:

Density (including floor space and number of dwellings) should be appropriate for a site and context. Densities should be sustainable and in precincts undergoing transition, should be consistent with the stated desired future density, responding in a regional context based upon availability of services.

The proposal is consistent with the applicable density controls (site coverage and floor space ratio). Refer to discussion of *LEP 194* and *DCP 55*.

Principle 5 - Resource, energy and water efficiency:

Refer to comments from *Development Engineer* and *Urban Design Consultant* and assessment against *DCP 55*. The proposal has been considered acceptable with respect to sustainability and resource availability.

Principle 6 - Landscape:

Landscape and buildings should operate as integrated and sustainable systems resulting in 'greater aesthetic quality' and amenity for occupants and the public domain. Landscape should build on the sites' natural and cultural features, provide habitat for local biodiversity and fit the development within its context.

Landscaping should optimise useability, benefits to neighbours and provide for long term management.

Clause 25I(2) of *LEP 194* provides a minimum standard for 40% deep soil landscaping. *DCP 55* also contains specific requirements in relation to the location, composition and design of deep soil landscaping as a means of integrating medium density housing with the existing, unique landscaped character of Ku-ring-gai.

The proposal provides deep soil zones which comply with *LEP 194* Clause 25I(2) (minimum standards for deep soil landscaping). Council's Landscape Development Officer has assessed the submitted landscape plan. Subject to conditions, the concept meets the objectives of *DCP 55* and integrates the built form appropriately within a landscaped setting and maintains consistency with the surrounding landscape. The landscaping proposed improves the streetscape and preserves the privacy and visual amenity for adjoining dwellings. The landscape surrounds provide interest and amenity for future occupants and the proposal is satisfactory against Principle 6 of *SEPP 65*.

Principle 7 - Amenity:

Good design provides amenity through the physical, spatial and environmental quality of a development through room dimensions and shapes, solar access, ventilation, privacy, storage, indoor and outdoor space, outlook and access.

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DCP 55 contains specific development objectives and guidelines for achieving a high level of residential amenity. Controls include minimum bedroom dimensions, sunlight and ventilation, minimum courtyard/balcony areas, ceiling heights and orientation. The proposal provides a high level of residential amenity as detailed in the discussion of DCP 55.

Principle 8 - Safety and security:

Good design optimises safety and security both internally and externally by maximising overlooking to public areas and allowing passive surveillance.

Refer to design controls and considerations in relation safety and security under Clause 4.6 of *DCP 55* and Principle 8 of *SEPP 65*. The development addresses the street, provides amenity, landscaping within the streetscape and connection to the street. The development promotes passive surveillance, safety and security.

Principle 9 - Social dimensions:

Development should respond to lifestyles, affordability and local community needs, providing a mixture of housing choices.

Refer to detailed discussion of social dimensions under Clause 4.7 of *DCP 55*. The proposal provides a variety of housing choices for a mixture of income levels, family structures and accessibility levels and is consistent with both *SEPP 65* and *DCP 55* in this regard.

Principle 10 - Aesthetics:

Composition of building elements, textures, materials and colours should reflect the use of the development, its environment and desirable elements of the streetscape. Aesthetics of a building should contribute to the desired future character of areas undergoing transition.

An assessment of the aesthetics of the design and its consistency with the design principles of *SEPP 65* has been made by Council's Urban Design Consultant. The proposal is generally consistent with Council's controls in relation to building design and separation (refer to discussion of *DCP 55*). The development is appropriate in density and scale and provides opportunity within setback areas for deep soil/tall tree/screen planting. The proposal is consistent with the desired future character of the area as specified by *LEP 194* and *DCP 55* and is acceptable in relation to aesthetics.

Residential Flat Design Code

Relating to the local context:

As detailed above, the proposal provides setbacks to comply with the Council's streetscape and landscaping objectives and provides an appropriate transition between zones. The proposal is consistent with desired future character of locality as discussed in detail under the provisions of *SEPP 65* and *DCP 55*.

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Site analysis:

An appropriate site analysis was submitted indicating building edges, landscape response, access and parking and building performance.

In terms of site configuration, the proposal provides acceptable separation from the two street boundaries for the establishment of significant landscaping in accordance with Council's objectives and controls.

Building design:

The development provides suitable residential amenity for future occupants in compliance with SEPP 65 and DCP 55 and is inconsistent with Council's guidelines relating to building design, articulation, setbacks and scale. The development relates well to the streetscape or the desired future character.

All other relevant matters relating to building design are assessed elsewhere in this report.

State Environmental Planning Policy No 55 - Remediation of Land

SEPP 55 requires Council to consider the development history of a site and its potential for containing contaminated material.

The subject site has historically been used for residential purposes and is unlikely to be affected by contamination.

Sydney Regional Environmental Plan No 20 - Hawkesbury-Nepean River

SREP 20 applies to land within the catchment of the Hawkesbury Nepean River. The general aim of the plan is to ensure that development and future land uses within the catchment are considered in a regional context. The plan includes strategies for the assessment of development in relation to water quality and quantity, scenic quality, aquaculture, recreation and tourism.

The development has the potential to impact on water quality and volumes to the catchment. Subject to conditions, the development is unlikely to generate significant additional stormwater and is consistent with the provisions of SREP 20.

Ku-ring-gai Planning Scheme Ordinance (KPSO)

COMPLIANCE TABLE		
Development standard	Proposed	Complies
Site area (min): 1200m ²	1772.8m ²	YES
Deep landscaping (min): 40%	52% (921m ²)	YES
Street frontage (min): 23m	30.3m (Woodville) 23.6m (Pacific Highway)	YES
Number of storeys (max): 3	3	YES

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Site coverage (max): 35%	35%	YES
Top floor area (max): 60% of level below	58%	YES
Storeys and ceiling height (max): 3 storeys and 7.2m	3 storeys & 7.2m	YES
Car parking spaces (min): <ul style="list-style-type: none"> • 5 (visitors) • 20 (residents) • 25 (total) 	<div style="text-align: center;">5 21 26</div>	<div style="text-align: center;">YES YES YES</div>
Zone interface setback (min): 9m	Between 8.3m and 11m	NO*
Manegeable housing (min): 1 per 10 dwellings (10%)	10% (2 units)	YES
Lift access: required if greater than three storeys	Yes	YES

* SEPP 1 objection received in respect of non-compliance, discussed below

Site area (cl.25E):

Clause 25E stipulates that consent may be granted for the purpose of a residential flat building, if the land has an area of at least 1,200m². The site measures 1,772.8m² and is satisfactory for the development of a residential flat building.

Deep landscaping (cl.25I(2)):

Clause 25I(2) provides a minimum standards for deep soil landscaping. For multi unit housing, deep soil landscaping with a minimum width of 2 metres is to be provided. 40% deep soil landscaping is required for a site of less than 1,800m² in area. The development provides 931m² 52% deep soil landscaping and comfortably complies.

Site frontages (cl.25I(3)):

Clause 25I(3) sets a minimum street frontage of 23 metres for a site measuring 1,200m² or more but less than 1,800m². The site has a frontage of 30 metres to Woodville Avenue and a frontage of 23.8 metres to the Pacific Highway and complies.

Number of storeys (cl.25I(5)):

Clause 25I(5) stipulates a maximum number of three (3) storeys for a development site measuring less than 1,800m². The site measures 1,772.8m² and the development proposed has a height of three storeys.

Site coverage (cl.25I(6)):

Clause 25I(6) stipulates a maximum site coverage of 35% for a residential flat building. The site coverage proposed is 35% and complies.

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Top floor (cl.25I(7)):

Where the maximum number of storeys permitted is attained, then the floor area of the top storey of a residential flat building of 3 storeys or more is not to exceed 60% of the total floor area of the storey immediately below it. The proposal complies with the third storey measuring 58% of the floor below.

Storeys and ceiling height (cl.25I(8)):

Clause 25I(8) sets a maximum perimeter ceiling height in addition to the maximum number of storeys of 7.2m. The maximum perimeter ceiling height for the development is 7.2 metres (not including top storey) which complies.

Car parking (cl.25J):

Pursuant to Clause 25I(10), consent must not be granted to development that will result in more than one dwelling on a site unless:

- (a) at least one car space is provided per dwelling and, if the site is not within 400 metres of a pedestrian entry to a railway station, one additional car space is provided for each dwelling with 3 or more bedrooms, and
- (b) at least one additional visitor car space is provided for every 4 dwelling, or part thereof, that will be on the site.

Car parking is not to be open air parking.

The site is located further than 400 metres (450 metres) from Wahroonga Railway Station and requires 14 spaces for the 1 and 2 bedroom units and 2 spaces for the 3, 3 bedroom units on the second floor. As indicated in the KPSO *Compliance Table*, the proposal complies with the car parking requirements of Clause 25J of LEP 194.

Zone interface (cl.25L):

Clause 25L provides a development standard requiring the third and four storey of any building on land within Zone 2(d3) to be set back at least 9 metres from any boundary of the site of the building with land (other than a road) that is not within Zone 2(d3) (zone interface). No. 1537 Pacific Highway and 4-6 Woodville Avenue adjoin the site directly to the north and east, respectively and are zoned Residential 2(c2).

The objective of the zone interface development standard is to provide a transition in the scale of buildings between certain zones.

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The second floor (third storey) of the development breaches the required 9 metres setback at 3 points along the eastern and northern elevations, the western corner of the balcony of Unit 15 and the external walls of the dining rooms of Units 16 and 17. The maximum breach is 700mm.

The application has lodged an objection under State Environmental Planning Policy (SEPP) No. 1 in relation to the breach to argue that the strict application of Clause 25L is unreasonable and unnecessary. The following justification is provided:

The proposed development incorporates a third floor level recessed behind the alignment of the levels below, with a floor area of 301m², representing 60% of the floor area of the level below. The third floor level is predominately set back well in excess of 9 metres to the northern boundary, however a triangular section of the living room of Apartment 15 protrudes within the setback by up to 400mm. The majority of the upper level is set back 9 metres from the eastern boundary, however a portion of the dining room of Apartments 16 and 17 protrude within the setback by 620mm.

In the circumstances, this SEPP No. 1 objection has been prepared in relation to that portion of the third floor level located within 9 metres of the northern and eastern boundaries.

Objectives of the standard

The objective of the development standard is expressed in Clause 25L as follows:

The objective of this clause is to provide a transition in the scale of the buildings between certain zones.

Consideration of objective

The objective of this clause is to provide a transition in the scale of the buildings between certain zones.

The subject site is adjoined to the north and east by detached dwellings. The existing dwelling to the north is set back approximately 4.5 metres from the common boundary of the subject site with a balcony protruding towards the boundary. The existing dwelling to the east is set back approximately 10 metres from the common boundary, with a covered patio protruding towards the boundary.

Residential flat buildings, townhouses and villas are prohibited forms of development on the adjoining land to the north and east. In the circumstances, it is unlikely that those allotments will be significantly redeveloped in the immediate future.

The non-compliant portion of the upper level along the northern elevation remains separated from the adjoining dwelling in that direction by approximately 13 metres, and the non-compliant portion of the building along the eastern elevation remains separated from the adjoining dwelling in that direction by approximately 18.5 metres.

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In the circumstances, the proposed development provides for an appropriate transition in the scale of building and the objectives of the standard are generally satisfied despite the non-compliance.

Justification for variation of the standards

Strict compliance with Clause 25L of the Ku-ring-gai PSO is considered unnecessary and unreasonable in the particular circumstances because:

- *The extent of non-compliance is extremely minor;*
- *The objective of the control is generally achieved despite the non-compliance primarily as a consequence of the existing and proposed building separation;*
- *A building separation of approximately 13 metres is maintained with the adjoining dwelling to the north such that there is no abrupt transition in building forms;*
- *A building separation of approximately 18.5 metres is maintained with the adjoining dwelling to the north such that there is no abrupt transition in building forms;*
- *The non-compliant portion of the building along the northern elevation is limited to an area of 5m², representing less than 2% of the upper level, and 0.2% of the total site area;*
- *Continuous deep soil landscaping is proposed within the setback to the northern and eastern boundaries adjacent to the non-compliant portions of the upper level; and*
- *The non-compliant portions of the upper level do not generate any significant additional impacts on the amenity of the adjoining properties.*

Conclusion

Where the consent authority is satisfied that an objection is well founded, and is also of the opinion that granting of consent to that Development Application is consistent with the aims of the Policy, SEPP No. 1 permits flexibility in the application of development standards so that consent may be granted to the Application.

In the circumstances of the proposal, strict compliance with the zone interface control would be unnecessary and unreasonable. The proposed development will not hinder the attainment of the objectives under Section 5(1)(i)(ii) of the Environmental Planning and Assessment Act 1979. Therefore, variation of the development standard is considered reasonable in this instance.

The objective of SEPP 1 is to provide flexibility in the application of planning controls/development standards in circumstances where strict compliance with those standards would, in any particular case, be unreasonable or unnecessary or hinder the attainment of the objects specified in section 5 (a)(i) and (ii) of the Act (the proper management, development and conservation of resources, social and economic welfare of the community and environment and orderly and economic use and development of land).

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Clause 6 of SEPP 1 stipulates that *‘where development could, but for any development standard, be carried out under the Act’, ‘the person intending to carry out the development may make a development application in respect of that development, supported by a written objection that compliance with that development standard is unreasonable or unnecessary in the circumstances of the case, and specifying the grounds of that objection.’*

Clause 7 allows that *‘where the consent authority is satisfied that the objection is well founded and is also of the opinion that granting of consent to that development application is consistent with the aims of this Policy as set out in Clause 3, it may, with the concurrence of the Director, grant consent to that development application notwithstanding the development standard the subject of the objection.’*

SEPP 1 allows for flexibility in design and merit consideration in applying development standards. The development standards contained in LEP 194 are imposed as primary, numerical parameters for guiding acceptable development, Clause 25I of LEP 194 *‘Site requirements and development standards for multi-unit housing’* sets out heads of consideration for the consent authority (objectives) which are as follows:

- a) *the desirability to provide a high proportion of deep soil landscape to the site area,*
- b) *the impact of overshadowing, an any loss of privacy and loss of outlook, likely to be caused by the proposed development,*
- c) *the desirability to achieve an appropriate separation between buildings and site boundaries and landscaped corridors along rear fence lines,*
- d) *the environmental features that are characteristic of the zone in which the site is situated by requiring sufficient space on-site for effective landscaping,*
- e) *the desirability of adequate landscaping so that the built form does not dominate the landscape; and*
- f) *how the principles of water cycle management can be applied to limit the impacts of runoff and stormwater flows off site.*

The specific objective of Clause 25L (zone interface) is to *‘provide a transition in the scale of buildings between certain zones’*.

The applicant has not addressed the heads of consideration, however, has addressed the above objective of Clause 25L.

In summary, the applicant argues that despite the non-compliance, the proposed development is adequately separated from the adjoining sites, landscaping is provided within the setbacks and that the non-compliance is minor.

In relation to the heads of consideration, the development provides a high proportion of deep soil landscaped area (a). An ‘appropriate’ transition is provided between buildings and sufficient setback to achieve a ‘landscaped corridor’ in accordance with (c). The building is designed and sited so as not to dominate the streetscape in accordance with (e). The impact of privacy loss and

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outlook can be mitigated through landscaping along the boundaries and the fitting of screening measures to north and east facing balconies.

The northern and eastern elevations of the building predominately comply with the required 9 metres setback. The development breaches the standard at 3 points, by between 450-700mm which is not considered unreasonable. The breaches will not accentuate the bulk of the building and the development is consistent with the objectives of LEP 194. Based on the merits of the application, it is recommended that the applicant's SEPP 1 objection be supported by Council in this instance.

Manageable housing (cl.25N(2)):

Manageable housing should be provided to increase the housing choice for seniors and people with disabilities and to encourage ageing in place.

Clause 25N(2) stipulates that consent must not be granted to development for the purpose of multi-unit housing in Zone 2(d3) unless at least one dwelling comprises manageable housing for each 10 dwellings (or part thereof) and wheelchair access is provided to all dwellings comprising manageable housing.

One dwelling, Unit 2, is provided as manageable housing and the proposal meets the requirements of Clause 25N(2).

Lift access (cl.25N(3)):

A lift must be provided in all multi-unit housing of more than 3 habitable storeys in Zone 2(d3).

The building does not exceed three storeys in height, however, lift access is provided.

Heritage /conservation areas (cl.61D – 61I):

The site is not located within a conservation area and is not affected by heritage.

POLICY PROVISIONS

**Development Control Plan No. 55 – Railway/Pacific Highway Corridor &
 St Ives Centre**

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 4.1 Landscape design:		
Deep soil landscaping (min) • 150m ² per 1000m ² of site area = 265.9m ²	1112m ²	YES
No. of tall trees required (min): 5 trees (1 per 350m²)	38 trees	YES
Part 4.2 Density:		

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Floor space ratio (max): • 0.7:1	0.68:1	YES
Part 4.3 Setbacks:		
Street boundary setback (min): • 10-12 metres (<40% of the zone occupied by building footprint)	Pacific Highway 10-16m Woodville Avenue 10-12m	YES YES
Rear boundary setback (min): • 6m	6m	YES
Side boundary setback (min): • 6m	6m	YES
Setback of ground floor courtyards to street boundary (min): • 8m/11m	Pacific Highway: 8m Woodville Avenue: 7.5m-8m	YES NO
% of total area of front setback occupied by private courtyards (max): • 15%	<15%	YES
Part 4.4 Built form and articulation:		
Facade articulation: • Wall plane depth >600mm • Wall plane area <81m ²	<600mm (400mm) <81m ² (27m ²)	YES YES
Built form: • Building width < 36m • Balcony projection < 1.2m	26m >1.2m (variable – up to 3.2m from outermost part of building facade)	YES NO
Part 4.5 Residential amenity		
Solar access: • >70% of units receive 3+ hours direct sunlight in winter solstice • >50% of the principle common open space of the development receives 3+ hours direct sunlight in the winter solstice	76% 50%	YES YES

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<ul style="list-style-type: none"> <15% of the total units are single aspect with a western orientation 	11%	YES
Visual privacy: Separation b/w windows and balconies of a building and any neighbouring building on site or adjoining site: Storeys 1 to 3 <ul style="list-style-type: none"> 12m b/w habitable rooms 9m b/w habitable and non-habitable rooms 6m b/w non-habitable rooms 	10.5m (Units 3 and 4) 13m (Units 10 and 11) north to 1537 Pacific Highway >12m to eastern dwelling 4-6 Woodville Ave 10.5m (north) 21m (east) 10m (north) >10m (east)	NO YES YES YES
Internal amenity: <ul style="list-style-type: none"> Habitable rooms have a minimum floor to ceiling height of 2.7m Non-habitable rooms have a minimum floor to ceiling height of 2.4m 1-2 bedroom units have a minimum plan dimension of 3m in all bedroom Single corridors: <ul style="list-style-type: none"> - serve a maximum of 8 units - >1.5m wide - >1.8m wide at lift lobbies 	2.7m 2.6m >3m 7 units 1.5m 2m	YES YES YES YES YES YES
Outdoor living: <ul style="list-style-type: none"> ground floor apartments have a terrace or private courtyard greater than 25m² in area Balcony sizes: <ul style="list-style-type: none"> - 10m² – 1 bedroom unit - 12m² – 2 bedroom unit - 15m² – 3 bedroom unit NB. At least one space >10m ²	<25m ² (ranging between 27.5-51m ² in area) 10-12m ² 13-16m ² 15-42m ²	YES YES YES YES

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<ul style="list-style-type: none"> primary outdoor space has a minimum dimension of 2.4m 	>2.4m	YES
Part 4.7 Social dimensions:		
Visitable units (min): <ul style="list-style-type: none"> 70% 	70%	YES
Housing mix: <ul style="list-style-type: none"> Mix of sizes and types 	Mix of 1, 2 and 3 bedroom units	YES
Part 4.8 Resource, energy and water efficiency:		
Energy efficiency: <ul style="list-style-type: none"> >65% of units are to have natural cross ventilation 	65%	YES
<ul style="list-style-type: none"> single aspect units are to have a maximum depth of 10m 	<10m (8.5m)	YES
<ul style="list-style-type: none"> 25% of kitchens are to have an external wall for natural ventilation and light 	>25%	YES
<ul style="list-style-type: none"> >90% of units are to have a 4.5 star NatHERS rating with 10% achieving a 3.5 star rating 	100% of units with 4.5 star rating	YES
Part 5 Parking and vehicular access:		
Car parking (min): <ul style="list-style-type: none"> 20 resident spaces 5 visitor spaces 25 total spaces 	21 spaces 5 spaces 26 spaces	YES YES YES

Part 2: Elements of good design

Part 2 of DCP 55 contains broad guidelines and controls relating to appropriate design for Ku-ring-gai.

Elements relate to the integration of a building with the local area and the scale, articulation and presentation of a building within the streetscape.

A building should provide a clear identity for the street. Entries should be located to relate to the street and should be clearly identifiable from the public domain.

Materials should respond to the existing pattern of building construction characteristic of the area such as dark or red brick, timber or copper. Buildings set well back from the street should be surrounded by a dense tree canopy. Lift overruns and mechanical equipment should be integrated in the design.

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The proposed building is constructed of rendered and painted masonry walls with steel framed glazed balustrades, steel framed pergolas and 'shale grey' colourbond roof sheeting. It is proposed to paint the ground and first floor external walls with a sandy beige colour called 'candle bark' and the second floor walls a lighter beige colour, 'pipe clay'. Entry piers and awnings are to be finished with a metallic mauve paint 'purple punch'. Trims, balustrades and pergolas are to be finished in white. Courtyards, balconies and balconies are to be sandstone paved and common paths are to be paved in grey.

A proposed 1500mm high timber front fence is proposed along the Pacific Highway and Woodville frontages of the site (detailed in Landscape plan LA04A).

The proposed construction materials and finishes are considered appropriate to the architectural style of the building and respectful to surrounding architectural styles. The building will not intrude upon the streetscape.

The proposed front fence is considered to be acceptable in height and is a relatively transparent 'screen'. The height and transparency of the fence will afford the development privacy and identity without diminishing the landscaped setting of the development.

The development is considered to be of good design.

Part 3 Local context:

Development should be consistent with the stated desired future character of the residential 2(d3) zone and not detract from the existing character of adjoining/surrounding areas.

Objectives for the desired future character is stated in Clause 25 of LEP 194 including to: encourage the protection and enhancement of the environmental and heritage qualities of Ku-ring-gai, preserve biodiversity, preserve and replenish the existing tree canopy, protect natural watercourses and topographical features and achieve high quality architectural and urban design. Development should have regard to heritage items within the vicinity.

Refer to the above discussion. The development is designed to be in keeping with the area and the proposed landscaping maintains consistency with the tree canopy and treed character of the area and replenishes habitat for local biodiversity. The development is consistent with the desired future character of the Residential 2(d3) and the local context.

Part 4.1 Landscape design:

Development should reinforce the landscaped and 'treed' character of the area. Deep soil planting is to be established surrounding built form to increase visual amenity, screening and to maintain consistency with the surrounding garden dominated, leafy landscape.

The proposal complies with the numerical requirements of the LEP and DCP in relation to the ratio of built form to deep soil landscaping and tree replenishment provided. As previously discussed,

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LEP 194 requires 40% of the site area to be available for deep soil planting. 50% deep soil landscaping is proposed and the proposal generously complies.

Part 4.2 Density:

Site density should be balanced with the need to provide appropriate deep soil landscaping on a site. The proposed development complies with the 0.7:1 floor space ratio control (0.68:1), 35% site coverage standard and 40% deep soil landscaping standard, achieving the optimum capacity of the site within a landscaped context. The density is appropriate for the site.

Part 4.3 Setbacks:

Buildings should not intrude upon the streetscape or unreasonably affect solar access and privacy available to adjoining dwellings. Buildings should be set within a landscaped curtilage.

Street setbacks

Clause C-1 (b) specifies a street boundary setback of 10-12 metres. The setback of a building extends above and below ground, including all built elements such as basement car parking (C-3).

The site has two street frontages, the Pacific Highway and Woodville Avenue.

At ground level, the building generally complies with the 10-12 metres setback along both frontages, with the exception of some sections of the building which occupy small sections of the 10-12 metres zone. At basement level, the proposal fully complies along the Pacific Highway frontage, however, a portion of the building is located within the 10-12 metres setback zone. C-1(b) stipulates that 40% of the building footprint may be occupied by the building footprint and the proposal is consistent with this control.

The siting of the building allows sufficient opportunity for deep soil landscaping, tall canopy trees within the setback and appropriate definition at the street edge. The proposal complies.

Side and rear setbacks

A development should generally be set back 6 metres from the side and rear boundaries.

However, under Clause C-1 (b) the side setback for buildings 3 storeys or less on sites less than 1800m² may be reduced based on merit, to 3 metres or 6 metres where windows are located in habitable rooms.

The proposal complies with the 6 metres setback control to the north (rear) and eastern side. Some courtyard areas are provided within this zone, however, Council's Landscape Development Officer is satisfied that sufficient area is available for screen planting, subject to conditional modifications. The proposal provides for an appropriate transition between properties. Refer also to discussion of interface setbacks under *KPSO/LEP 194*.

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Part 4.4 Built form and articulation:

Part 4.4 contains design guidelines to prevent buildings visually impacting on the public domain and dominating the streetscape and to control the separation and landscaping between buildings.

Soft landscaped features should be evident within the streetscape and building elements should be integrated into the overall building form.

The following specific guidelines apply in the assessment of the articulation of a building:

- Facades to the public domain should be articulated by wall planes varying in depth by not less than 600mm;
- No single wall plane should exceed 81m² in area and the width of a single building on any street facing elevation should not exceed 36 metres;
- Balconies should not project more than 1.2 metres from the outermost building façade;
- Service elements should not be visible and should be integrated into the design of the roof;
- Unit arrangements are to respond to site opportunities and constraints.

The proposal complies with the above criteria, with the exception of balcony projection. The first and second floor balconies protrude by up to 3.2 metres from the outer face of the building (south eastern corner Unit 17). Despite these breaches at some points of the building, the proposal complies with the design objectives which include: predominance of soft landscape features, carried articulation and architectural elements integrated into the overall building form. The stepped facades provide visual relief within the streetscape and the public domain.

Part 4.5 Residential amenity:

Part 4.5 contains controls in relation to solar access, visual and acoustic privacy, internal amenity and outdoor living.

Building layouts, orientation and provision of outdoor space and landscaping should maximise internal and external amenity for occupants.

DCP 55 contains technical requirements relating to availability of space, storage, solar access, natural solar ventilation, visual and acoustic privacy and outdoor living.

Refer to *DCP 55 Compliance Table*. The proposal complies with the design controls of Clause 4.5 with the exception of separation between habitable rooms within the development and habitable rooms of the northern adjoining property (No. 1357 Pacific Highway).

The living rooms of proposed Units 3, 4 and 5 (at ground level) are located approximately 10.5 metres from the southern elevation of the dwelling at 1357 Pacific Highway (and an external balcony area).

The proposed development has been viewed from the perspective of 1357 Pacific Highway. There are no south-facing windows or door openings at ground floor level which would be affected by the

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proposed separation. At first floor level, a small bedroom and bathroom window are located along the southern elevation of No. 1357. The first floor of the proposed building is located approximately 11 metres from these windows. DCP 55 requires that non-habitable and habitable rooms be separated by 9 metres and non-habitable rooms by 6 metres. The proposal complies.

Subject to conditions requiring the retention of the Chinese elm located on the northern boundary of the site, the establishment of additional screen planting along the northern boundary and the provision of screening measures to the first and second floor balconies, acceptable amenity is afforded to the northern adjoining dwelling.

Adequate separation is provided between the proposed development and the adjoining dwelling to the east (4-6 Woodville Avenue).

Shadowing

Clause 4.5 C-6 requires that development allows the retention of at least 3 hours of sunlight between 9.00am and 3.00pm on June 21 to the habitable rooms and the principal outdoor living areas of adjoining dwellings within the Residential 2(c2) zone.

Shadow diagrams were submitted with the application showing shadows cast by the proposal in March, September and June. Shadow cast generally falls over the Pacific Highway and Woodville Road setbacks. Some shadow extends across the eastern boundary (4-6 Woodville Road) at 3pm on June 21. This shadow generally falls over the existing garage located on this property and consequently does not unreasonably affect the amenity of the adjoining property.

The development provides for at least 3 hours of sunlight to the principal indoor and outdoor living areas of the northern and eastern adjoining dwellings and complies with the provisions of DCP 55.

Visual and acoustic privacy

Objection has been raised by both property owners to the north and east (1537 Pacific Highway and 4-6 Woodville Avenue) in relation to privacy.

At first floor level, the living areas and balconies of Units 10, 11 and 12 are oriented north toward the dwelling and private open space/pool area at 1537 Pacific Highway.

Some bedrooms and living areas within Units 12, 13 and 14 are oriented east, toward the residential dwelling and associated open space/gardens at 4-6 Woodville Road.

The building is further set back at second floor level, however, the living room of Unit 15 is located 8.5 metres from the northern boundary. North-facing bedroom and study areas of Unit 16 access views to the north.

Second floor living, dining and bedroom areas of Units 16 and 17 are located between 10 and 8.5 metres from the eastern boundary, common with 4-6 Woodville Avenue. Living areas open out onto large balconies which provide potential for overlooking.

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Tree no. 23, a Chinese Elm exists on the site adjacent the northern boundary. This tree has a dense canopy of 7m x 7m and is approximately 11 metres tall and currently provides amenity and privacy for the first floor level of the dwelling located at 1537 Pacific Highway (south-facing bedroom and bathroom window). **Condition No. 57** requires that this tree remain to maximise privacy between properties. Council's Landscape Officer is of the opinion that this tree can be protected and retained as part of the development.

It is proposed to provide evergreen 'medium scale' eastern Australian forest trees for screening along the northern boundary (Landscape plan LA01 A). Supplementary screening will be also be provided between tall trees by "Syzgium "Aussie Southern" Lilli pilli varieties.

Dense landscaping to an average height of approximately 5 metres exists along the western boundary of. 4-6 Woodville Road; providing immediate screening for the indoor and outdoor entertaining areas of the dwelling. Three separate rows of tall trees are proposed along the eastern boundary of the site, including a large *Eucalyptus saligna* at the south-eastern corner of the site. Rows of *Syzgium "Aussie Southern" Lilli pilli* will be planted between tall trees along the eastern boundary of the site to provide additional screening between the development and adjoining dwelling.

In addition, **Conditions No. 65 and 66** are recommended requiring the provision of planter boxes along the edges of the northern and eastern facing balconies at first and second floor level and fixed, moveable privacy screens.

Subject to conditions, privacy impacts associated with the development are not considered unreasonable.

Internal amenity and outdoor living

Refer to *DCP 55 Compliance Table*, the proposal complies with the design objectives and controls of DCP 55 in relation to ceiling heights, room dimensions, corridor widths and outdoor living spaces.

Part 4.6 Safety and security:

Refer to discussion of SEPP 65, Principle 8 'Safety and Security'.

Apartments adjacent to public streets are required to have at least one window or a habitable room with an outlook to that area. Entries and common open space should be visible from public areas or apartments and lighting should be provided to increase visibility.

West and south-facing balcony and courtyard areas are oriented across external common space areas and the street, providing acceptable passive surveillance.

Part 4.7 Social dimensions:

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Refer to discussion of *SEPP 65 Principle 9: Social Dimensions*.

As indicated in the *Compliance Tables*, the proposed provides 10% 'manageable' units in accordance with LEP 194 Clause 25N and 70% 'visitable' units, internal paths of travel and visitor and resident parking spaces in accordance with DCP55 Clause 4.7 C-3.

The development provides a flexible mix of housing types and a suitable variety of unit sizes to meet market demand for a range of medium density accommodation needs.

Part 4.8 Resource, energy and water efficiency:

The development achieves a very high average NatHERS rating of 4.9 stars, with 14 units achieving a 5 star rating and 3 units, a 4.5 star rating.

Units 2 and 9 have a single aspect orientation facing west. Units 6 and 13 have single aspect, facing east. None of the single aspect units face south and sufficient solar access is available to proposed units overall. The four single aspect units provided have a depth of less than 10 metres in compliance with design control C-2.

Kitchens generally have access to external walls and natural sunlight. Sun shading devices are recommended by **Condition No. 2** along the northern and eastern-facing balconies.

The development provides for good solar access, light and ventilation and is consistent with Clause 4.8 of DCP 55.

Part 5 Parking and vehicular access:

Refer to *Compliance Table*.

Car spaces for resident, visitor and accessible are provided in accordance with the numerical requirements of LEP 194 and DCP 43 -Car Parking. The proposal does not provide a designated bicycle storage area, however, it is considered that bicycle storage could be accommodated in the secure 'storage' areas provided within the basement car park.

The proposed car parking dimensions are consistent with the technical requirements specified by Clause 5.1 of DCP 55.

Vehicular access is provided to the development via Woodville Avenue, not the Pacific Highway which is main arterial road. The development is therefore consistent with Clause 5.2 of DCP 55.

Part 6 Isolated sites:

The proposal does not have the effect of isolating or compromising the development potential of any surrounding sites.

Development Control Plan 31 - Access

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Matters for assessment under DCP 31 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 40 - Construction and Demolition Waste Management

Matters for assessment under DCP 40 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan No 43 - Car Parking

Matters for assessment under DCP 43 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 47 - Water Management

Matters for assessment under DCP 47 have been taken into account in the assessment of this application against DCP 55.

Section 94 Plan

The development attracts a section 94 contribution of \$187,070.13 based on 8 'small' dwellings, 9 'medium' dwellings and a credit for one 'large' dwelling (2A Woodville Avenue) and one 'very large' dwelling (1533 Pacific Highway). This contribution is required to be paid by **Condition No. 71**.

LIKELY IMPACTS

The likely impacts of the development have been discussed elsewhere within this report.

SUITABILITY OF THE SITE

The site is suitable for the development proposed.

PUBLIC INTEREST

The approval of the application is considered to be in the in the public interest.

ANY OTHER RELEVANT MATTERS CONSIDERATIONS NOT ALREADY ADDRESSED

There are no other matters for assessment.

CONCLUSION

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Having regard to the provisions of section 79C of the Environmental Planning and Assessment Act 1979, the proposed development is considered to be satisfactory. Therefore, it is recommended that the application be approved.

RECOMMENDATION:

Pursuant to Section 80(1) of the Environmental Planning and Assessment Act, 1979

THAT the Council, as the consent authority, is of the opinion that the objection under *State Environmental Planning Policy No 1 - Development Standards* to the Zone Interface standard (cl. 25L) of the Ku-ring-gai Planning Scheme Ordinance is well founded. The Council is also of the opinion that strict compliance with the development standard is unreasonable and unnecessary in the circumstances of this case as the SEPP 1 Objection has demonstrated that the underlying objective or purpose of the standard has been satisfied.

AND

THAT the Council, as the consent authority, being satisfied that the objection under SEPP No 1 is well founded and also being of the opinion that the granting of consent to DA 676/05 is consistent with the aims of the Policy, grant development consent to DA 676/05 for the demolition of existing structures and construction of a residential flat building containing 17 units, basement car parking and strata subdivision on land at 2A Woodville Avenue and 1533 Pacific Highway, Wahroonga for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

GENERAL

1. The development must be carried out in accordance with plans numbered DA01-DA10, dated 23 June 2005, drawn by Wolski, Lycenko and Brecknock Architects and Landscape Plan LA01 – LA04 dated 26 June 2005, drawn by Taylor Brammer Landscape Architects Pty Ltd, and endorsed with Council's approval stamp, except where amended by the following conditions:
2. All building works shall comply with the Building Code of Australia.
3. The approved building shall not be occupied unless the development has been completed in accordance with all conditions of consent and the approved plans and an Occupation Certificate has been issued.
4. The submission of the approved plans to Sydney Water, before any work is commenced to ensure that the proposed structure meets that Authority's By-Laws. Failure to submit these plans before commencing work will render the owner liable to a penalty and may result in the demolition of work.

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5. The opening of any footway, roadway, road shoulder or any part of the road reserve shall not be carried out without a Road Opening Permit being obtained from the Council (upon payment of the required fee) beforehand.
6. For the purpose of ensuring the compliance with the terms of the approval, an approved copy of the plan and this Consent and Construction Certificate shall be kept on site at all times.
7. For the purpose of safety and amenity of the area, no building materials, plant or the like are to be stored on the road or footpath without the written approval being obtained from the Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.
8. **HOURS OF WORK:** For the purpose of residential amenity, noise generating work carried out in connection with building and construction operation, including deliveries of building materials and equipment, is restricted to the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted. The use of the following items of plant on the site is also restricted to the abovementioned hours: compressors, bulldozers, power operated woodworking machines, excavators and loaders, jackhammers, Ramset guns, concrete mixers and concrete delivery wagons, hoists, winches, welding and riveting plant.

Whilst work on Saturdays may be performed until 5.30pm, such work or any associated activities shall not involve the use of any noise generating processes or equipment.
9. A sign shall be erected in a prominent position on the site which states the name and contact details of the Principal Certifying Authority.
10. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.
11. All excavations shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.
12. If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation to be made:
 - a. must preserve and protect the building from damage, and
 - b. if necessary, must underpin and support the building in an approved manner, and
 - c. must, at least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner

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of the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished.

The owner of the adjoining allotment of land is not liable for any part of the cost of work carried out for the purposes of this clause, whether carried out on the allotment of land being excavated or on the adjoining allotment of land.

In this clause, allotment of land includes a public road and any other public place.

13. With regard to the proposed rock breaking the following conditions are to be observed:
 - a. The Geotechnical Engineer shall supervise the works in progress.
 - b. A dilapidation report on adjoining or nearby properties shall be prepared prior to any excavation, rock breaking, or associated work commencing and shall be submitted to the Principal Certifying Authority.
 - c. All material removed from or imported to the site shall be loaded, unloaded or conveyed in such a manner that will minimise nuisance. Trucks shall be covered and site controls shall include shaker grids at the exits of the site. All materials falling to any part of the road or footpath or any public place shall be immediately cleaned up.
 - d. All material removed from or imported to the site shall be loaded, unloaded or conveyed in such a manner that will minimise nuisance. Trucks shall be covered and site controls shall include shaker grids at the exits of the site. All materials falling to any part of the road or footpath or any public place shall be immediately cleaned up.
14. All noise generating equipment associated with any proposed mechanical ventilation system/s shall be located and/or soundproofed so the equipment is not audible within a habitable room in any other residential premises before 7am and after 10pm Monday to Friday and before 8am and after 10pm Saturday, Sunday and Public Holidays. Furthermore, the operation of the unit outside these restricted hours shall emit a noise level of not greater than 5dbA above the background when measure at the nearest adjoining boundary.
15. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
16. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
17. Demolition work, including removal of material or debris from the site, on any building in a residential area shall only be carried out during the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted.
18. A person taking down or demolishing or causing to be taken down or demolished any building or part thereof shall, upon identifying or suspecting that asbestos is present in the building, immediately notify the Workcover Authority. The Authority is the controlling body

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for the safe removal, handling and disposal of asbestos. The Authority supervises and monitors contractors engaged in asbestos removal.

The requirements and standards imposed by the Authority, its consultants or contractors shall be complied with.

19. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.
20. Dust control measures shall be taken on all demolition sites so as to avoid a nuisance to adjoining properties and harm to the environment.
 - a. A person taking down or demolishing or causing to be taken down or demolished any building or portion of any building shall:
 - i. cause the windows or other openings in the external walls to be close boarded or otherwise covered;
 - ii. cause screens of canvas, hessian, boards, mats or other suitable material to be fitted in appropriate locations;
 - iii. cause areas, components and debris to be wetted down; in such a manner as to minimise, as far as practicable, the nuisance arising from the escape of dust during such taking down or demolition.
 - b. Such person shall not chute, throw or let fall or cause to chute, throw or let fall from the floor to floor or into any basement of such building any building materials or any other matter so as to cause dust to escape from the building or cause any such material to fall or cast upon a public way to the annoyance, inconvenience, or danger of persons using such public way.
21. A temporary construction exit and sediment trap to reduce the transport of sediment from the site onto public roads shall be provided before demolition commences.
22. Existing stormwater lines on the site are to be blocked and made inoperable after buildings are demolished so as to prevent the conveyance of silt or sediments into the gutter or street drainage system.
23. Toilet facilities are to be provided, within the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
24. Trees and vegetation on a site shall not be disturbed except with the approval of the Council.
25. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.
26. The fence and footings shall be constructed entirely within the boundaries of the property.

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27. Fire hoses are to be maintained on site during the course of demolition.
28. The burning of undergrowth, foliage, building refuse and like matter on the site is prohibited.
29. Buildings built prior to the 1970's may contain lead based paint. Lead dust is a hazardous substance. You are advised to follow the attached WorkCover guidelines to prevent personal and environmental contamination.
30. In the event of a pipeline being uncovered during construction, all work is to cease and the Principal Certifying Authority and Council must be contacted immediately for advice. Any damage caused to the Council pipe shall be immediately repaired in full and at no cost to Council.
31. Stormwater runoff from new hard surfaces generating runoff or landscaped areas that are not at natural ground level shall be piped to the street drainage system. New drainage line connections to the street system shall conform and comply with the requirements described in sections 5.3 and 5.4 of Councils Water Management Development Control Plan 47, available in hard copy at Council and on the Council website. The connection may be downstream of the vehicular crossing to the neighbouring property, but is either to be installed by boring or the entire crossing is to be reconstructed to Council's Specification at the existing levels.
32. A mandatory rainwater retention and re-use system comprising storage tanks and ancillary plumbing must be provided for the development. The (minimum) total storage volume of the rainwater tank system, and the prescribed re-use of the water on site, must satisfy the requirements specified in chapter 6 of Ku-ring-gai Council Water Management Development Control Plan 47 (DCP47).
33. In addition to the mandatory rainwater retention and re-use system provided, an on-site stormwater detention system must be provided for the development to control the rate of runoff leaving the site. The minimum volume of the required on-site detention system must be determined in accordance with chapter 6 of the Ku-ring-gai Council Water Management Development Control Plan 47 (DCP 47) - having regard to the specified volume concession offered in lieu of installing rainwater retention tanks. The design of the on-site detention system must be performed by a qualified civil/hydraulic engineer and must satisfy the design controls set out in appendix 5 of DCP 47.
34. For stormwater control a 200mm wide grated channel/trench drain with a heavy-duty removable galvanized grate is to be provided in front of the garage door/basement parking slab to collect driveway runoff. The channel drain shall be connected to the main drainage system and must have an outlet of minimum diameter 150mm to prevent blockage by silt and debris.
35. During construction, stormwater runoff must be disposed in a controlled manner that is compatible with the erosion and sediment controls on the site. Immediately upon completion of any impervious areas on the site (including roofs, driveways, paving) and where the final drainage system is incomplete, the necessary temporary drainage systems must be installed to

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manage and control runoff as far as the approved point of stormwater discharge. Such measures shall be to the satisfaction of the Principal Certifying Authority.

36. A maintenance period of six (6) months applies to all work in the public road reserve carried out by the applicant - **after** the works have been completed to the satisfaction of Ku-ring-gai Council. In that maintenance period, the applicant shall be liable for any section of the completed public infrastructure work which fails to perform in the designed manner, or as would reasonably be expected under the operating conditions. The maintenance period shall commence once the Applicant receives a written indication from Council stating that the works involving public infrastructure have been completed satisfactorily.
37. For the purpose of any further plan assessment and works inspections by Council engineers, the corresponding fees set out in Councils adopted Schedule of Fees and Charges are payable to Council. A re-inspection fee per visit may be charged where work is unprepared at the requested time of inspection, or where remedial work is unsatisfactory and a further inspection is required. Engineering fees must be paid in full prior to any final sign-off from Council.
38. Approval is to be obtained from Ku-ring-gai Council Traffic Committee for any temporary public road closures and/or placement of cranes on public land.
39. All demolition and construction traffic control and management measures shall be implemented in accordance with an approved *Construction and Traffic Management Plan* to be submitted and approved by Council prior to the commencement of works. The Principal Certifying Authority shall monitor the traffic control and management situation over the course of construction works. Where it is found that the Traffic control and management measures may be improved, this shall be undertaken under the supervision of qualified traffic control persons and in consultation with Council.
40. Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the Applicants full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services at the appropriate stage of development (including water, phone, gas and the like). Council accepts no responsibility whatsoever for any matter arising from its approval of this application involving any influence upon utility services provided by another authority.
41. All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials and plant must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "*Traffic Control Devices for Work on Roads*". **If pedestrian circulation is not satisfactorily maintained**

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across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.

42. The provision of temporary sediment and erosion control facilities and measures must be installed, prior to the commencement of any works on the site to eliminate unnecessary erosion and loss of sediment. These facilities must be maintained in working order during construction works up to completion. All sediment traps must be cleared on a regular basis and after each major storm, and/or as directed by the Principal Certifying Authority and Council officers.
43. Driveways and vehicular access ramps must be designed not to scrape the underside of cars. In all respects, the proposed vehicle access and accommodation arrangements must be designed and constructed to comply with the minimum requirements of Australian Standard 2890.1 (2004) "Off-Street car parking".
44. The Applicant must obtain a **Section 73 Compliance Certificate** under the *Sydney Water Act 1994*. An application must be made through an authorised Water Servicing Coordinator. The Applicant is to refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-developer" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
45. In order to allow **unrestricted access at all times** for Ku-ring-gai Council waste collection vehicles into the basement garbage collection area - no doors, grilles, gates or other devices are to be provided in the access driveways to the basement carpark preventing this service.
46. A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee the excavation procedure. Geotechnical aspects of the development work, namely:
 - Appropriate excavation methods and techniques,
 - Vibration management and monitoring,
 - Support and retention of excavated faces,
 - Hydrogeological considerations,
 - Must be undertaken in accordance with the recommendations of the geotechnical report prepared by Jeffery and Katauskas and all subsequent geotechnical inspections carried out during the excavation and construction phase. Approval must be obtained from all affected property owners, including Ku-ring-gai Council where rock anchors (both temporary and permanent) are proposed below adjacent private or public property.

PRIOR TO COMMENCEMENT OF WORKS

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47. Additional geotechnical work is to be carried out as recommended in the report by Jeffery and Katauskas. Over the course of the works a qualified Geotechnical/hydrogeological Engineer must complete the following:
- Further geotechnical investigations and testing recommended in the above report(s) and as determined necessary,
 - Further monitoring and inspection at the hold points recommended in the above report(s) and as determined necessary,
 - Written report(s) including certification(s) of the geotechnical inspection, testing and monitoring programs.
48. If the use of temporary rock anchors extending into the road reserve is proposed, then approval must be obtained from Council and/or the Roads and Traffic Authority in accordance with Section 138 of the Roads Act 1993. The Applicant is to submit details of all the work that is to be considered, and the works are not to commence until approval has been granted. The designs are to include details of the following:
- RTA concurrence to the proposed temporary rock anchors
 - How the temporary rock anchors will be left in a way that they will not harm or interfere with any future excavation in the public road
 - That the locations of the rock anchors are registered with Dial Before You Dig
 - That approval of all utility authorities likely to use the public road has been obtained. All temporary rock anchors are located outside the allocations for the various utilities as adopted by the Streets Opening Conference.
 - That any remaining de-stressed rock anchors are sufficiently isolated from the structure that they cannot damage the structure if pulled during future excavations or work in the public road.
 - That signs will be placed and maintained on the building stating that de-stressed rock anchors remain in the public road and include a contact number for the building manager. The signs are to be at least 600mm x 450mm with lettering on the signs is to be no less than 75mm high. The signs are to be at not more than 60m spacing. At least one sign must be visible from all locations on the footpath outside the property. The wording on the signs is to be submitted to Council's Director Technical Services for approval before any signs are installed.
 - Permanent rock anchors are not to be used where any part of the anchor extends outside the development site into public areas or road reserves.
 - All works in the public road are to be carried out in accordance with the Conditions of Construction issued with any approval of works granted under Section 138 of the Roads Act 1993.
49. Approval is to be obtained from the property owner for any anchors proposed beneath adjoining private property. If such approval cannot be obtained, then the excavated faces are to be shored or propped in accordance with the recommendations of the geotechnical and structural engineers.

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50. Prior to the commencement of any works on the site, the applicant shall submit, for approval by the Principal Certifying Authority (with a copy forwarded to Council) a full dilapidation report on the visible and structural condition of the residence, garage and brick retaining wall at 4-6 Woodville Avenue, and the residence at 1537 Pacific Highway. The report must be completed by a consulting structural/geotechnical engineer. A second dilapidation report, recording structural conditions of all structures originally assessed prior to issue of the Construction Certificate, must be carried out at the completion of the works and be submitted to Council.
51. Prior to the commencement of **any** works on site the applicant must submit, for review by Council Engineers, a *Construction and Traffic Management Plan*. The following matters must be specifically addressed in the Plan:
1. **A plan view of the entire site and frontage roadways indicating:**
 - Dedicated construction site entrances and exits, controlled by a certified traffic controller, to safely manage pedestrians and construction related vehicles in the frontage roadways,
 - Turning areas within the site for construction and spoil removal vehicles, allowing a forward egress for all construction vehicles on the site,
 - The locations of proposed Work Zones in the frontage roadways,
 - Location of any proposed crane standing areas
 - A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries
 - Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected.
 - The provision of an on-site parking area for employees, tradesperson and construction vehicles as far as possible.
 2. **Traffic Control Plan(s) for the site.**
 - All traffic control devices installed in the road reserve must be in accordance with the RTA publication "Traffic Control Worksite Manual" and be designed by a person licensed to do so (minimum RTA 'red card' qualification). The main stages of the development requiring specific construction management measures are to be identified and specific traffic control measures identified for each.
 - Approval is to be obtained from Ku-ring-gai Council for any temporary road closures or crane use from public property.
 - **A detailed description and route map of the proposed route for vehicles involved in spoil removal, material delivery and machine floatage must be provided.**
 - Light traffic roads and those subject to a load or height limit must be avoided at all times.
 - A copy of this route is to be made available to all contractors, and shall be clearly depicted at a location within the site.

In addition, the plan must address:

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- Evidence of RTA concurrence where construction access is provided directly or within 20m of an Arterial Rd.
- A schedule of site inductions to be held on regular occasions and as determined necessary to ensure all new employees are aware of the construction management obligations. These must specify that construction-related vehicles to comply with the approved requirements.
- Minimising construction related traffic movements during school peak periods.
- For those construction personnel that drive to the site, the Applicant shall attempt to provide on-site parking so that their personnel's vehicles do not impact on the current parking demand in the area.

For traffic and pedestrian amenity purposes, no truck movements shall occur in Woodville Avenue during school drop-off (8.00 am to 9.30 am) and school collection hours (2.30 pm to 4.00 pm).

The *Construction and Traffic Management Plan* shall be prepared by a suitably qualified and experienced traffic consultant and be certified by this person as being in accordance with the requirements of the abovementioned documents and the requirements of this condition. The construction management measures contained in the approved plan shall be implemented in accordance with the plan prior to the commencement of, and during, works on-site including excavation. As the plan has a direct impact on the local road network, the plan shall be submitted to and reviewed by Council, attention Development Engineer. A written acknowledgment from Council engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site. A fee is payable for the assessment of the plan by Ku-ring-gai Council.

52. If a Works Zone is proposed, the Applicant must make a written application to the Ku-ring-gai Local Traffic Committee to install the 'Work Zone'. The application must be made at least 15 days prior to the commencement of any works on site approved under this consent. Works Zones are provided specifically for the set down and pick up of materials and not for the parking of private vehicles associated with the site. Works Zones will generally not be approved where there is sufficient space on-site for the setting down and picking up of goods being taken to or from a construction site. If the Works Zone is approved by the Committee, the Applicant must obtain a written copy of the related resolution from the Ku-ring-gai Local Traffic Committee and submit a copy of this to the Principal Certifying Authority for approval prior to commencement of any works on the site. Where approval of the 'Work Zone' is resolved by the Committee, the necessary 'Work Zone' signage shall be installed (at the cost of the Applicant) and the adopted fee paid prior to commencement of any works on the site. Further, at the expiration of the Works Zone approval, the Applicant is required to remove the Works Zone signs and reinstate any previous signs, all at the Applicant's cost.
53. Prior to the commencement of any works on site the applicant shall submit **to Council** a full dilapidation report on the visible (**including photos**) and structural condition of the following public infrastructure:

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- Full road pavement width of Woodville Avenue and southbound road pavement of Pacific Highway, both including kerb and gutter, over the site frontage, including the intersection.
- All driveway crossings and laybacks in Woodville Avenue opposite the subject site.
- The report must be completed by a consulting structural/civil engineer. Particular attention must be paid to accurately recording (both via photo and in written format) *existing* damaged areas on the aforementioned infrastructure so that Council is fully informed when assessing any damage to public infrastructure caused as a result of the development.

A second dilapidation report, recording structural conditions of all structures originally assessed prior to the commencement of works, must be carried out at the completion of the works and be submitted to Council.

54. A Tree Preservation Order exists within the Ku-ring-gai Council area whereby the removal, lopping or destruction of any tree exceeding 5.0 metres in height or 4.0 metres in canopy spread (except where exempt as defined under Council's Tree Preservation Order) without prior written consent of Council is prohibited.
55. To maintain and maximise neighbour amenity, tree #23 *Ulmus parvifolia* (Chinese Weeping Elm) is to be retained. Existing levels beneath the canopy drip line outside of the proposed building footprint are to be retained.
56. Demolition work within 6.0m of any tree to be retained is to be undertaken manually using hand tools. Where a driveway is to be demolished being of concrete strip or slab type construction, it is to be undertaken by working from the end of the driveway closest to the building back towards the street by utilising the driveway as a stable platform to prevent soil compaction. Where a concrete slab driveway passes less than 1.0m from the base of a tree and the area beneath the driveway is to be undisturbed and incorporated into the landscape works for the site, the volume of the space previously occupied by the driveway must be replaced with local top soil from the site or otherwise a loamy sand, to replace the mass of the concrete on the root plate which may be critical to the ballast and centre of mass for the stability of the tree.
57. Landscape works shall be carried out in accordance with Landscape Drawing No LA01 Rev A, LA02 Rev A, LA03 Rev A prepared by Taylor Brammer and dated 27/06/2005 submitted with the Development Application, except as amended by the following:
 - In addition to the proposed screen planting an additional four trees capable of growing 13.0m in height are to be planted within the setbacks from the northern and western boundary setbacks. The additional trees are to be spaced so that they do not encroach on each others canopy at maturity eg 8-10m spacing.
 - The proposed pedestrian access path from the southern site boundary to Woodville Ave is to be deleted and the area maintained as soft landscape.
 - Tree #29 *Castanospermum australe* (Blackbean) is to be removed and replaced with an *Angophora floribunda* (Rough barked apple).

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- Tree #23 *Ulmus parvifolia* (Chinese Elm) is to be retained to maintain neighbour amenity
- Tree #22a *Archontophoenix cunninghamiana* x 3, is to be retained in situ. If this is not possible the palms are to be transplanted and relocated within the immediate vicinity to maintain neighbour amenity.

58. Canopy and/or root pruning of the following tree/s which may be necessary to accommodate the approved building works shall be undertaken by an experienced Arborist/Horticulturist, with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate:

Tree/Location

#5 *Platanus x hybrida* (London Plane Tree)
Woodville Ave nature strip

#6 *Lophostemon confertus* (Brushbox)
Adjacent to southern site boundary in Woodville Ave site frontage

#14 *Corymbia ficifolia* (Red flowering gum)
Adjacent to western site boundary

#23 *Ulmus parvifolia* (Chinese Elm)
Adjacent to north west site boundary

59. The trees to be retained shall be inspected, monitored and treated when necessary by a qualified Arborist before, during and after completion of development works to ensure their long term survival. Regular reports from the Arborist to the principal certifying authority shall be required at three monthly/quarterly intervals. Documentary evidence of compliance with this condition shall be submitted to the principal certifying authority prior to the issue of the Occupation Certificate.
60. Paving works within the specified radius of the trunk/s of the following tree/s shall be constructed to ensure that existing water infiltration and gaseous exchange to the tree/s root system is maintained. Details for the paving shall be submitted to the Principal Certifying Authority for approval by a suitably qualified professional prior to the commencement of paving construction:

Tree/Location	Radius From Trunk
#5 <i>Platanus x hybrida</i> (London Plane Tree) Woodville Ave nature strip	6.0m
#6 <i>Lophostemon confertus</i> (Brushbox) Adjacent to southern site boundary in Woodville Ave site frontage	4.0m

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61. No mechanical excavation of the proposed structure shall be undertaken within the specified radius of the trunk/s of the following tree/s until root pruning by hand along the perimeter line of such works is completed:

Tree/Location	Radius From Trunk
#5 Platanus x hybrida (London Plane Tree) Woodville Ave nature strip	8.0m
#6 Lophostemon confertus (Brushbox) Adjacent to southern site boundary in Woodville Ave site frontage	6.0m
#14 Corymbia ficifolia (Red flowering gum) Adjacent to western site boundary	3.5m

62. Transplanting of the following trees/shrubs shall be directly supervised by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate.

Species/Location

#22a Archontophoenix cunninghamiana (Bangalow Palm) x 3
Within immediate vicinity to maintain neighbour amenity

63. The applicant shall ensure that at all times during the construction period no activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order.
64. All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

65. In order to protect the privacy of the northern and eastern adjoining properties (No. 1357 Pacific Highway and 4-6 Woodville Avenue), the northern and eastern edges of the balconies at first and second floor level (Units 10, 11, 12, 13, 16 and 17) shall be fitted with sliding, adjustable privacy/sun screens. Details shall be provided with the Construction Certificate application.
66. In order to protect the privacy of the northern and eastern adjoining properties, continuous, 1.2 metres wide, 1 metre high, in-built planter boxes shall be provided to the northern and eastern edges of the top floor balconies (Units 16 and 17). The planter boxes shall contain shrubs which achieve a maximum growth height of 1 metre and are effective for screening.

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67. The Long Service Levy is to be paid to Council in accordance with the provisions of Section 34 of the Building and Construction Industry Payments Act 1986 prior to the issue of the Construction Certificate.

Note: Required if cost of works exceed \$25,000.00.

68. It is a condition of consent that the applicant, builder or developer or person who does the work on this residential building project arrange the Builders Indemnity Insurance and submit the Certificate of Insurance in accordance with the requirements of Part 6 of the *Home Building Act 1989* to the Council or other Principal Certifying Authority for endorsement of the plans accompanying the Construction Certificate. It is the responsibility of the applicant, builder or developer to arrange the Builder's Indemnity Insurance for residential building work over the value of \$12,000 and to satisfy the Council or other Principal Certifying Authority by the presentation of the necessary Certificate of Insurance so as to comply with the applicable requirements of Part 6 of the *Home Building Act 1989*. The requirements for the Builder's Indemnity Insurance does not apply to commercial or industrial building work or for residential work less than \$12,000, nor to work undertaken by persons holding an Owner/Builder's Permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).
69. The Infrastructure Restorations Fee calculated in accordance with the Council's adopted schedule of Fees and Charges is to be paid to the Council prior to any earthworks or construction commencing. The applicant or builder/developer will be held responsible for and liable for the cost any damage caused to any Council property or for the removal of any waste bin, building materials, sediment, silt, or any other article as a consequence of doing or not doing anything to which this consent relates. "Council Property" includes footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, litter bins, trees, shrubs, lawns mounds, bushland, and similar structures or features on road reserves or any adjacent public place. Council will undertake minor restoration work as a consequence of the work at this site in consideration of the "Infrastructure Restorations Fee" lodged with the Council prior to the release of the Construction Certificate. This undertaking by the Council does not absolve the applicant or Builder/developer of responsibility for ensuring that work or activity at this site does not jeopardise the safety or public using adjacent public areas or of making good or maintaining "Council property" (as defined) during the course of this project.
70. Prior to commencing any construction or subdivision work, the following provisions of the Environmental Planning & Assessment Act, 1979 (the 'Act') are to be complied with:
- a. A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.
 - b. A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act.
 - c. Council is to be notified in writing, at least two (2) days prior to the intention of commencing buildings works, in accordance with Section 81A(2)(c) of the Act.

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- d. Should the development be certified by a Principal Certifying Authority other than Council, a fee for each Part 4A Certificate is to be paid to Council on lodgement of those Certificates with Council.

71. A contribution is to be paid for the provision, extension or augmentation of community facilities, recreation facilities, open space and administration that will, or are likely to be, required as a consequence of development in the area.

TOTAL CONTRIBUTION FOR THIS DEVELOPMENT OF FIFTEEN (15) ADDITIONAL DWELLINGS IS CURRENTLY \$187,070.13. The amount of the payment shall be in accordance with the Section 94 charges as at the date of payment. The charges may vary at the time of payment in accordance with Council's Section 94 Contributions Plan to reflect changes in land values, construction costs and the consumer price index.

This contribution shall be paid to Council prior to the release of the Construction Certificate and the amount payable shall be in accordance with the Council's adopted Section 94 Contributions Plan for Residential Development, effective from 30 June 2004, calculated for additional person as follows:

1. Community Facilities	\$1 117.76
2. Park Acquisition and Embellishment Works- <i>Warrawee</i>	\$4 723.00
3. Sportsgrounds Works	\$1 318.32
4. Aquatic / Leisure Centres	\$27.82
5. Traffic and Transport	\$150.28
6. Section 94 Plan Administration	\$100.04

To obtain the total contribution figure the following table of occupancy rates is to be used:

OCCUPANCY RATES FOR DIFFERENT DWELLING SIZES

Small dwelling (under 75 sqm)	1.27 persons
Medium dwelling (75 - under 110 sqm)	1.78 persons
Large dwelling (110 - under 150sqm)	2.56 persons
Very Large dwelling (150sqm or more)	3.48 persons
New Lot	3.48 persons
SEPP (Seniors Living) Dwelling	1.3persons

72. A total of three visitor parking spaces are to be provided. This is to be clearly shown on the Construction Certificate plans.
73. Prior to issue of the Construction Certificate the Applicant must consolidate the existing Torrens lots which will form the development site. Evidence of lot consolidation, in the form of a plan registered with Land and Property Information, must be submitted for approval of the Principal Certifying Authority prior to issue of the Construction Certificate. This condition is imposed to ensure continuous structures will not be placed across separate titles.

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74. Prior to issue of the Construction Certificate footpath and driveway levels for any fully new, reconstructed or extended sections of driveway crossings between the property boundary and road alignment must be obtained from Council. Such levels are only able to be issued by Council under the *Roads Act 1993*. All footpath crossings, laybacks and driveways are to be constructed according to Council's specifications "Construction of Gutter Crossings and Footpath Crossings" or as specified by Council. These are issued with alignment levels after completing the necessary application form at Customer Services and payment of the adopted fee.

The grading of such footpaths or driveways outside the property shall comply with Council's standard requirements. The suitability of the grade of such paths or driveways inside the property is the sole responsibility of the applicant and the alignment levels fixed by Council may affect these. **Approval of this Development Application is for works wholly within the property. DA consent does not imply approval of footpath or driveway levels, materials or location within the road reserve regardless of whether this information is shown on the application documents.**

Note 1: The construction of footpaths and driveways outside the property, in materials other than those approved by Council, is not permitted and Council may require immediate removal of unauthorised installations.

Note 2: When completing the request for driveway levels application from Council, the applicant must attach a copy of the relevant Development Application drawing which indicates the position and proposed level of the proposed driveway at the boundary alignment. Failure to submit this information may delay processing.

75. The Applicant must carry out the following infrastructure works in the Public Road:
- a. construct a concrete footpath for the Woodville Avenue frontage of the site (asphaltic concrete may be required within tree canopies).

Development Consent under the EP&A Act does NOT give approval to these works on Council property. **THE APPLICANT MUST OBTAIN A SEPARATE APPROVAL UNDER SECTION 138 AND 139 OF THE ROADS ACT 1993** for the works in the Public Road, required by this condition. The Construction Certificate must not be issued, and these works must not proceed, until Council has issued a formal written consent under the *Roads Act 1993*.

To obtain consent under the *Roads Act 1993* for the infrastructure works on Council property, full engineering drawings (plans, sections and elevations) and specifications for the infrastructure works are to be prepared by a suitably qualified and experienced consulting civil engineer. These must be submitted and approved by Council prior to issue of the Construction Certificate. Construction of the works must proceed in accordance with any conditions attached to the Council *Roads Act 1993* approval.

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All works are to be designed in accordance with Council's "Specification for Road and Drainage Works". In addition, the drawings must detail existing services and trees affected by the works, erosion control requirements and traffic management requirements during the course of works. Traffic management is to be certified on the drawings as being in accordance with the documents SAA HB81.1 – 1996 – Field Guide for Traffic Control at Works on Roads – Part 1 and RTA Traffic Control at Work Sites (1998).

NOTE 1: A minimum of three (3) weeks will be required for assessment of Roads Act submissions. Early submission is highly recommended to avoid delays in obtaining a Construction Certificate.

NOTE 2: An engineering assessment fee (set out in Council's adopted fees and charges) is payable and Council will withhold any consent and approved plans until full payment of the correct fees.

NOTE 3: Plans and specifications must be marked to the attention of Council's Development Engineers. In addition, a copy of this condition must be provided, together with a covering letter stating the full address of the property and the accompanying DA number.

76. Prior to the issue of the Construction Certificate, a longitudinal driveway section is to be prepared by a qualified civil/traffic engineer and be submitted for approval by the Principal Certifying Authority. The profile is to be at 1:100 scale along the *inside trafficked edge* of the proposed driveway, starting from the centreline of the frontage street carriageway to the proposed basement floor level. The traffic engineer shall provide specific written certification on the plans that:

- Vehicular access can be obtained using grades of 20% (1 in 5) maximum (to allow the laden garbage collection vehicle to exit the site), and
- All changes in grade (transitions) comply with clause 2.5.3 of Australian Standard 2890.1 (2004) – "Off-street car parking" to prevent the scraping of the underside of vehicles, particularly along the inside radius for curved driveways.
- If a new driveway crossing is proposed then the longitudinal sections at the boundary alignment **must incorporate the driveway crossing levels as issued by Council** upon prior application.

77. Prior to issue of the Construction Certificate the Applicant must submit, for approval by the Principal Certifying Authority, certified parking layout plan(s) to scale showing all aspects of the vehicle access and accommodation arrangements clearly dimensioned. A qualified civil/traffic engineer must review the proposed vehicle access and accommodation layout and provide written certification on the plans that:

- All parking space dimensions, driveway and aisle widths, driveway grades, transitions, circulation ramps, blind aisle situations and other trafficked areas comply in full with Australian Standard 2890.1 – 2004 "Off-street car parking".

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- A clear height clearance of 2.5 metres (required under DCP40 for waste collection trucks) is provided over the designated garbage collection truck manoeuvring areas within the basement.
- No doors or gates are provided in the access driveways to the basement carpark which would prevent unrestricted access for internal garbage collection at any time from the basement garbage storage and collection area.
- Traffic mirrors are shown at each end of the one way ramp.

The vehicle access and accommodation arrangements are to be constructed in accordance with the certified plans.

78. Prior to issue of the Construction Certificate and prior to commencement of any works that Authority, a Soil and Erosion Control Plan prepared in accordance with the Landcom document "*Managing Urban Stormwater – Soils and Construction, Volume 1*" (2004). A qualified and experienced civil/environmental engineer shall prepare this plan in accordance with the above guidelines and section 8.2.1 of Councils Water Management Development Control Plan 47.
79. Prior to issue of the Construction Certificate the applicant must submit, for approval by the Principal Certifying Authority, scale construction plans and specifications in relation to the stormwater management and disposal system for the development. The plan(s) must include the following detail:
- Exact location and reduced level of discharge point to the public drainage system.
 - Full layout of the property drainage system components, including but not limited to (as required) gutters, downpipes, spreaders, pits, swales, kerbs, cut-off and intercepting drainage structures, subsoil drainage, flushing facilities and all ancillary stormwater plumbing - all designed for a 235mm/hour rainfall intensity for a duration of five (5) minutes (1:50 year storm recurrence).
 - Location(s), dimensions and specifications for the required rainwater storage and reuse tanks and systems. Where proprietary products are to be used, manufacturer specifications or equivalent shall be provided.
 - Specifications for reticulated pumping facilities (including pump type and manufacturer specifications) and ancillary plumbing to fully utilise rainwater in accordance with the Ku-ring-gai Council Development Control Plan 47 and/or BASIX commitments.
 - Details of the required **on-site detention** tanks required under Ku-ring-gai Council Water Management DCP 47 including dimensions, materials, locations, orifice and discharge control pit details as required (refer chapter 6 and appendices 2, 3 and 5 of DCP 47 for volume, PSD and design requirements).
 - Details of the water quality measures required under Chapter 8 of DCP 47.
 - The required basement stormwater pump-out system to cater for driveway runoff and subsoil drainage (refer appendix 7.1.1 of Development Control Plan 47 for design).
 - The above construction drawings and specifications are to be prepared by a qualified and experienced civil/hydraulic engineer in accordance with Councils Water Management Development Control Plan 47, Australian Standards 3500.2 and 3500.3 - *Plumbing and Drainage Code* and the BCA. The plans may be generally based on the

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Concept Stormwater Management Plans by AFCE Environment + Infrastructure submitted for Development Application approval, which are to be advanced as necessary for construction issue purposes.

80. Prior to issue of the Construction Certificate the Applicant must contact Energy Australia regarding power supply for the subject development. A written response detailing the full requirements of Energy Australia (including any need for underground cabling, substations or similar within or in the vicinity the development) shall be submitted to the Principal Certifying Authority for approval prior to issue of the Construction Certificate. Any structures or other requirements of Energy Australia shall be reflected on the plans issued with the Construction Certificate, to the satisfaction of the Principal Certifying Authority and Energy Australia. The requirements of Energy Australia must be met in full prior to issue of the Occupation Certificate.
81. Prior to issue of the Construction Certificate the applicant must make contact with all relevant utility providers whose services will be impacted upon by the approved development. A written copy of the requirements of each provider, as determined necessary by the Principal Certifying Authority, must be obtained. All utility services or appropriate conduits for the same, including electricity, gas, telephone, water and sewerage must be provided by the developer in accordance with the specifications of those supply authorities.

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

82. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s is fenced off at the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

Tree/Location	Radius in Metres
#15 Jacaranda mimosifolia (Jacaranda) Adjacent to north west site corner	5.0m
#15a Hymenosporum flavum (Native Frangipani) Adjacent to north west site corner	3.0m
#14 Corymbia ficifolia (Red flowering gum) Adjacent to western site boundary	4.0m
#12 Banksia integrifolia (Banksia) Adjacent to western site boundary	2.0m
#11 Araucaria columnaris (New Caledonia Pine) Adjacent to south west site corner	3.0m
#9 Jacaranda mimosifolia (Jacaranda)	4.0m

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Woodville Ave nature strip

#23 Ulmus parvifolia (Chinese Elm) 2.0m
Adjacent to north west site boundary

83. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s excluding that area of the proposed driveway shall be fenced off for the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site:

Tree/Location	Radius From Trunk
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#5 Platanus x hybrida (London Plane Tree) Woodville Ave nature strip	8.0m
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#6 Lophostemon confertus (Brushbox) Adjacent to southern site boundary in Woodville Ave site frontage	6.0m
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84. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
85. Tree protection signage is to be attached to each tree Protection Zone and displayed in a prominent position and the sign repeated at 10m intervals or closer where the fence changes direction. Each sign to advise -as minimum details, the following:
- Tree Protection Zone
 - This fence has been installed to prevent damage to the trees and their growing environment both above and below ground, and access is restricted.
 - If encroachment or incursion into this Tree Protection Zone is deemed to be essential the consulting Arborist should be informed prior to the undertaking of such works
 - Name, address, and telephone number of the developer/principal certifying authority.
86. The area of the Tree Protection Zone is to be mulched to a depth of 100mm with organic material being 75% leaf litter and 25% wood, and this being composted material preferably from the same genus and species of tree as to that where the mulch is to be applied, ie species specific mulch. The depth of mulch and type as indicated, to be maintained for the duration of the project.
87. No services either temporary or permanent are to be located within the Tree protection Zone. If services are to be located within the Tree Protection Zone, special details will need to be provided by a qualified consulting Arborist for the protection of the tree regarding the location of the service/s.

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88. In the event of prolonged dry periods, or where a tree has been transplanted, or where excavation nearby, especially up slope, leads to drying out of soil profiles closest to the tree/s, the tree/s is to be deep root watered thoroughly at least twice a week. The need for such watering is determined readily by observing the dryness of the soil surface within the dripline of the tree by scraping back some mulch. Mulch to be reinstated afterwards. In the event of disrupted ground or surface water flows to the tree due to excavation, filling or construction, an irrigation system may be required to be installed, consideration must be given to volume, frequency, and drainage of water delivered, and this should be in consultation with a qualified consulting Arborist.
89. If a tree is growing down slope from an excavation, a silt fence located along the contours of the site in the area immediately above the Tree Protection Zone fencing may be need to be installed and regularly maintained to prevent burial and asphyxiation of the roots of the tree. To allow for the maintenance of both fences, the silt fence must be constructed separately to the tree protection fence and the two fences must be constructed independently of each other and stand alone. To reduce competition the Tree Protection Zone is to be kept free of weeds for the duration of the development works.
90. Prior to the commencement of any work, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder who intends to carry out the approved works.
91. External finishes and colours are to be sympathetic to the surrounding environment. Samples of materials and finishes are to be submitted to and approved by Council prior to the commencement of work.
92. To preserve and enhance the natural environment, earthworks and/or demolition of any existing buildings shall not commence until an Erosion and Sediment Control Plan (ESCP) is prepared, submitted to the Principal Certifying Authority, approved and implemented to the satisfaction of the Principal Certifying Authority. The plan shall comply with the guidelines set out in the NSW Department of Housing Manual "Managing Urban Stormwater: Soils and Construction" Certificate.
93. A Compliance Certificate pursuant to Section 73 Sydney Water Act 1994, as evidence of compliance with the provisions of Division 9 of that Act, to be obtained from Sydney Water prior to the commencement of any work on the site.

CONDITIONS TO BE COMPLIED WITH PRIOR TO OCCUPATION

94. Prior to issue of the Occupation Certificate, the Principal Certifying Authority (where not Council) must provide Ku-ring-gai Council with a signed declaration that the following works in the road reserve have been completed in full:
 - New concrete driveway crossing in accordance with levels and specifications issued by Council.

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- Removal of **all** redundant driveway crossings and kerb laybacks (or sections thereof) and reinstatement of these areas to footpath, turfed verge and upright kerb and gutter. (Reinstatement works to match surrounding adjacent infrastructure with respect to integration of levels and materials).
 - Full repair and resealing of any road surface damaged during construction.
 - Full repair of any footpath damaged during construction.
 - Full replacement of damaged sections of grass verge with a non-friable turf of native variety to match existing.
 - All works must be completed in accordance with the *General Specification for the Construction of Road and Drainage Works in Ku-ring-gai Council*, dated November 2004. The Occupation Certificate must not be issued until all damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council. Repair works shall be at no cost to Council.
95. Prior to issue of an Occupation Certificate the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.
96. Prior to issue of an Occupation Certificate the applicant must submit certification from a suitably qualified and experienced traffic/civil engineer to the Principal Certifying Authority. This certification must be based on a site inspection of the constructed vehicle access and accommodation areas, with dimensions measurements as necessary, and must make specific reference to the following:
- That the as-constructed carpark complies with the approved Construction Certificate plans,
 - That mirrors are provided at each end of the one way ramp,
 - That the completed vehicle access and accommodation arrangements comply in full with Australian Standard 2890.1 – 2004 “Off-Street car parking” in terms of minimum parking space dimensions provided,
 - That finished driveway gradients and transitions will not result in the scraping of the underside of cars.
 - That no doors, gates, grilles or other structures have been provided in the access driveways to the basement carpark, which would prevent unrestricted access for internal garbage collection from the basement garbage storage and collection area.
 - That the vehicular headroom requirements of:
 - Australian Standard 2890.1 - “Off-street car parking”,
 - 2.44m height clearance for waste collection trucks (refer DCP 40) are met from the public street into and within the applicable areas of the basement carpark.
97. Prior to issue of the Occupation Certificate a qualified and experienced consulting civil/hydraulic engineer must undertake a site inspection of the completed stormwater drainage and management system. The engineer is to provide written certification based on

Item 1

the site inspection to the Principal Certifying Authority, prior to issue of the Occupation Certificate, which makes specific reference to all of the following:

- That the stormwater drainage works have been satisfactorily completed in accordance with the approved Construction Certificate drainage plans.
- That the minimum retention and on-site detention storage volume requirements of Ku-ring-gai Council Water Management DCP 47 respectively, have been achieved in full.
- That retained water is connected and available for uses including toilet flushing, clothes washing and irrigation.
- That basement and subsoil areas are able to drain via a pump/sump system installed in accordance with AS3500.3 and appendix 7.1.1 of Ku-ring-gai Council Water Management DCP 47.
- That all grates potentially accessible by children are secured.
- That components of the new drainage system have been installed by a licensed plumbing contractor in accordance with the Plumbing and Drainage code AS3500.3 2003 and the BCA, and
- All enclosed floor areas, including habitable and garage floor levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices.

The following certification sheets **must be accurately completed and attached** to the certification:

- Rainwater retention certification sheet contained at appendix 13 of Water Management DCP 47.
- On-site detention certification sheet contained at appendix 4 of Water Management DCP 47.

98. Prior to issue of the Occupation Certificate a registered surveyor must provide a Works-as-Executed (WAE) survey of the completed stormwater drainage and management systems. The WAE plan(s) must be submitted to the Principal Certifying Authority for approval prior to issue of the Occupation Certificate. The WAE survey must indicate:

- As built (reduced) surface and invert levels for all drainage pits.
- Gradients of drainage lines, materials and dimensions.
- As built (reduced) level(s) at the approved point of discharge to the public drainage system.
- As built location and internal dimensions of all detention and retention structures on the property (in plan view) and horizontal distances to nearest adjacent boundaries and structures on site.
- The achieved storage volumes of the installed retention and detention storages and derivative calculations.
- As built locations of all access pits and grates in the detention and retention system(s), including dimensions.
- The size of the orifice or control fitted to any on-site detention system.

Item 1

- Dimensions of the discharge control pit and access grates.
 - The maximum depth of storage possible over the outlet control.
 - Top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system.
 - The WAE plan(s) must show the as-built details above in comparison to those shown on the drainage plans approved with the Construction Certificate prior to commencement of works. All relevant levels and details indicated must be marked **in red** on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.
99. Prior to issue of the Occupation Certificate a maintenance regime shall be prepared for the basement stormwater pump-out system and submitted to Principal Certifying Authority. The regime shall specify that the system is to be regularly inspected and checked by qualified practitioners.
100. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring with certifications as specified in the Report on Geotechnical Investigation by Jeffery and Katauskas, and the professional geotechnical input over the course of the works, must be compiled in report format and submitted to the Principal Certifying Authority for approval.
101. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate (and at the completion of the works) the Applicant shall submit to the Principal Certifying Authority (PCA) a follow up dilapidation report on the visible and structural condition of the existing structures originally assessed:
- Full road pavement width of Woodville Avenue and southbound road pavement of Pacific Highway, both including kerb and gutter, over the site frontage, including the intersection.
 - All driveway crossings and laybacks in Woodville Avenue opposite the subject site.
 - The residence, garage and brick retaining wall at 4-6 Woodville Avenue; and
 - The residence at 1537 Pacific Highway.
 - The Report must be completed by a practicing consulting structural engineer and be submitted for Council records prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate.
102. The landscape works shall be completed prior to release of the Certificate of Occupation and maintained in a satisfactory condition at all times.
103. On completion of the LANDSCAPE WORKS/TREE PLANTING OR SCREEN PLANTING, a Landscape Architect or qualified Landscape Designer shall submit a report certifying correct installation, faithful to the landscape plan to the Principal Certifying Authority with a copy to Council, prior to issue of the Occupation Certificate.

PRIOR TO RELEASE OF SUBDIVISION CERTIFICATE

Item 1

104. Prior to release of the linen plan/issue of the subdivision certificate by the Consent Authority, the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the on-site stormwater detention facilities. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instrument for protection of on-site detention facilities" (available from Council on request) and to the satisfaction of Council. The location of the on-site detention facilities for all dwellings is to be denoted on the final plan of subdivision.
105. Prior to release of the linen plan/issue of the subdivision certificate by the Consent Authority, the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site retention and re-use facilities. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instrument for protection of retention and re-use facilities" (available from Council on request) and to the satisfaction of Council. The location of the retention and re-use facilities for all dwellings are to be denoted on the final plan of subdivision
106. An easement for waste collection is to be created. This is to permit legal access for Council, Council's contractors and their vehicles over the subject property for the purpose of collecting waste from the property. The terms of the easement are to indemnify Council and Council's contractors against damages to private land or property whilst in the course of carrying out waste collection services. The terms of the easement are to be generally in accordance with Council's draft terms for an easement for waste collection.
107. For endorsement of the linen plan/issue of the subdivision certificate, the Applicant shall submit an original plan of subdivision plus six (6) copies, suitable for endorsement by the consent authority. The following details **must** be submitted with the plan of Subdivision and its (5) copies, where Council is the consent authority:
- The endorsement fee current at the time of lodgment.
 - The 88B Instruments plus six (6) copies,
 - A copy of the Occupation Certificate,
 - The Consulting Engineer's certification of the on-site stormwater detention facility. This must be on the standard Council on-site detention certification sheet, available from Council's customer services.
 - A copy of all works-as-executed plans required under the consent,
 - All Surveyor's and/or Consulting Engineer's certification(s) required under this consent,
 - The Section 73 (Sydney Water) Compliance Certificate.

Council officers will check the consent conditions on the subdivision. Failure to submit the required information will delay endorsement of the linen plan, and may require payment of rechecking fees.

Note 1: Plans of subdivision and copies must not be folded.

Item 1

- Note 2: Council will not accept bonds in lieu of completing subdivision works.
Note 3: If the certifying authority is not Council, then a copy of all of the above must be provided to Council

108. For endorsement of the linen plan/subdivision certificate issue, the Applicant shall submit an original instrument under Section 88B of the Conveyancing Act with the plan of subdivision, plus six (6) copies. This is to create any required easements, rights-of-carriageway, positive covenants, restrictions-on-use or other burdens/benefits as may be required. Ku-ring-gai Council must be named as the authority whose consent is required to release, vary or modify the same.
109. Prior to release of the linen plan/issue of the subdivision certificate, the applicant shall create all burdens including but not limited to drainage easements, easements for services and rights-of-carriageway, as required. A registered surveyor is to certify, prior to release of the linen plan/issue of the subdivision certificate, that all existing interallotment drainage lines, services and/or driveways are fully contained within the proposed burdens and/or that future provision of such are fully covered by the proposed burdens. Alternatively, where the surveyor is of the opinion that no interallotment easements or rights-of-carriageway are required, then certification to this effect must be submitted to the Principal Certifying Authority (PCA).
110. All parking spaces and all areas of common property, including visitor car parking spaces and on-site detention facilities, which are to be common property, must be included on the final plans of strata subdivision.
111. Prior to release of the linen plan/issue of the subdivision certificate, the Section 73 Sydney Water compliance certificate **which refers to the subdivision application** must be obtained and submitted to the Council.
112. All parking spaces and all areas of common property, including visitor car parking spaces and on-site detention facilities, which are to be common property, must be included on the final plans of strata subdivision.

BUILDING CONDITIONS

113. The following are required details and must be submitted to the Principal Certifying Authority *prior to issue of the Construction Certificate*. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.
- a. Details prepared by a practicing structural engineer for all or any reinforced concrete, structural steel or timber framing.
 - b. Wind bracing details complying with AS 1684-1992 National Timber Framing Code, AS 1170.2-1989 Wind Load Code or AS 4055-1992 Wind Loads for Housing Code.
 - c. Upper floor joist details, engineered or complying with AS 1684-1992 National Timber Framing Code.
 - d. Retaining walls and associated drainage.

Item 1

- e. Wet area waterproofing details complying with the Building Code of Australia.
 - f. Mechanical ventilation details complying with Australian Standard 1668-1993 Mechanical Ventilation & Air-conditioning.
 - g. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
 - h. Stormwater disposal details complying with Council's Stormwater Management Manual and/or other conditions of this consent.
114. Any mechanical ventilation installed in a dwelling shall comply with the requirements of Part 3.8.5.0 of the Building Code of Australia Housing Provisions. Documentary evidence of compliance is to be obtained from a suitably qualified person and submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.
115. For fire safety an automatic fire detection and alarm system shall be installed throughout the dwelling in accordance with the following requirements:
- a. A smoke alarm system complying with Part 3.7.2 of the Building Code of Australia Housing Provisions; or
 - b. Smoke alarms which:
 - i. comply with Australian Standard 3786 or listed in the Scientific Services Laboratory Register of Accredited Products (all accredited products should have scribed on them the appropriate accreditation notation); and
 - ii. are connected to the mains and have a standby power supply; and
 - iii. are installed in suitable locations on or near the ceiling and as prescribed under Part 3.7.2 of the Building Code of Australia Housing Provisions.

To ensure compliance with this condition, a Compliance Certificate or documentary evidence from a suitably qualified person is to be submitted to the Principal Certifying Authority.

116. Termite protection which will provide whole of building protection in accordance with Australian Standard 3660 - "*Protection of Buildings from Subterranean Termites*" is to be provided.

Council has a non chemical policy for termite control but will consider proposals involving physical barriers in combination with approved chemical systems. Handspraying is prohibited.

Where a monolithic slab is used as part of a termite barrier system, the slab shall be constructed in accordance with Australian Standard 2870.1 or as designed by a structural engineer but in either case shall be vibrated to achieve maximum compaction.

To ensure compliance with this condition, a Compliance Certificate or documentary evidence from a suitably qualified person is to be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.

Item 1

N Richter
Executive Assessment Officer

M Leotta
Team Leader
Development Assessment - North

M Prendergast
Manager
Development Assessment Services

M Miocic
Director
Development & Regulation

Attachments:

- Zoning extract - 558063**
- Survey plan - 558064**
- Strata plans - 558065**
- Site analysis - 558066**
- Shadow diagrams – 558067**
- Compliance calculations - 558070**
- Landscape plan - 558072**
- Basement and roof plans - 558074**

Zoning Extract

1533 Pacific Hwy & 2a Wooville Ave Wahroonga



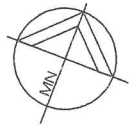
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	EXISTING COUNTY ROAD		
	RESIDENTIAL 2(c)		
	RESIDENTIAL 2(c2)		
	RESIDENTIAL 2(d3)		
	SPECIAL USES 5(a) (Schools etc)		



21-11-2005

Scale = 1:2000





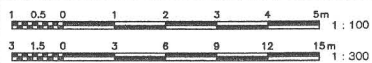
PACIFIC

HIGHWAY

Short Line Table	
a	3.505 309°36'
b	3.505 285°59'
c	3.505 262°22'



Origin of Levels : SSM 23755 Fd.
Location : Pacific Highway, Warrongga.
R.L. : 193.018m A.H.D.



date Amendment details

This plan is subject to
Copyright & any reproduction
of this plan without approval
is strictly prohibited.

reference #Go: 11818.dwg

L.G.A.: KU-RING-GAI

Parish: WAHROONGA County: NORTHUMBERLAND

(For Contour Detail Surveys Only)

- All Dimensions are in metres unless otherwise shown.
- Tree spreads (if shown) have been drawn to scale.
- Sewer details (if within Gasford L.G.A.) are from G.C.G.
diagrams and are approximate positions only.

contour interval: 0.5m

In set: 1 OF 1

design: N/A

date: 22/02/05

approved:

Registered Surveyor

surveyed: D.G. drawn: P.M.D.

red. ratio: 1:300 datum: A.H.D.

design: N/A

date: 22/02/05

approved:

Registered Surveyor

client: WILSON & FOO

#1533 PACIFIC HIGHWAY & #2a

address: WOODVILLE RD, WAHROONGA.

site details: Lots 10 & 11 in DP 608144.

title: PLAN SHOWING SPOT-

LEVELS, CONTOURS & DETAIL

wayne dowdle & associates

surveyors & planners, ecological & bushfire consultants

#1 OSCAR STREET

UMINA BEACH NSW 2257

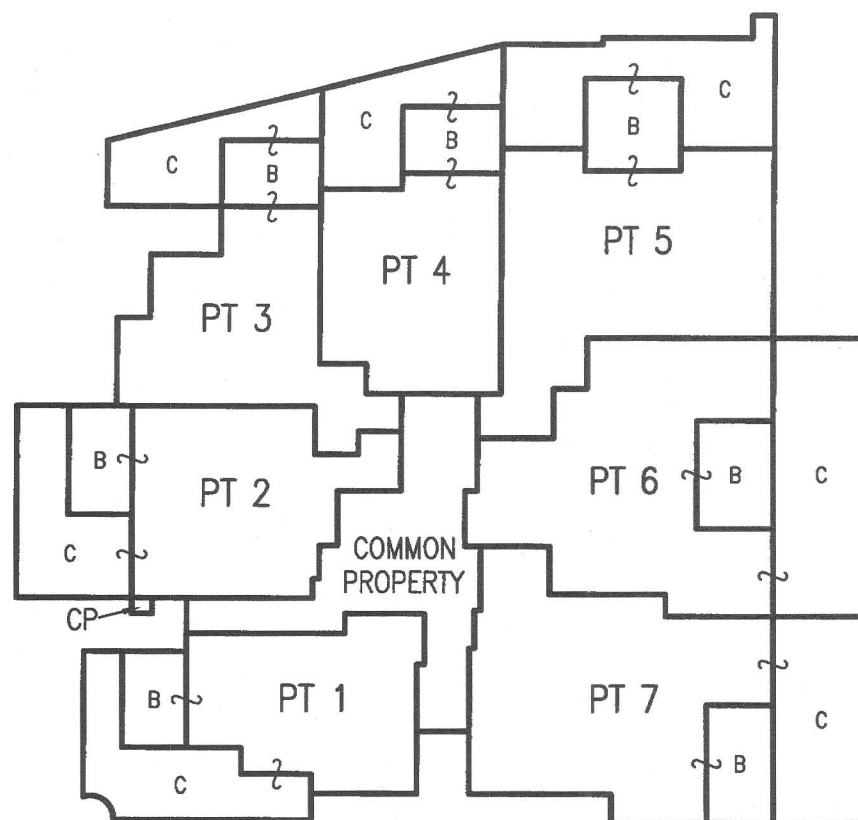
PH 43443553 Fax 43446636

email wdownle@tpg.com.au

Po Box 158 WY WY NSW 2256

(A) EASEMENT FOR SEWERAGE PURPOSES
OVER EXISTING LINE OF PIPES.

Tree Details Table			
#	Trunk Ø	Spread	Height
1	0.8m	10m	16m
2	0.3m	6m	12m
3	0.3m	4m	12m
4	0.3m	10m	10m
5	0.8m	15m	17m
6	0.9m	14m	16m
7	0.3m	4m	5m
8	0.2m	6m	8m
9	0.5m	8m	8m
10	0.3m	10m	8m
11	0.4m	5m	15m
12	0.3m	6m	8m
13	0.3m	6m	8m
14	0.6m	10m	16m
15	0.6m	10m	12m
16	0.4m	8m	6m
17	0.3m	6m	8m
18	0.4m	10m	10m
19	0.3m	7m	8m
20	0.3m	6m	6m
21	0.3m	8m	12m
22	0.6m	10m	17m
23	0.2m	6m	12m
24	0.6m	7m	6m
25	0.3m	10m	8m
26	0.7m	10m	15m
27	0.3m	3m	8m
28	0.3m	4m	8m
29	0.6m	10m	8m
30	0.5m	8m	17m

DRAFTGROUND LEVEL**CONTRACT PLAN**

Plan compiled from
architectural CAD data.

Plan is subject to final
survey after completion
of construction.

PRINTED 27 JUNE 2005

THIS PLAN IS BASED ON SKETCH PLANS BY
WOLSKI, LYCENKO & BRECKNOCK - ARCHITECTS
DWG No.: DA03 ISSUE: 23 JUNE 2005

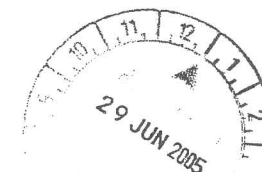
B - DENOTES BALCONY
C - DENOTES COURTYARD
CP - DENOTES COMMON PROPERTY

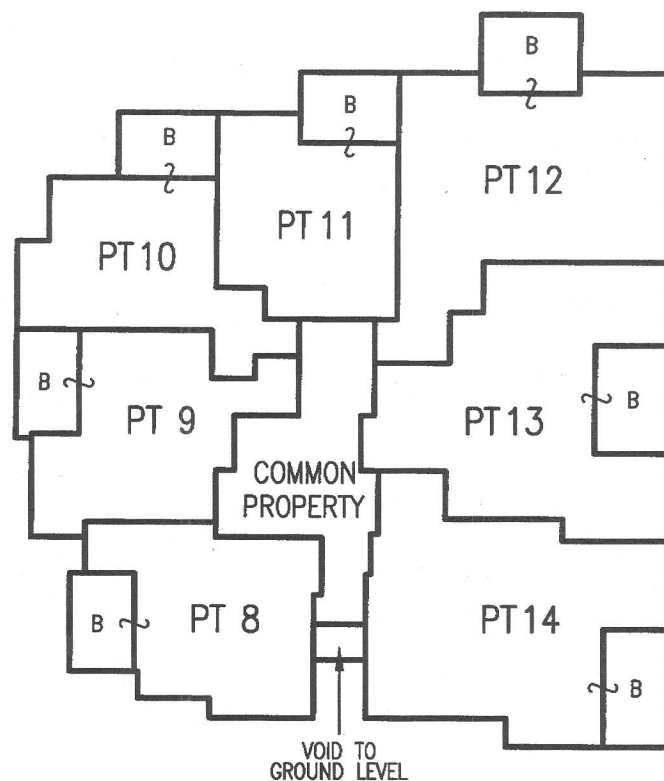
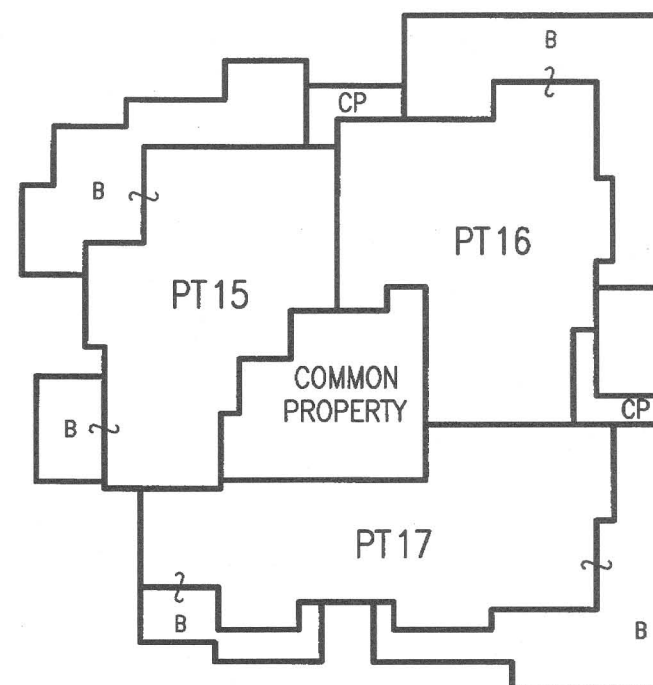
Reduction Ratio 1 : 200

Lengths are in metres

Registered Surveyor

Authorised Person/General Manager/Accredited Certifier



DRAFTLEVEL 1LEVEL 2**CONTRACT PLAN**

Plan compiled from
architectural CAD data.

Plan is subject to final
survey after completion
of construction.

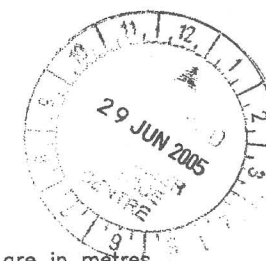
PRINTED 27 JUNE 2005

THIS PLAN IS BASED ON SKETCH PLANS BY
WOLSKI, LYCENKO & BRECKNOCK - ARCHITECTS
DWG No.: DA04 & DA05 ISSUE: 23 JUNE 2005

B - DENOTES BALCONY
CP - DENOTES COMMON PROPERTY

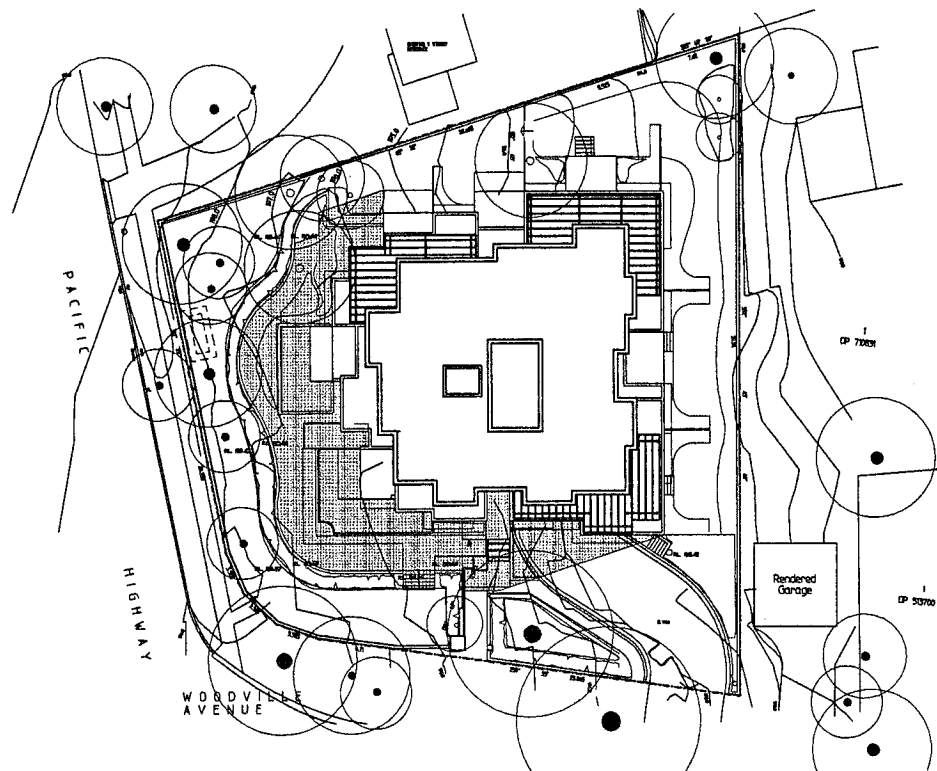
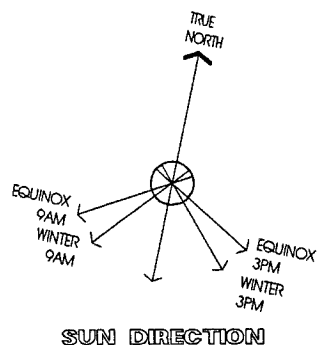
Reduction Ratio 1 : 200

Lengths are in metres



Registered Surveyor

Authorised Person/General Manager/Accredited Certifier



SHADOW DIAGRAM
EQUINOX SEPT & MAR 21 9am
AZIMUTH 60deg; ALTITUDE 35deg

SHADOW CAST BY
DEVELOPMENT

SCALE 1:200
0 2 4 6 8 10m
PLOT DATE 24/05/05



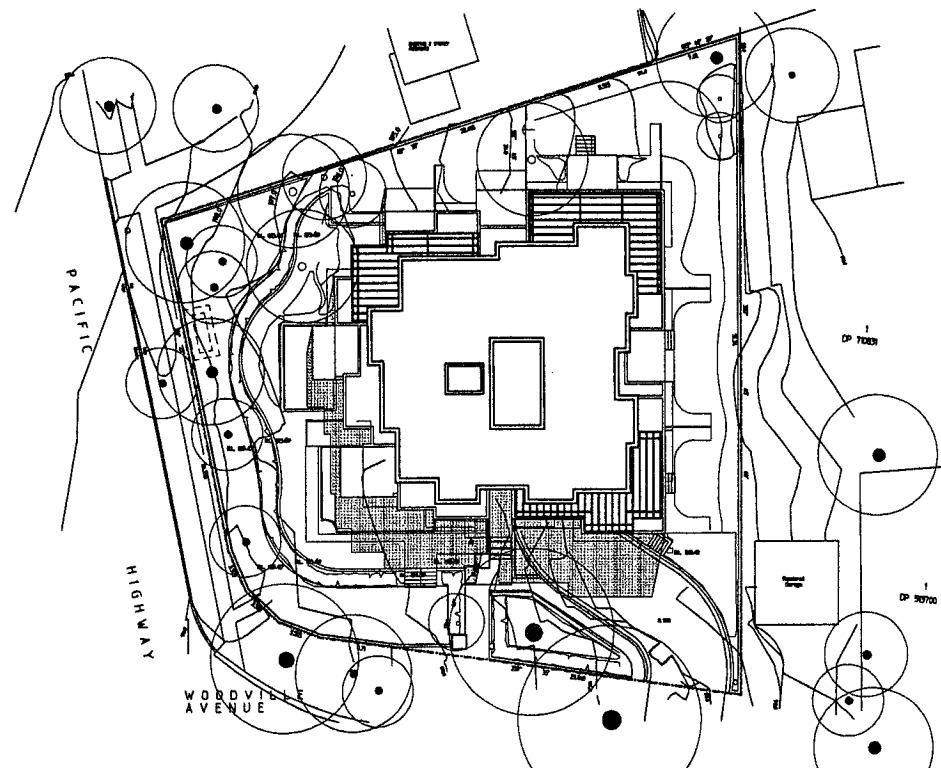
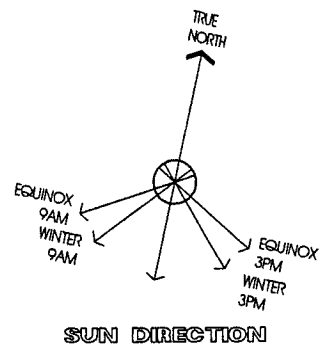
ADVOCATE
ARCHITECTS

RESIDENTIAL REDEVELOPMENT
CNR PACIFIC HWY & WOODVILLE AVE, WAHROONGA
FOR ADVOCATE DEVELOPMENTS

WOLFE, HYCHES & MURDOCK - ARCHITECTS
MAY 2005

SHADOW DIAGRAM

SH01
2512
DATE DRAWN: 23/06/05

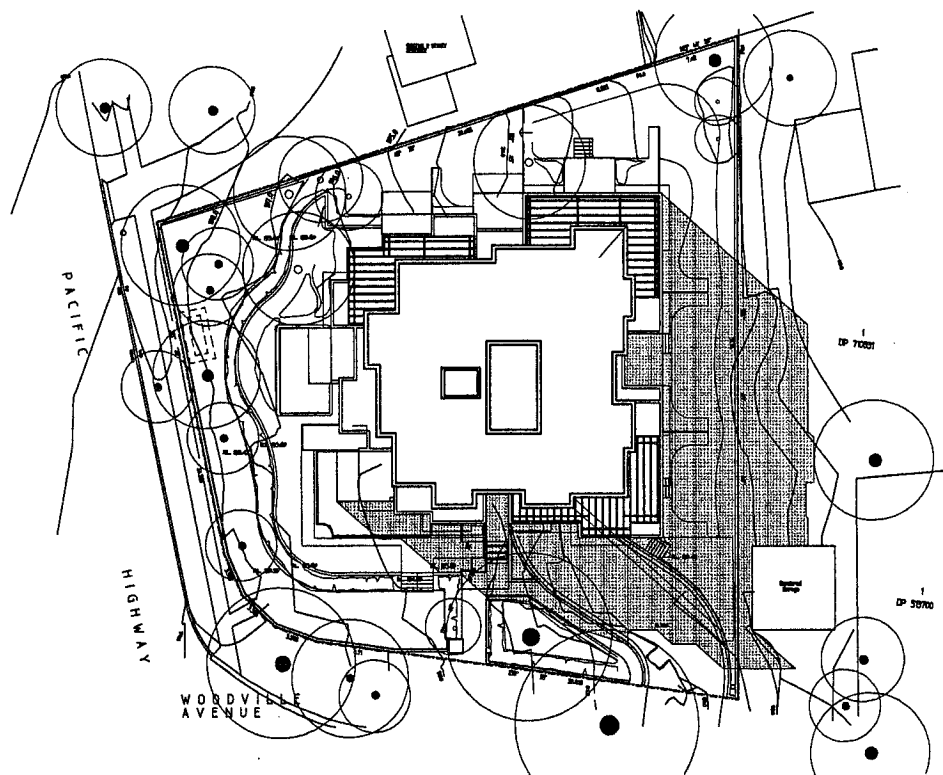
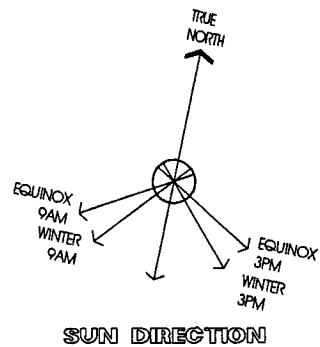


SHADOW CAST BY DEVELOPMENT

SHADOW DIAGRAM
EQUINOX SEPT & MAR 21 12noon
AZIMUTH 0deg ALTITUDE 55deg

70

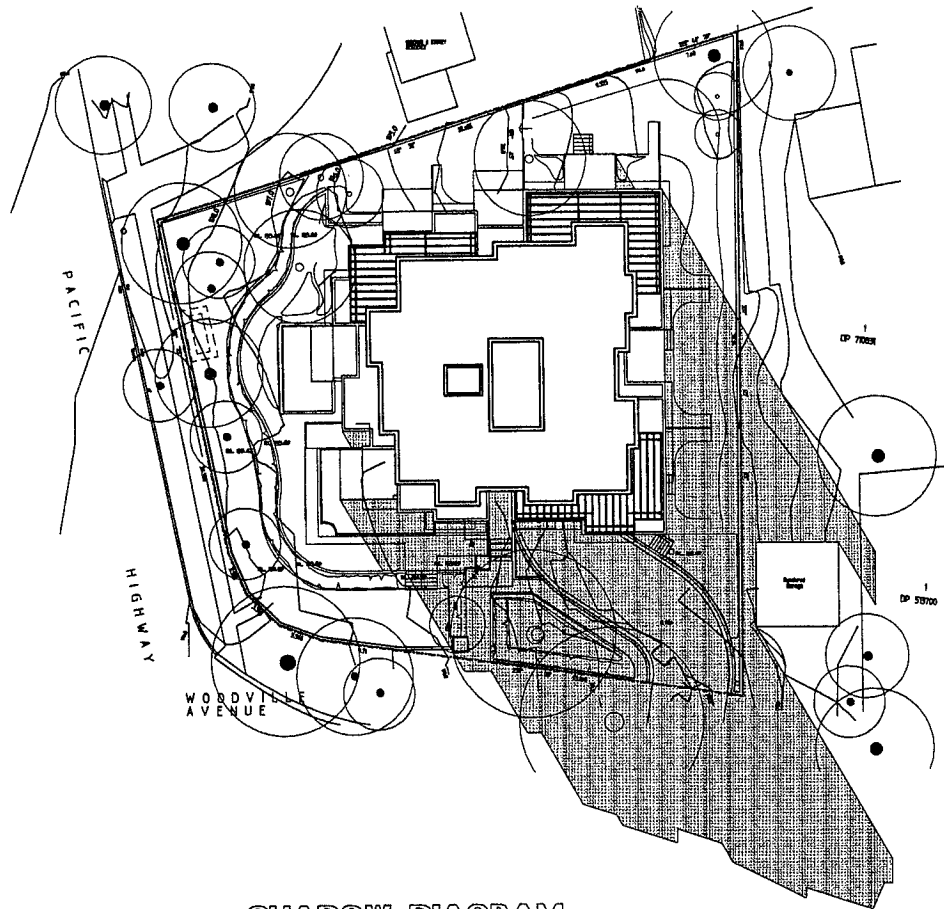
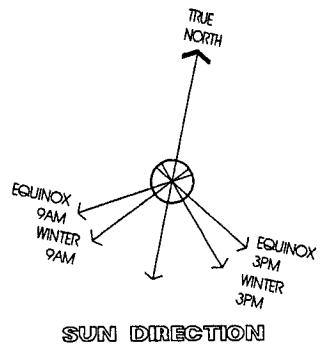




SHADOW DIAGRAM
EQUINOX SEPT & MAR 21 3pm
AZIMUTH 60deg ALTITUDE 35deg

SHADOW CAST BY
DEVELOPMENT

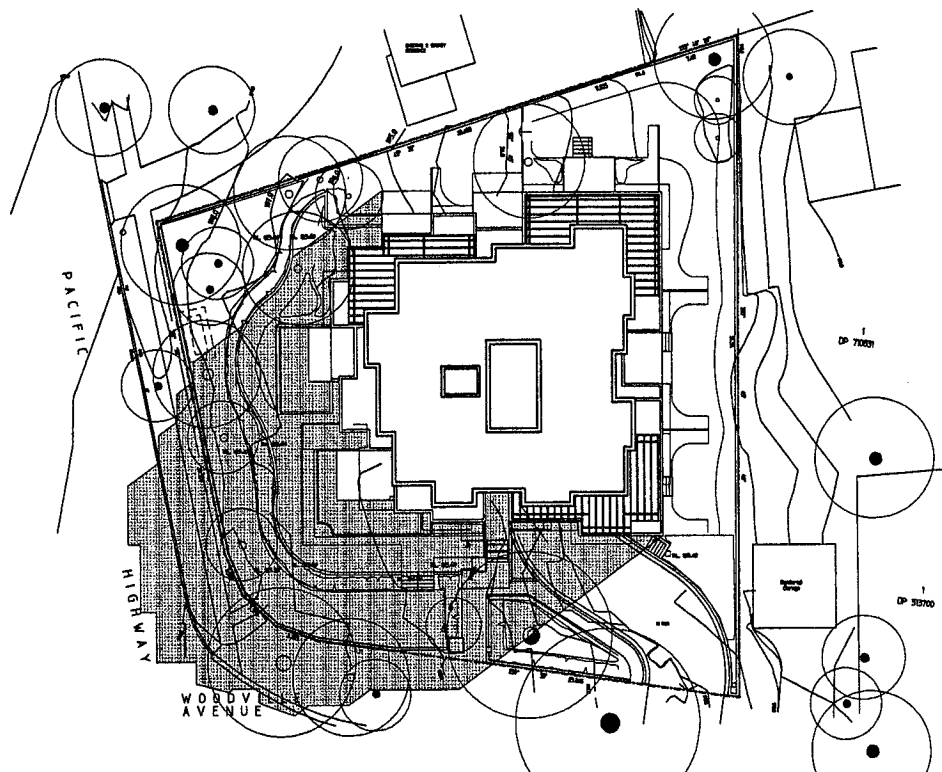
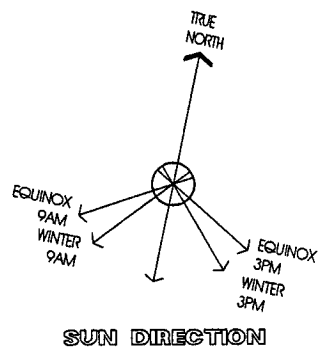
71



SHADOW CAST BY DEVELOPMENT

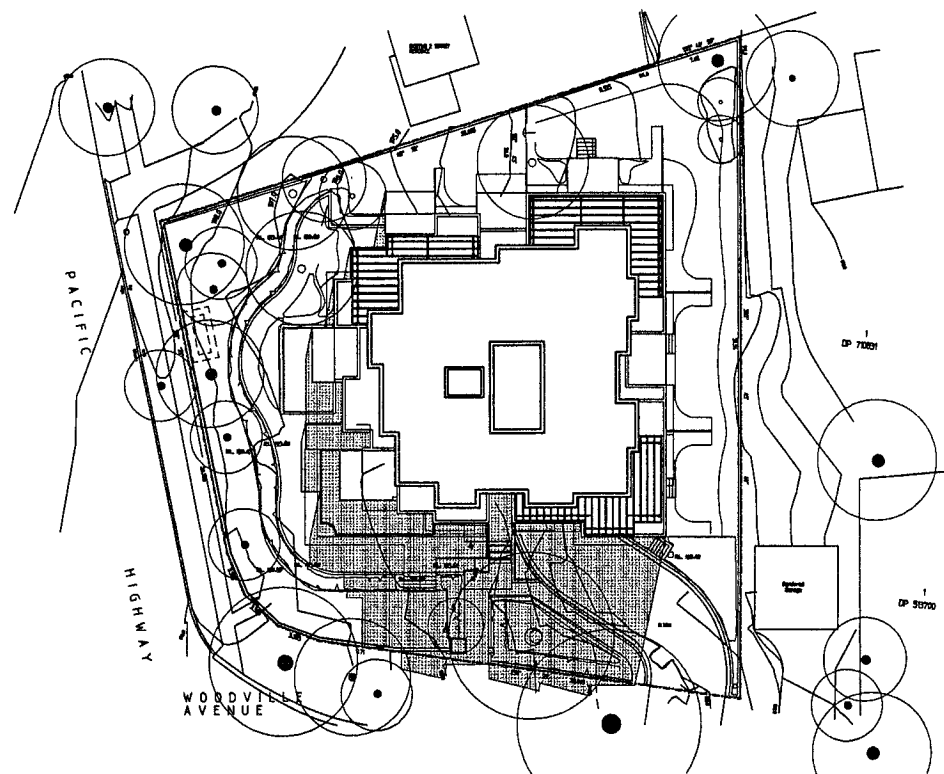
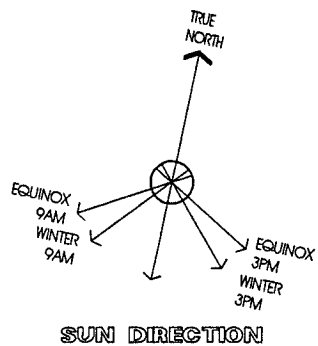
SHADOW DIAGRAM
WINTER JUNE 21 3pm
AZIMUTH 42deg ALTITUDE 17deg

72



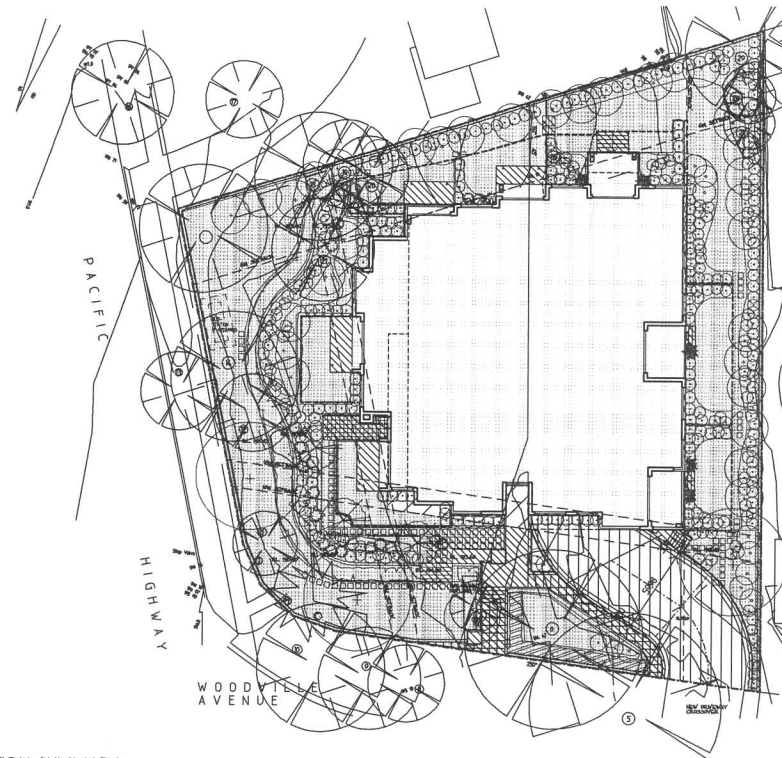
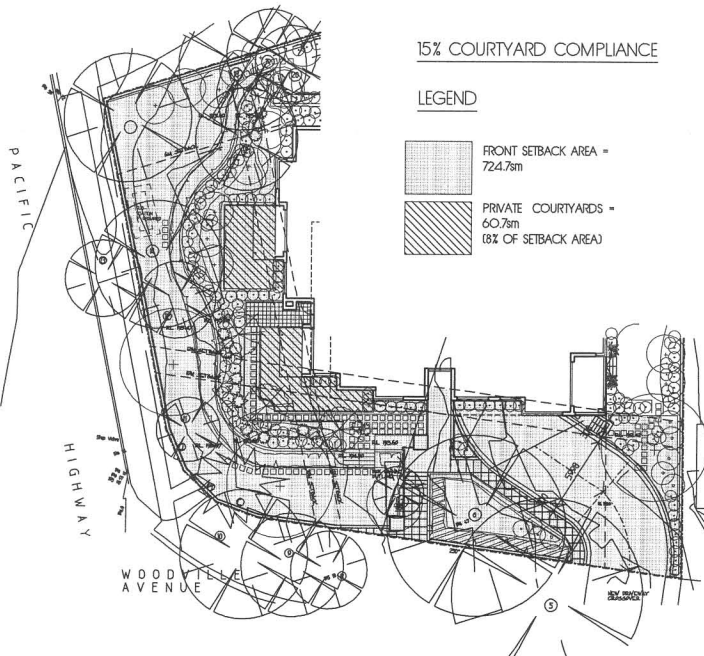
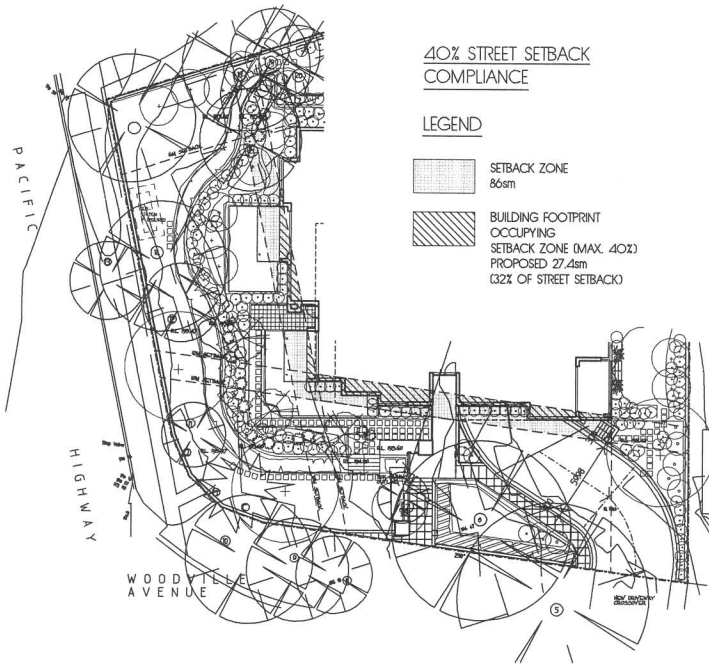
SHADOW DIAGRAM
WINTER JUNE 21 9am
AZIMUTH 42deg ALTITUDE 17deg





SHADOW DIAGRAM
WINTER JUNE 21 12noon
AZIMUTH 0deg ALTITUDE 51deg

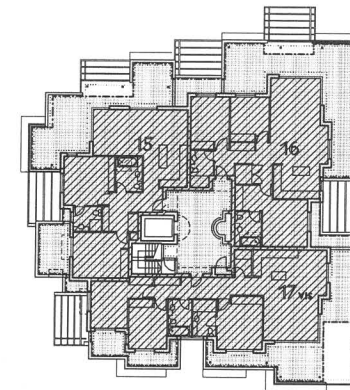


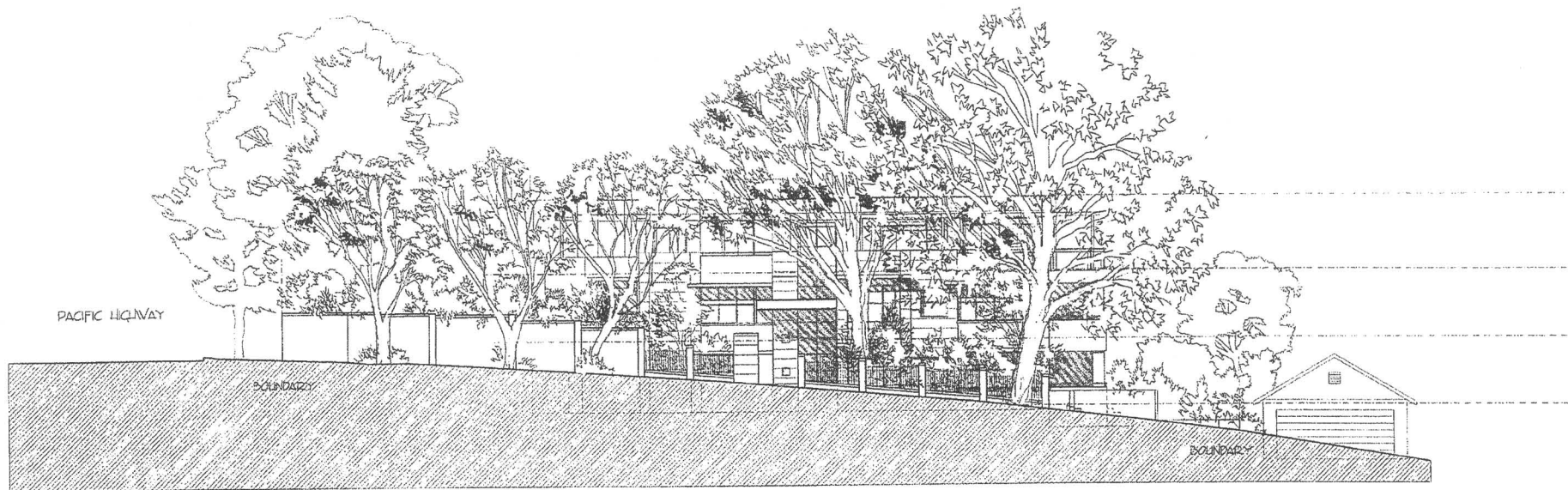


ACCOMMODATION SUMMARY

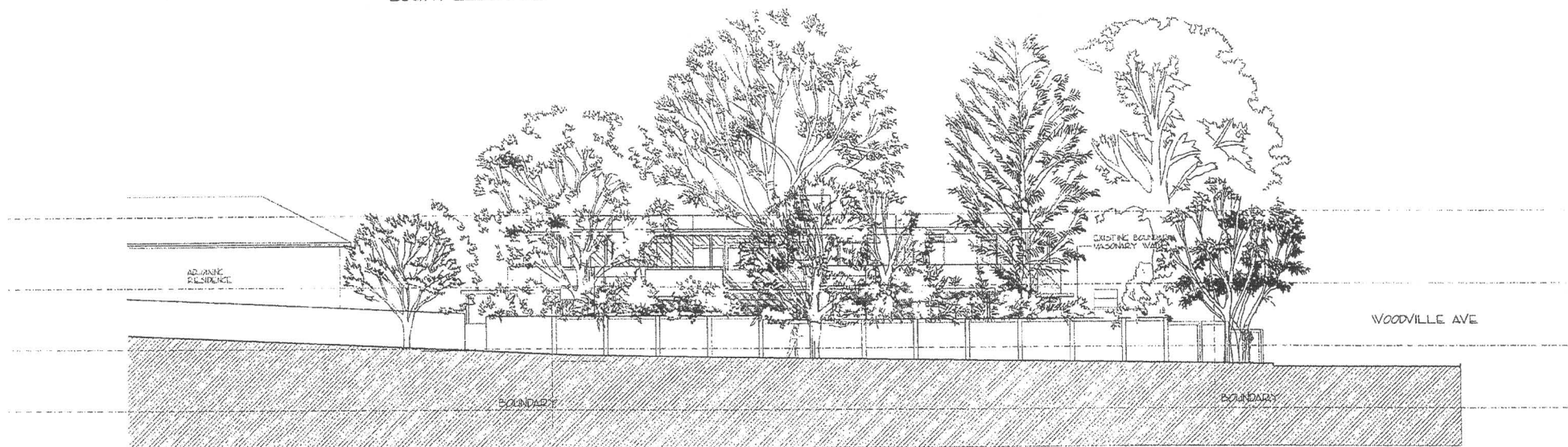
LEVEL	GROSS FLOOR AREA (m ²)	BALCONIES (m ²)	APARTMENTS	1B	2B	3B
GROUND	515	38	7	4	3	-
FIRST	497	78.5	7	4	3	-
SECOND	301	172	3	-	1	2
TOTAL	1313	288.5	17	8	7	2

FSR = 0.74: 1





SOUTH ELEVATION



STREET SCAPE ELEVATION

DP 16715

0.74

197.0

0.84

45°

195.0

28.685

30°

225° 40' 20"

7.62

194.0

192.0

0.94

0.94

1
DP 710831

1
DP 513700

Rendered
Garage

194.0

3.595

3.595

9.77

250°

0.94

23.865

33°

0.74

193.0

192.0



SCALE 1:100

PLOT DATE 24/11/2005



ADVOCATE
ARCHITECTS

RESIDENTIAL REDEVELOPMENT
CNR PACIFIC HWY & WOODVILLE AVE, WAHROONGA
FOR ADVOCATE DEVELOPMENTS

WOLKE LYNDEN & BERGONCKE - ARCHITECTS

ROOF PLAN

DA06
2512
DATE DRAWN: 23/06/05

Item 2

DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	657 TO 661 PACIFIC HIGHWAY, KILLARA - CONSTRUCTION OF A RESIDENTIAL FLAT BUILDING AND TOWNHOUSES COMPRISING A TOTAL OF 49 UNITS AND BASEMENT CARPARKING FOR 127 VEHICLES AND STRATA SUBDIVISION
WARD:	Gordon
DEVELOPMENT APPLICATION N^o:	677/05
SUBJECT LAND:	657 to 661 Pacific Highway, Killara
APPLICANT:	Thiessen Architects
OWNER:	Afafura Property Pty Ltd and Sankilt Pty Ltd
DESIGNER:	Thiessen Architects
PRESENT USE:	Vacant site
ZONING:	Residential 2(D3)
HERITAGE:	No
PERMISSIBLE UNDER:	Ku-ring-gai Planning Scheme Ordinance
COUNCIL'S POLICIES APPLICABLE:	KPSO - LEP 194 and LEP 202, DCP 31 - Access, DCP 40 - Waste Management, DCP 43 - Car Parking, DCP 47 - Water Management
COMPLIANCE WITH CODES/POLICIES:	Yes with variation
GOVERNMENT POLICIES APPLICABLE:	SEPP 55, SEPP 65
COMPLIANCE WITH GOVERNMENT POLICIES:	Yes
DATE LODGED:	29 June 2005
40 DAY PERIOD EXPIRED:	8 August 2005
PROPOSAL:	Construction of a residential flat building and townhouses comprising a total of 49 units and basement carparking for 127 vehicles and strata subdivision
RECOMMENDATION:	Approval

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DEVELOPMENT APPLICATION N^o 677/05
PREMISES: 657-661 PACIFIC HIGHWAY, KILLARA
PROPOSAL: CONSTRUCTION OF A RESIDENTIAL FLAT
BUILDING AND TOWNHOUSES
COMPRISING A TOTAL OF 49 UNITS AND
BASEMENT CARPARKING FOR 127
VEHICLES AND STRATA SUBDIVISION
APPLICANT: THIESSEN ARCHITECTS
OWNER: AFAFURA PROPERTY PTY LTD AND
SANKILT PTY LTD
DESIGNER THIESSEN ARCHITECTS

PURPOSE FOR REPORT

To determine development application No. 677/05, which seeks consent for the construction of a residential flat building and townhouses comprising a total of 49 units and basement car parking for 127 vehicles and strata subdivision.

EXECUTIVE SUMMARY

Issues: Setback of townhouse 1 from Bruce Avenue.
Submissions: Seven (7) submissions.
Land & Environment Court Appeal: Not applicable
Recommendation: Approval

HISTORY

Site history:

The site is vacant, however, it was previously used for residential purposes.

Development application history:

DA 677/05

24 March 2005 The preliminary plans submitted in relation to the development of 657-661 Pacific Highway demonstrated a consideration of the controls and guidelines provided by DCP 55, LEP 194 and Draft LEP 202.
24 June 2005 LEP 202 gazetted.

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29 June 2005	Application lodged.
15 August 2005	Request from Council in relation to additional information to deep soil area.
30 August 2005	Response received in relation to deep soil area.
20 October 2005	Issues raised with applicant.
7 November 2005	Applicant provides a planning and design response to matters raised by Council.

THE SITE AND SURROUNDING AREA

The site

Zoning:	Residential 2(D3)
Visual Character Study Category:	1920/1945
Lot Number:	1 and C, D
DP Number:	1030172 and 330222
Heritage Affected:	No
Bush Fire Prone Land:	No
Endangered Species:	No
Urban Bushland:	No
Contaminated Land:	No

Site description:

The properties known as 657-661 Pacific Highway, Killara are situated on the eastern side of the Pacific Highway, between Greengate Road and Bruce Avenue. The site is generally rectangular in shape and has a frontage of 75 metres to Pacific Highway, 51 metres to Bruce Avenue, and 72.7 metres to Greengate Lane. The site has an average depth of 60 metres in relation to the Pacific Highway frontage and has an area of 4,257 square metres. The site is currently vacant, with the two storey residential flat building on 657 Pacific Highway and the dwelling houses on 659 and 661 Pacific Highway having been demolished.

The site comprises three (3) allotments as follows:

657 Pacific Highway, Lot 1, DP 1030172
659 Pacific Highway, Lot D, DP 330222
661 Pacific Highway, Lot C, DP 330222

Surrounding development:

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The site is located in a mixed residential and commercial precinct which straddles the Pacific Highway at the northern end of the Killara Shopping Centre.

The land to the east of the site, on the opposite side of Greengate Lane, comprises the property known as 1 Bruce Avenue and an Energy Australia substation. A development application has been lodged for a 42 unit residential flat building at the site 1-7 Bruce Avenue, Killara. This application was considered by Council at its' meeting of 8 November, 2005 and deferred to a site meeting which was carried out on 12 November, 2005.

All other residential properties fronting Bruce Avenue to the north and north-east are zoned 2(d3).

The land to the west of the site, on the opposite side of the highway comprises the properties known as 696-702 Pacific Highway which contain residential flat buildings of two and three storeys.

The land to the south of the site comprises properties known as 655 Pacific Highway and 2 Greengate Avenue. 655 Pacific Highway contains the Greengate Hotel and 2 Greengate Road contains a residential flat building containing four units.

Zoning history:

LEP 202 was gazetted on 24 June 2005. LEP202 rezoned part of the site, being Lot 1, DP 1030172.

No 657 Pacific Highway was rezoned from Residential 2(d) to Residential 2(d3) under LEP202. Properties 659 and 661 Pacific Highway were zoned 2(d3) when LEP 194 was gazetted in May, 2004.

THE PROPOSAL

This application seeks development consent for:

- a) The construction of a five storey residential flat building, containing a total of forty (40) units consisting of:
 - 16 x 1-bedroom units;
 - 22 x 2-bedroom units;
 - 2 x 3-bedroom units;
- b) The construction of a three (3) storey town house building comprising:
 - 6 x 2-bedroom units;
 - 3 x 3-bedroom units;
- c) The construction of a two (2) level basement car park under the complex accommodating a total of one hundred and twenty-six (127) spaces including:
 - sixty-seven (67) spaces associated with the proposed dwellings; and

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- sixty (60) spaces to be used in connection with the Greengate Hotel situated on the adjoining property known as 655 Pacific Highway; and
- d) The strata subdivision of the development into forty-nine (49) residential allotments and one (1) allotment comprising the hotel car park.

It is intended to create a right of way arrangement to facilitate vehicular and pedestrian access to and from the proposed hotel car park.

CONSULTATION - COMMUNITY

In accordance with Council's Notifications Policy, owners of surrounding properties were given notice of the application.

In response, seven (7) submissions in opposition from the following were received.

1. W F and J Beumont, 25 Greengate Road, Killara
2. E G and Mr & J O'Donnell, 16 Greengate Road, Killara
3. G and S Chipps, Unit 2/702 Pacific Highway, Killara
4. P and L Woodland, 8 Greengate Road, Killara
5. T G Howard and M S O'Dea, 26 Greengate Road, Killara
6. Jane Curran, Ravenswood School for Girls
7. S and P Cooper, PO Box 694, Gordon 2072

The submissions raised the following issues:

Traffic problems in relation to the use of Greengate Lane

Council's Development Control Engineer has advised as follows in relation to traffic generation:

Vehicular access to this development is proposed to be from Greengate Lane. At present the lane is sealed, approximately 3 metres wide, with no kerb and gutter on either side. The road reserve is 6 metres.

It is noted that at the time of rezoning of this site, access was proposed from Bruce Avenue and the use of Greengate Lane by residents of a future development was not envisaged. Levels of the site and surrounding area mean that access from Greengate Lane is more practical.

The traffic report submitted with the subject development application predicted that the traffic generated by the development would not cause Greengate Road or Bruce Avenue to experience traffic volumes above the RTA's environmental capacity of 300 vehicles per hour for local streets. The report is silent on the effect on Greengate Lane and did not take into account the other development sites nearby, 1-7 Bruce Avenue and 9-23 Bruce Avenue. Residents commissioned their own traffic report which found that the traffic in the lane would exceed the environmental capacity following development of all sites.

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Council's Strategic Traffic Engineer has carried out an internal traffic study. The study considered alternatives for traffic flow in the area. AMCORD guidelines indicate that for a local road carrying 30 to 100 vehicles per hour, a minimum road reserve of 13 metres and carriageway width of 5 to 5.5 metres is required. Therefore, for two way flow to be maintained in Greengate Lane, the road reserve would have to be widened to 13 metres.

An alternative would be one way conditions, with minor widening/ formalisation of the carriageway, similar to Tryon Lane. It is understood that the process of implementing the latter is underway. The recommended conditions allow for the developer to liaise with Council's Traffic Section regarding the desirable width for construction of Greengate Lane and timing of the various stages in the process.

The landscaping located along Greengate Lane appears only to grow to 3 metres in height with the use of *Murraya Paniculata*.

In addition to the proposed *Murraya Paniculata* to be planted within the courtyards of the townhouses, nine (9) *Syncarpia glomulifera* (Turpentine) are proposed to be planted along the street frontage which have a mature height of 15 metres and a width of 15 metres. Nine (9) *Pistacia chinensis* (Pistacia) are also proposed within the courtyards of the townhouses which have a mature height and width of 6 metres.

It will significantly change the character of the area

Multi-unit residential developments are permissible under the zoning and are therefore anticipated within the area. The development complies with the prescribed standards of LEP 194 and LEP 202, in particular, maximum height, number of storeys and site coverage, and has adequate deep soil landscaping and large tree planting provision, consistent with the established landscape character of the area.

Increase in traffic noise due to the reflection of noise off the face of the additional storeys

Whilst the proposal has additional height in relation to the previous residential development located upon the site, it is unlikely that any reflected traffic noise would have any unreasonable impact upon the amenity of the opposite neighbours. It would be unreasonable to refuse the application on this base alone.

CONSULTATION - WITHIN COUNCIL

Council's Heritage Adviser, Paul Dignam, has commented on the proposal as follows:

Nearby heritage items

There are two heritage items adjacent to this site:

- 655A Pacific Highway, the Greengate Hotel; and
- 663 Pacific Highway.

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The Greengate Hotel (incorrectly identified in the heritage report as 663 Pacific Highway) is listed for its:

archaeological, architectural, landmark value, Municipal (local) significance, possible state significance. (KC inventory)

It is also classified by the National Trust and included in the RAIA register of 20th Century Buildings of Significance. The building is considered to have possible State heritage significance. It was constructed in 1943 to a design by the noted architect Cyril Ruwald, who designed several buildings in Ku-ring-gai, including the Killara Golf Links Clubhouse. The site is adjacent to the hotel and is designed to accommodate car parking for the hotel in the basement. Its location on a prominent corner site gives it local landmark significance. This building is the second hotel building on the site. The original hotel building was built c1832. It is rumoured that the basement area contains part of the former building and it is rumoured that a tunnel connects the basement to the opposite side of the Pacific Highway.

663 Pacific Highway is separated from the site by Bruce Avenue and is listed in Council's heritage schedule for:

architectural, landmark value Municipal (local) significance.

It is a relatively large two storey house built in the Federation Arts & Crafts style c1908. It is relatively intact although face brickwork on the lower level has been painted, reducing its aesthetic value. It has some landmark significance for its corner location.

National Trust UCA No 12 – Greengate Precinct

UCA No 12 is a relatively small area between the Pacific Highway and the railway line. Bruce Street has recently been rezoned for residential flat development and it is expected that the Greengate Road precinct will remain relatively intact. The Greengate Hotel provides a landmark profile to the UCA. Since demolition of the former buildings on the subject site, the northern elevation of the hotel has become visually prominent and the views from the upper terrace are broader. Development of the subject site will reduce these 'temporary' views.

Comments

The heritage statement prepared by the applicant has noted that:

It is clearly not possible for multi unit housing of the type envisaged by the standards of the LEP (194) to respect the predominant single residence character of the surrounding Urban Conservation Area nor is it necessary to do so to be reasonable and acceptable complying development.

It is not clear why the heritage report is commenting on planning issues but it suggests that residential flat development can not respect the surrounding character. Council's design

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objective is to encourage new flat development to respect the character of, and minimise impact through appropriate design and siting.

Design of proposed building

The design statement prepared by the architect states that the development picks up the scale of the existing buildings and the façade has been designed so that the scale reflects two large houses set within a large landscaped site. The architect claims that the flat roofed section breaks the building into two distinct parts. The freestanding brick ‘screen’ in front of the proposed building picks up on the “Loggias” of the hotel. The materials, including dark grey split faced blocks, brown face brickwork and rendered brick relate to the hotel and other nearby buildings including the ‘white house’ at 663 Pacific Highway. The curved screen in front of the building intends to relate to the curved facade of the Greengate hotel. The three storey townhouses facing the lane have been designed to provide a transition between the taller section on the highway and to relate to the context of the lane.

Comment

This development can be considered infill development. For ‘infill’ development, the appropriate design criteria are:

- *character;*
- *scale;*
- *form;*
- *siting;*
- *materials and colour; and*
- *detailing.*

The proposed building tries to deal with all of the above design issues. The form, siting, materials and colours all relate to the surrounding buildings, most notably the two adjoining heritage items. The heritage impact statement states that:

A wide variety of architectural treatments may be acceptable in this location and the assessment does not comment on architectural design except as it my impact on the significance of the adjoining items.

The design is contemporary and picks up elements from the surrounding buildings in an almost ‘post modern’ composition. Visually it is an interesting building. The roof picks up the form, pitch and eaves overhang of the hotel but the large dormers are in my opinion over scaled

The ‘terrace’ form of the townhouses is not a common building type in Ku-ring-gai however in the context is considered an appropriate design solution.

Impact on the Greengate Hotel

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The main bulk of proposed building has a side setback from the hotel building between 20 to 25 m and there is landscaping to soften the area. The separation is consistent with the guidelines in DCP 55 and considered satisfactory. Views from the first floor terrace in the hotel to the north and north east will be reduced, but not lost. The view corridor across the site between the main block and the townhouses is retained although the large oak trees will reduce the view in summer. The existing view of the north-eastern façade of the hotel will be largely lost when looking south along the highway, however this view is not an historic view and is only now possible due to demolition of the former flat building on the site. The most important view of the hotel from the corner of Pacific Highway and Greengate Avenue, will not be reduced. The proposed development would be seen as a background element.

Impact on 663 Pacific Highway

There is reasonable separation between the heritage item and the proposed building and views to or from it from the Pacific Highway should not be affected. The proposed development has a reasonable setback from Bruce Avenue.

Archaeology

Archaeology was raised as a potential issue for this site primarily because it was thought deposits from the earlier "Green Gate" hotel may extend to the subject site and there has been rumours about a tunnel from the basement of the hotel. The applicant claims that the former Green Gate hotel did not extend to the subject site and that the now demolished buildings on the site were the first to be erected on the land which was previously vacant. Based on the available historical information provided by the application it is accepted that the site is unlikely to contain deposits from earlier period and further archaeological investigations are not required. However, as the former Green Gate hotel is a very early building (1832) it is still possible that the subject site could contain deposits from earlier buildings or activities on the site. I recommend that a condition about the possibility of relics on the site be placed on any approval issued by Council.

Conclusion

A condition should be placed on any consent issued by Council, requiring the applicant to notify the NSW Heritage Council in the event that any relics are uncovered during excavation works. (**Refer Condition No. 53**)

Urban Design

Council's Urban Design Consultant, Russell Olssen, has commented on the proposal in the context of SEPP 65 and Residential Flat Design Code considerations as follows:

Principle 1: Context

SEPP 65 : Good design responds and contributes to its context.....Responding to context involves identifying the desirable elements of a location's current character, or, in the case of

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precincts undergoing a transition, the desired future character as stated in planning and design policies.

The built form context is comprised of

- *the 2 storey Greengate Hotel adjoining the site to the south. This is a heritage item*
- *a 2 storey detached house on the northern corner of Bruce Avenue and the Pacific Highway. This is a heritage item.*
- *a detached house and Electricity Substation on the eastern side of Greengate Lane. The house lot is zoned Residential 2 (d3)*
- *Four residential flat buildings of 2 and 3 storeys opposite the site on the western side of the Pacific Highway*

The Residential 2 (d3) zoning of this site and the sites to the east establishes the future scale of development on these sites as being 5 storeys maximum. This zoning establishes a future difference in height and bulk in relation to the existing two storey heritage items to the north and south of the site. The scope available for minimising the impact of the proposed 5 storey development on the two heritage items is limited to the siting of the proposed buildings, the setbacks and quality of landscape within the setbacks and the architectural form and character of the buildings.

The heritage item to the north of the site is set within dense landscaping, which the visual impact of the proposed buildings on the existing building. Bruce Avenue provides a visual separation and there is no overshadowing of the existing building. The proposed 5 storey building is set back 10m- 14m from the northern site boundary, which provides sufficient visual separation from the heritage item. The landscape in the setback reinforces the existing 3 street trees to provide sufficient visual separation.

The proposed 5 storey building is set back 9.8m to 15.5m from the southern boundary adjoining the Green Gate Hotel. The two buildings are separated by 18m to 22m. The setback is densely planted with Lomandra and Dianella native trees, to provide a visual buffer between the buildings. Overshadowing of the hotel property is not an issue, as a driveway is located along the northern boundary of the hotel.

The relationship to the existing context is acceptable.

Principle 2: Scale

SEPP 65: Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing transition proposed bulk and height needs to achieve the scale identified for the desired future character of the area.

The scale of development is acceptable, as it complies with the 2 (d3) controls

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Principle 3: Built form

SEPP 65: Good design achieves an appropriate built form for a site and the buildings purpose, in terms of building alignments, proportions, building type and the manipulation of building elements.....

The 8m setback of the 3 storey townhouse building from Bruce Avenue will be out of alignment with the future building on the eastern side of Greengate Lane. The proposed building alignment for that site is 10m- 12m. It is recommended that the 3 storey building is set back a minimum of 10m from the Bruce Avenue boundary. The townhouses are also built close to the drip line of the existing Oak tree canopy on the southern end. It is recommended that the setback from the tree is verified by an arborist to ensure that it will remain unaffected by the building.

Principle 4: Density

SEPP 65: Good design has a density appropriate to its site and its context, in terms of floor space yields (or numbers of units or residents).....

The site coverage is 32.7% of the site. The top floor occupies 30% of the floor area of the lower floors. The FSR is 1.16 : 1. The density is acceptable.

Principle 5 : Resource, energy and water efficiency

SEPP 65: Sustainability is integral to the design process. Aspects include.....layouts and built form, passive solar design principles,..... soil zones for vegetation and reuse of water.

More than 70% of living rooms/balconies in apartments will receive greater than 2 hours sunlight between 9am and 3pm in mid-winter. There are no south facing apartments. The rear walls of kitchens are within 8m of a window. More than 25% of kitchens are located on external walls. The maximum building depth of single orientation apartments is less than 10m. The buildings will have acceptable sunlight access, which will minimise energy consumption through lighting and heating.

60% of apartments are naturally ventilated, which satisfies the Residential Flat Design Code guidelines. Natural ventilation of the town houses and the top floor apartments in the 5 storey building, is achieved by the stack effect of ventilation through multiple levels. Corner apartments provide the other cross ventilated apartments. Natural ventilation is not excellent, however it is satisfactory.

Principle 6 : Landscape

SEPP 65: Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain.

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The landscape design is acceptable.

Principle 7: Amenity

SEPP 65: Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts, and service areas, outlook and ease of access for all age groups and degrees of mobility.

The living room dimensions of some townhouses are too small (4m x 4m) to adequately furnish. Other living rooms which are 4m x 5m would be difficult to furnish due to the number of doors and stairs opening into the room. It is recommended that the length of the townhouses building is reduced by setting back the building further from Bruce Avenue, and possibly from the Oak tree to the south (depending upon an arborists report). It is also recommended that one townhouse is removed from the existing row of townhouses, and that additional floor space is added to the existing townhouses to improve their internal dimensions and the ability for them to be adequately furnished.

Principle 8: Safety and security

SEPP 65: good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising activity on the streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.

There are no perceived safety and security issues.

Principle 9: Social Dimensions

SEPP 65 : Good design responds to the social context and needs of the local community in terms of lifestyles, affordability and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood, or, in the case of precincts undergoing transition, provide for the desired future community.

The mix of apartments and town houses is acceptable.

Principle 10: Aesthetics

SEPP 65: Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

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The proposed 5 storey building shares design elements with the Greengate Hotel, such as a steeply pitched roof which is visually separated from the lower floors by large windows under the eaves. The proposed single and 2 storey screen walls recall the hotels ground and first floor arcades. The proposed design complements the hotel, however does not mimic it. Differences between the 2 buildings include the extent of render in the proposed building and dormer and porthole windows.

The townhouses have the vertical proportions of terrace houses and are articulated by changes of materials.

The two buildings are acceptable re-interpretations of traditional building forms and types.

Conclusion and recommendations

It is recommended that

- *The 3 storey building is set back a minimum of 10m from the Bruce Avenue boundary. The townhouses are also built close to the drip line of the existing Oak tree canopy on the southern end. It is recommended that the setback from the tree is verified by an arborist to ensure that it will remain unaffected by the building*
- *One townhouse is removed from the existing row of townhouses and that additional floor space is added to the existing townhouses to improve their internal dimensions and the ability for them to be adequately furnished*

The proposal is otherwise acceptable in terms of SEPP 65 design principles, and should be approved when these changes are made.

Comment

The applicant has made the following response in relation to the above recommendations:

The development of this land was considered in detail in the application that was made to Council to alter the Ku-ring-gai Planning Scheme to enable, among other things, a car park associated with the adjoining Greengate Hotel to be established on the land.

This application culminated in the making of Ku-ring-gal Local Environmental Plan No.202 (KLEP 202).

KLEP 202 provides criteria different to that applying to other land zoned Residential 2(d3) under Ku-ring-gal Local Environmental Plan N. 194.

KLEP 202 provides for the provision of basement car parking of at least 60 cars for the exclusive use of the Greengate Hotel, but only if:

- *the parking is provided in conjunction with a multi-unit housing development;*

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- 60% of the site is landscaped, comprising 35% deep soil landscaping and 25% with a soil depth of at least 2m; and
- 8m wide deep soil landscaping along the site's Pacific Highway and Bruce Avenue frontages.

These requirements dictate a site specific solution for the redevelopment of the site substantially in accordance with the development concept plans that supported the making of KLEP 202.

The only element of the development which impinges on the 10m setback to Bruce Avenue is a three (3) storey town-house styled building, which is set back a minimum of 8m from the site's Bruce Avenue boundary.

This variation to the setback guideline contained in DCP 55 is justified for the following reasons:

- a) The proposal complies with KLEP 202, which requires an 8m wide deep soil landscape zone adjacent to Bruce Avenue.*
- b) The town-house styled building is to be located a minimum of 18m from any building proposed in the redevelopment on the land to the east on the opposite side of Greengate Lane on 1 Bruce Avenue.*
- c) Landscaping in the proposed deep soil landscaped area in the Bruce Avenue setback can be designed to obliterate the view of the building in the Bruce Avenue streetscape.*
- d) If Council accepted the advice contained in the tree report prepared on behalf of the applicant by Craig Martin, buildings could be constructed at a distance of 7.24 meters of the oak trees to be retained in the south-eastern corner of the site and the development could observe a setback from Bruce Avenue of 11.26m. (refer Tree Transplanters letter)*
- e) The proposed development is to have a floor space ratio of only 1.16, which significantly less than the maximum 1.3 to 1 permissible on this land, and the departure from the street setback guideline is not due to an overdevelopment of the site.*
- f) The proposed development has essentially been designed to provide additional parking associated with the Greengate Hotel and to ensure the economic use and development of the land.*

The above response is reasonable except that in relation to the oak trees, the applicant's Environmental and Botanical Consultant, Anne Clements and Associates Pty Ltd, have assessed the impact of the proposed development on the two oak trees and support the 10.5 metres setback of the proposed from the centre of the easternmost oak tree, and therefore the 8 metre setback of Townhouse 1 from Bruce Avenue is accepted.

Landscaping

Council's Landscape and Tree Assessment Officer, Geoff Bird, has commented on the proposal as follows:

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The site

It is proposed to construct a five storey residential flat building, nine three storey townhouses and basement car parking on the existing amalgamated site area of 4 257sqm with vehicular access from Greengate Lane and the existing vehicular access from the Greengate Hotel via a new elevated bridge. The site has previously been cleared of vegetation with the exception of a few trees located adjacent to the perimeter boundaries. The site is dominated by two mature Quercus robur (English Oak) located adjacent to the south east site corner. The site is governed by LEP202 which requires specific controls regarding setbacks, deep soil and landscaped areas above basements.

Impacts on trees/Trees to be removed/Tree replenishment

The proposed development will result in the removal of the remaining trees on site with the exception of the two Quercus robur (English Oak) located adjacent to the south east site corner. There is no objection raised to the nominated tree removal with the exception of the mature Phoenix canariensis (Canary Island Date Palm) located adjacent to the eastern site boundary. The palm is a significant landscape element and is suitable to be transplanted and relocated on site as a feature planting. This will be conditioned.

Root mapping has been undertaken to ensure that adverse impacts to the two Oaks is minimised. The development has allowed for adequate setbacks to accommodate the two trees. As a result it is considered that the proposed development will not have any adverse tree impacts.

As proposed the site will have an additional nineteen (19) trees capable of attaining a minimum height of thirteen metres being located/planted on site. This exceeds council's tree replenishment requirements.

Street trees

The existing street trees that surround the site are in generally poor condition due to poor pruning for overhead wires and wind shear. Although the existing trees are shown for retention it will be required as a consent condition that the existing trees be removed and replaced with advanced tree species as formal avenue plantings. It will be required that the Bruce Ave and Pacific Hwy street tree planting be Jacaranda mimosifolia (Jacaranda) to complement the existing streetscape planting.

Deep soil area

LEP202 requires a minimum deep soil area of 35% for the site, in addition to a further 25% of the site area with a minimum depth of 2.0m. By the applicant's calculations the proposed development will result in 60.5% or 2 577sqm of the site being landscaped, of which 1 716sqm (40.3%) will be deep soil area and 860sqm (20.2%) will be above the basement area with a minimum depth of 2.0m with an additional 5% of the site as deep soil area (which is calculated as part of the deep soil area).

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Landscape plan

Overall, subject to minor amendments the proposed landscape plan can be supported by Landscape Services. It will be required, to enhance the existing streetscape, that additional trees be planted within the site frontages to both Bruce Ave and the Pacific Hwy. This will ensure that as the trees mature that the treed character of the streetscape is maintained and enhanced. This will be conditioned.

Drainage plan

Landscape services raises no objections to the proposed drainage works for the site.

Landscape Services can support the application, subject to conditions.

Comment:

Council's Development Assessment Officer, Graham Bolton, has checked the deep soil calculations and confirms that the applicant proposes a total of 2,555 square metres of deep soil area, which complies with the LEP202 requirement of 2,554 square metres.

Engineering

Council's Engineering Assessment Officer, Kathy Hawken has commented on the proposal as follows:

The application is for the construction of 49 units, 16x1br, 28x2br, 5x3br, with two levels of basement carparking. The upper basement level contains sixty spaces for parking associated with the Greengate Hotel.

The application includes strata subdivision.

The following documents were used for the assessment:

- *Statement of Environmental Effects, prepared by Ludvik & Associates, dated May 2005;*
- *Environmental Investigation Services Report on Stage 1 Environmental Site Assessment, dated March 2005;*
- *Jeffery and Katauskas Report on Geotechnical and Hydrogeological Investigation, dated 17 March 2005;*
- *Michael Frost & Associates Stormwater Services Drawings HS01/P2 and HS02 to HS04, all P1;*
- *Thiessen Architects Drawings DA00 to DA08, all Rev A, 25.05.2005;*
- *Degotardi, Smith & Partners survey plan, Issue F, dated 17/07/02; and*
- *Traffic report prepared by Masson Wilson Twiney, dated May 2005.*

The application is supported subject to conditions.

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Stormwater management

The stormwater services plans submitted detail a system which complies with Council's DCP 47 in relation to on site detention and retention, water quality and discharge from the site. Rainwater retention of 147 m³ is shown and detention of 67m³. Under the most recent revision of DCP 47, a retention volume of 49m³ (1 000 litres per unit) will suffice; this decision can be made by the designer at detailed design stage.

Traffic generation

Vehicular access to this development is proposed to be from Greengate Lane. At present the lane is sealed, approximately 3 metres wide, with no kerb and gutter on either side. The road reserve is 6 metres.

It is noted that at the time of rezoning of this site, access was proposed from Bruce Avenue and the use of Greengate Lane by residents of a future development was not envisaged. Levels of the site and surrounding area mean that access from Greengate Lane is more practical.

The traffic report submitted with the subject development application predicted that the traffic generated by the development would not cause Greengate Road or Bruce Avenue to experience traffic volumes above the RTA 's environmental capacity of 300 vehicles per hour for local streets. The report is silent on the effect on Greengate Lane and did not take into account the other development sites nearby, 1-7 Bruce Avenue and 9-23 Bruce Avenue. Residents commissioned their own traffic report which found that the traffic in the lane would exceed the environmental capacity following development of all sites.

Council's Strategic Traffic Engineer has carried out an internal traffic study. The study considered alternatives for traffic flow in the area. AMCORD guidelines indicate that for a local road carrying 30 to 100 vehicles per hour, a minimum road reserve of 13 metres and carriageway width of 5 to 5.5 metres is required. Therefore for two way flow to be maintained in Greengate Lane, the road reserve would have to be widened to 13 metres.

An alternative would be one way conditions, with minor widening/ formalization of the carriageway, similar to Tryon Lane. It is understood that the process of implementing the latter is underway. The recommended conditions allow for the developer to liaise with Council's Traffic Section regarding the desirable width for construction of Greengate Lane and timing of the various stages in the process.

Vehicle access and accommodation arrangements

The proposed development comprises 49 units, of which 5 are to be 3 bedroom. Therefore under LEP 194, 54 resident and 13 visitor parking spaces are required. The plans submitted show 67 spaces on Basement B2 and therefore comply.

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The upper level of carparking, Basement B1, provides 60 spaces for parking for Greengate Hotel patrons. The entry to this level is from the Pacific Highway, which has been approved by the RTA. These spaces are as required by the LEP for the subject site

The dimensions of the spaces and of the aisles and ramps comply with AS2890.1:2004, as do the driveway gradients. The report contains some recommendations for improvements which can be made on the Construction Certificate drawings as well as for parking restrictions along the Highway frontage of the site. Traffic Committee approval is required for the parking restrictions, which is included in the recommended conditions.

Waste collection is to be internal, on the upper basement level, and there is sufficient space for the small waste collection vehicle to enter and leave the site in a forward direction.

Construction management

Based on the scale of works and expected construction vehicle movements, a detailed construction traffic management plan must be submitted for review by Council Engineers prior to the commencement of any works on site. During the construction period it is anticipated that traffic and pedestrian control will be particularly important at the entry to Greengate Lane from Bruce Avenue, and at the site entrance. A works zone could be established along the Bruce Avenue frontage. The procedure for this is included in the recommended engineering conditions.

Impacts on Council infrastructure

The developer will be required to construct new road pavement and new kerb and gutter along the Greengate Lane frontage of the site. Detailed design drawings for these works will be assessed by Council's Technical Services section for approval under the Roads Act. No final certificate would be issued until the works are completed to the satisfaction of Council.

Geotechnical investigation

The environmental site assessment did not indicate elevated levels of any contaminants which were tested for, and concluded that the site is suitable for the proposed development, subject to the appropriate disposal of excavated soils. This matter is covered by legislation and does not require special consent conditions.

The site is underlain by shallow fill and residual clays with weathered shale below about 4 to 7 metres depth. The strength of the shale was not found to improve until a depth of 15.4 metres was reached. Excavation for the lower basement level to a maximum of about 5.5 metres below existing surface levels is likely to be easily achievable, although rock breaking may be required if stronger bands are encountered. If this is the case, the report recommends vibration monitoring. This would be included in the Implementation Program (see below).

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The report also contains recommendations for cut batters or temporary shoring systems. Rock anchors may be required which could extend into adjoining properties, or the road reserve. Conditions have been recommended which include this possibility.

The report concludes with a recommendation that an Implementation Program be prepared during the preparation of Construction Certificate documentation. This is included in the recommended conditions.

Given the proximity of the excavation to the Greengate Hotel, and the extent of the works which include the construction of the suspended bridge ramp, a dilapidation survey of the hotel building will be required before the commencement of any works on site.

CONSULTATION - OUTSIDE COUNCIL

Roads and Traffic Authority

The RTA has assessed the proposed development and provides the following advisory comments to Council for its consideration in the determination of the development application:

1. *The proposed development should be designed, such that road traffic noise from Pacific Highway is mitigated by durable materials, in accordance with EPA criteria for new land use developments (The Environmental Criteria for Road Traffic Noise, May 1999). The RTA's Environmental Noise Management Manual provides practical advice in selecting noise mitigation treatments.*

Where the EPA external noise criteria would not practically or reasonably be met the RTA recommends that Council apply the following internal noise objectives for all habitable rooms under ventilated conditions complying with the requirements of the Building Code of Australia:

- *All habitable rooms other than sleeping rooms: 45 dB(A) $L_{eq}(15hr)$ and 40 dB(A) $L_{eq}(9hr)$ and*
 - *Sleeping rooms: 35 dB(A) $L_{eq}(9hr)$*
2. *Council should ensure that post development storm water discharge from the subject site into the RTA drainage system does not exceed the pre-development discharge.*

Detailed design plans and hydraulic calculations of any changes to the stormwater drainage system are to be submitted to the RTA for approval, prior to the commencement of any works.

Details should be forwarded to;

*Sydney Asset Management
PO Box 558
Blacktown, NSW 2148*

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A plan checking fee may will be payable and a performance bond may be required before the RTA's approval is issued. With regard to the Civil Works requirement please contact the RTA's Project Engineer, External Works Ph: 8814 2114 or Fax 8814 2111.

3. *Off-street parking associated with the proposed development (such as driveways, aisle widths, aisle lengths, parking bay dimensions and sight distances) should be designed in accordance with AS 2890.1 - 2004.*
4. *Any redundant driveway on Pacific Highway must be removed and kerb and gutter reinstated to match existing.*
5. *Suitable provision should be made on site for all construction vehicles to avoid any vehicles parking or standing on Pacific Highway.*
6. *All vehicles are to enter and exit the site in a forward direction.*

These requirements have been included in the recommended consent (**See Condition No's 17-22**).

PROVISIONS OF RELEVANT LEGISLATION

State Environmental Planning Policy No 65 - Design Quality of Residential Flat Development.

The following is a design statement by the project architects Thiessen Architects.

The site is semi-urban in context with close proximity to Killara town centre. There are 2- 4 storey buildings in close proximity. The proposed building has been sited to not only align with Pacific Highway but also to ensure that the view from the Greengate Hotel's northern balcony was maintained.

SITE

The site is basically a rectangle with dimensions of 50m and 63m approximately on the north and south boundaries. The western boundary fronting Pacific Highway measure 74m and the east fronting Greengate Lane is at 72m approximately.

Car park access is proposed to be from Greengate Lane for the residential car park. Access to the hotel car park is from the existing car park drive off Pacific Highway from the hotel site.

BUILDING DESIGN

a) STREET SCALE - PITCHED ROOFS

Pacific Highway within the vicinity of the site consists of "Grand Houses" with large pitched tiled roofs. The proposed design picks up this scale of buildings. The façade

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from Pacific Highway has been deliberately detailed so that the scale of 2 large houses set on a large landscaped site. A flat roof seemingly breaks up the building into 2 distinct pads.

b) *STREET HEIGHT ALIGNMENT - “LOGGIAS”*

The Greengate Hotel to the south of the site has a loggia effect at its street face. The proposed residential building incorporates this element in its street façade. The top of the new ‘loggia’ approximates the height from the Greengate Hotel to maintain a continuation of streetscape along Pacific Highway. This new ‘loggia’ also helps to delineate the private-public space between the ground floor units and the public landscape area. The loggia also serves to provide security, privacy and psychologically ‘shields’ the residents from the Pacific Highway.

c) *MATERIALS SELECTION*

A combination of a rich dark coloured face brick and a white rendered finish contrasted with dark grey split faced block work has been chosen as the primary palette of colours. The brown face bricks are used for the construction of the loggia so that the context of the Greengate Hotel is noted and respected. The large setback from the street as well as heavy landscaping within the setback zone can result in a building that can get ‘lost.’ A white textured colour for the main body colour of the flats is used to brighten the building and helps its presentation to the street. This colour also works contextually with the large white houses found in the street — a notable example being No. 663 to the North of the site.

d) *MAIN ENTRIES*

The main elevation of the Greengate Hotel as well as the North balcony forms strong curved elements which have been echoed in the entry treatments of the new proposed building. A 2-3 storey curved entry pergola feature frames the 2 major entries to the development.

e) *GREENGATE LANE “STREET CONCEPT”*

The fence to Greengate Lane has a 2.5m setback from the boundary. This setback together with an open metal fence treatment and the integration of landscape elements, turn this into a “residential friendly street” providing for a better environment for the residents of both sides to the lane. The development at the Lane changes from the 4 storey walk up flats to a more suitable 3 storey “terrace” type façade. This also helps to cap off the eastern portions of the 2 storey car park.

f) *RESIDENTIAL FLAT DESIGN CODE COMPLIANCE*

The proposed development complies with and exceeds in some areas the guidelines of the Code in regards to the Building Configuration

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- layout,
- unit sizes,
- balconies,
- ceiling heights,
- ground floor apartments,
- internal circulation
- acoustic privacy,
- daylight access.
- ventilation,
- energy efficiency.

CONCLUSION

The proposed building has been designed within the guidelines and intentions of the Residential Flat Design code and has implemented elements of the unique character of Pacific Highway into its built form in a way that complements the existing character of the area.

Residential Flat Design Code

The considerations contained in the Residential Flat Design Code are as follows:

Relating to local context

The proposal, sited over three separate allotments, will require their consolidation. This amalgamation will result in a site area of 4,257 m² which is capable of accommodating the proposed development.

The proposal has two building elements, a four, part five storey apartment building, comprising forty units and a three storey townhouse styled building comprising nine units, with two levels of basement vehicle parking. The development has an acceptable bulk and scale in relation to the desired future character of the area. The building envelope, in terms of building height, floor area, depth and setbacks is satisfactory having regard to the desired future character of the locality.

Site analysis

A satisfactory site analysis has been submitted, indicating how the proposal performs in terms of building styles, landscape response, access and parking and overall building performance in respect to overall energy sustainability.

In terms of site configuration, the proposal will ensure adequate areas for private and common open space and deep soil landscaping.

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The orientation of the development ensures adequate solar access to habitable areas and private open space, both internally and to adjoining residential development and it will also provide appropriate frontages to the Pacific Highway and to Bruce Avenue.

Building design

The proposal is satisfactory in terms of internal configuration and will achieve the objectives of providing function and organised space with a high level of residential amenity. In addition, the proposal provides adequate habitable space, having windows with north-east to north-west orientation.

All other relevant matters under “Building Design” have been assessed elsewhere in the report and are satisfactory.

State Environmental Planning Policy No 55 - Remediation of Land

The provision of SEPP 55 requires Council to consider the potential for a site to be contaminated. The subject site as a history of residential use and, as such, it is unlikely to contain any contamination such that further investigation is not warranted in this case.

Ku-ring-gai Planning Scheme Ordinance (KPSO) LEP 194 and LEP202

COMPLIANCE TABLE		
Development standard	Proposed	Complies
Site area (min): 2400m ²	4257m ²	YES
Deep soil landscaping (min): 35% and to a width of 8 metres along the Pacific Highway and Bruce Avenue frontages	35% 8 m	YES YES
Soil depth: A soil depth of at least 2 metres (not being deep soil landscaping) being provided to 25% of the site area.	25%	YES
Street frontage (min): 30m	75m	YES
Number of storeys (max): 5	5	YES
Site coverage (max): 35%	32%	YES
Top floor area(max): 60% of the level below	30%	YES
Storeys and ceiling height (max) 5 storeys and 13.4m	5 & 13.4m	YES

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COMPLIANCE TABLE		
Development standard	Proposed	Complies
Car parking spaces (min):		
• 13 (visitors)	13	YES
• 54 (residents)	54	YES
• 67 (total)	67	YES
Manageable housing (min): 10% = 5	5	YES
Lift access: required if greater than three storeys	2 lifts	YES

Residential zone objectives and impact on heritage:

The development satisfies the objectives for residential zones as prescribed in clause 25D.

POLICY PROVISIONS

Development Control Plan No 55 - Railway/Pacific Highway Corridor & St Ives Centre

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 3 Local context:		
Development adjacent to a heritage item:		
• 10 m setback (1 st 2 2 nd storeys)	17.6m	YES
• 15m(3 rd and 4 th storey)	17.6m	YES
• No closer than heritage item from front boundary	Not closer	YES
Part 4.1 Landscape design:		
Deep soil landscaping (min) 150m ² per 1000m ² of site area = 600m ²	1,292m ²	YES
No. of tall trees required (min): 15 trees	19 trees	YES
Part 4.2 Density:		
Floor space ratio (max): 1.3:1 (3490m ²)	1.16:1	YES
Part 4.3 Setbacks:		
Street boundary setback (min):	Min: 10m Max 14.4m setback of RFB	YES
10 - 12 metres (<40% of the zone occupied by building footprint)	28.44%	YES
	Townhouses set back 8m	NO

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COMPLIANCE TABLE		
Development control	Proposed	Complies
Rear boundary setback (min): 6 metres	6 metres	YES
Side boundary setback (min): 6 metres	6 metres	YES
Setback of ground floor terraces/courtyards to street boundary (min): 8m/11	10 metres	YES
% of total area of front setback occupied by private courtyards (max): 15%	11%	YES
Part 4.4 Built form and articulation:		
Façade articulation:		
• Wall plane depth >600mm	>600mm	YES
• Wall plane area <81m ²	<81m ²	YES
Built form:		
• Building width < 36m	48.6m (units) 55.9m (townhouses)	NO
• Balcony projection < 1.2m	<1.2 metres	YES
Part 4.5 Residential amenity		
Solar access:		
• >70% of units receive 3+ hours direct sunlight in winter solstice	76%	YES
• >50% of the principle common open space of the development receives 3+ hours direct sunlight in the winter solstice	57%	YES
• <15% of the total units are single aspect with a western orientation	8%	YES
Visual privacy:		

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COMPLIANCE TABLE		
Development control	Proposed	Complies
<p>Separation b/w windows and balconies of a building and any neighbouring building on site or adjoining site:</p> <p>Storeys 1 to 4</p> <ul style="list-style-type: none"> 12m b/w habitable rooms 9m b/w habitable and non-habitable rooms 6m b/w non-habitable rooms <p>5th Storey</p> <ul style="list-style-type: none"> 18m b/w habitable rooms 13m b/w habitable and non-habitable rooms 9m b/w non-habitable rooms 	<p>>13 metres</p> <p>>13 metres</p> <p>>13 metres</p> <p>18 metres</p> <p>>13 metres</p> <p>>9 metres</p>	<p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p>
<p>Internal amenity:</p> <ul style="list-style-type: none"> Habitable rooms have a minimum floor to ceiling height of 2.7m Non-habitable rooms have a minimum floor to ceiling height of 2.4m 1-2 bedroom units have a minimum plan dimension of 3m in all bedrooms 3+ bedroom units have a minimum plan dimension of 3m in at least two bedrooms Single corridors: <ul style="list-style-type: none"> serve a maximum of 8 units >1.5m wide >1.8m wide at lift lobbies 	<p>Min 2.7m</p> <p>2.4m min</p> <p>> 3 m</p> <p>>3 m</p> <p>6 units</p> <p>1.5m</p> <p>>1.8m</p>	<p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p>
Outdoor living:		

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COMPLIANCE TABLE		
Development control	Proposed	Complies
<ul style="list-style-type: none"> Ground floor apartments have a terrace or private courtyard greater than 25m² in area 	> 25m ²	YES
<ul style="list-style-type: none"> Balcony sizes: <ul style="list-style-type: none"> - 10m² – 1 bedroom unit - 12m² – 2 bedroom unit - 15m² – 3 bedroom unit 	12m ² 12m ² 16m ²	YES YES YES
NB. At least one space >10m ²		
<ul style="list-style-type: none"> Primary outdoor space has a minimum dimension of 2.4m 	2.4m	YES
Part 4.7 Social dimensions:		
Visitable units (min): 70%	70%	YES
Housing mix: Mix of sizes and types	Mix of 1, 2 and 3 bedroom units	YES
Part 4.8 Resource, energy and water efficiency:		
Energy efficiency: <ul style="list-style-type: none"> >65% of units are to have natural cross ventilation 	84%	YES
<ul style="list-style-type: none"> single aspect units are to have a maximum depth of 10m 	> 10 m	YES
<ul style="list-style-type: none"> 25% of kitchens are to have an external wall for natural ventilation and light 	> 25%	YES
<ul style="list-style-type: none"> >90% of units are to have a 4.5 star NatHERS rating with 10% achieving a 3.5 star rating 	4.5 to 5 star rating = 67.3% 3.5 star rating = 33.7%	NO YES
Part 5 Parking and vehicular access:		
<ul style="list-style-type: none"> 54 resident spaces 	54 spaces	YES
<ul style="list-style-type: none"> 13 visitor spaces 	13 spaces	YES
<ul style="list-style-type: none"> 67 total spaces 	67 spaces	YES

Part 4.3 Setbacks

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Whilst the three (3) storey townhouse styled building stands 8 metres from the Bruce Avenue boundary instead of 10 metres as required by DCP 55, this departure is justified for the following reasons:

- a) The proposal complies with LEP 202, which requires over 8 metres wide deep soil landscape zone adjacent to Bruce Avenue.
- b) The townhouse styled building is to be located a minimum of 18 metres from any building proposed in the redevelopment on the land to the east of Greengate Lane or 1 Bruce Avenue.
- c) Landscaping in the proposed deep soil landscaped area in the Bruce Avenue can be designed to obscure the view of the building in the Bruce Avenue streetscape.
- d) The departure from the setback is not due to an overdevelopment of the site as it has a floor space ratio of 1.16:1 whereas the maximum permitted is 1.3:1.
- e) The length of wall that infringes the setback control is less than 9 metres and, as such, will have minimal impact upon the streetscape.

Part 4.4 Built form and articulation

Whilst the width of the residential flat building is 48.6 metres and the width of the townhouse style building is 55.9 metres, the non-compliances with the 36 metres width control in DCP 55 are justified for the following reasons:

The residential flat building

- a) The proposal, in its current form and shape, was considered in detail in connection with the development concept plans that were submitted in conjunction with the application for the rezoning of this site and the making of LEP 202.
- b) The compatibility of the proposed building form with the heritage values of the Greengate Hotel.
- c) The residential flat building is well modulated over its entire width through deep façade recesses and counter balancing projections and through the use of a variety of materials and finishes. The building design employs a strong central break in the roof form which also assists in reducing the evident bulk to Pacific Highway.
- d) There is sufficient separation between the neighbouring Greengate Hotel and the proposal, with setbacks ranging from 11 metres to 15 metres from the southern site boundary.
- e) The separation between buildings allows a side landscaped area that reinforces the vegetated character of the locality.

The townhouses

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- a) The townhouse style building is sufficiently articulated towards its centre due to the location of the vehicular access point to the basement carparking, and the corresponding break in the roof located above the access so that it presents to the street largely as two separate buildings with a mid level connection.

Part 4.8 Resource, energy and water efficiency

Energy efficiency:

DCP 55 requires 90% of units to have a NatTHERS noting rating of 4.5 stars. The environmental performance of the development is acceptable considering the east - west orientation of the site. The proposal has achieved a climatic responsive outcome by limiting the depth of the building. All units achieve a rating of 3.5 stars and 67.3% having a rating of 4.5 stars. Given that 76% of apartments receive at least 3 hours of sunlight and that the majority will have at least two aspects with good cross ventilation, the NatTHERS rating is acceptable.

Development Control Plan 31 - Access

Matters for assessment under DCP 31 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 40 - Construction and Demolition Waste Management

Matters for assessment under DCP 40 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 43 - Car Parking

Matters for assessment under DCP 43 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 47 - Water Management

Matters for assessment under DCP 47 have been taken in account in the assessment of this application against DCP 55.

Section 94 Plan

The development attracts a section 94 contribution of \$672,868.93, which is required to be paid by **Condition No 58**.

LIKELY IMPACTS

All likely impacts have been assessed elsewhere in the report.

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SUITABILITY OF THE SITE

The site is suitable for the proposed development.

PUBLIC INTEREST

The approval of the application is considered to be in the public interest.

CONCLUSION

Having regard to the provisions of section 79C of the Environmental Planning and Assessment Act 1979, the proposed development is considered to be satisfactory. Therefore, it is recommended that the application be approved.

RECOMMENDATION

Pursuant to Section 80(1) of the Environmental Planning and Assessment Act, 1979

THAT the Council, as the consent authority, grant development consent to DA 677/05 for the construction of a residential flat building comprising 49 units including basement parking and strata subdivision on land at 657-661 Pacific Highway, Killara, for a period of two (2) years from the date of the Notice of Determination subject to the following conditions:

GENERAL

- The development must be carried out in accordance with plans identified within the following table and endorsed with Council's approval stamp, except where amended by the following conditions:

Dwg No	Rev	Description	Author	Dated	Lodged
00	A	Cover Sheet	Thiessen	25.5.05	29.6.05
01	A	Cover Sheet	Thiessen	25.5.05	29.6.05
02	A	Basement 1	Thiessen	25.5.05	29.6.05
03	A	Site & Level 1	Thiessen	25.5.05	29.6.05
04	A	Levels/to 4 + loft	Thiessen	25.5.05	29.6.05
05	A	Elevations	Thiessen	25.5.05	29.6.05
06	A	Elevations	Thiessen	25.5.05	29.6.05
07	A	Sections	Thiessen	25.5.05	29.6.05
08	A	Site Analysis	Thiessen	25.5.05	29.6.05
01	A	Landscape calculation	Thiessen	25.5.05	29.6.05
02	A	Building areas calculation	Thiessen	25.5.05	29.6.05
SH-04	A	Shadow Diagram	Thiessen	March 2005	29.6.05
SH-05	A	Shadow Diagram	Thiessen	March 2005	29.6.05
SH-06	A	Shadow Diagram	Thiessen	March 2005	29.6.05
SK-20	A	Window amendment	Thiessen	November 2005	9.11.05
SK-21	A	Corridor widths plan	Thiessen	November 2005	9.11.05

- All building works shall comply with the Building Code of Australia.

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3. The submission of the approved plans to Sydney Water, before any work is commenced to ensure that the proposed structure meets that Authority's By-Laws. Failure to submit these plans before commencing work will render the owner liable to a penalty and may result in the demolition of work.
4. The approved building shall not be occupied unless the development has been completed in accordance with all conditions of consent and the approved plans and a Occupation Certificate has been issued.
5. The opening of any footway, roadway, road shoulder or any part of the road reserve shall not be carried out without a Road Opening Permit being obtained from the Council (upon payment of the required fee) beforehand.
6. For the purpose of ensuring the compliance with the terms of the approval, an approved copy of the plan and this Consent and Construction Certificate shall be kept on site at all times.
7. For the purpose of safety and amenity of the area, no building materials, plant or the like are to be stored on the road or footpath without the written approval being obtained from the Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.
8. **HOURS OF WORK:** For the purpose of residential amenity, noise generating work carried out in connection with building and construction operation, including deliveries of building materials and equipment, is restricted to the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted. The use of the following items of plant on the site is also restricted to the abovementioned hours: compressors, bulldozers, power operated woodworking machines, excavators and loaders, jackhammers, Ramset guns, concrete mixers and concrete delivery wagons, hoists, winches, welding and riveting plant.

Whilst work on Saturdays may be performed until 5.30pm, such work or any associated activities shall not involve the use of any noise generating processes or equipment.

9. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.
10. A sign shall be erected in a prominent position on the site which states the name and contact details of the Principal Certifying Authority.
11. All excavations shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.

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12. Any excavation of rock involving hydraulic or compressed air rock hammers or other excavation equipment shall comply with the requirements of Council's Code for the Control and Regulation of Noise on Building Sites.
13. No rock breaking or other machinery for the excavation, drilling or removal of rock shall be used on the site without the prior approval of the Principal Certifying Authority. Should rock breaking or associated machinery be required, the following details are to be submitted to the Principal Certifying Authority for consideration:
 - a. The type and size of machinery proposed.
 - b. The routes of all trucks to convey material to and from the site.
 - c. A report by a Geotechnical Engineer detailing the measures recommended in undertaking the work so as to prevent any damage to any adjoining or nearby buildings.
14. The applicant is advised that the Construction Certificate plans and specifications must comply with the provisions of the Building Code of Australia.
15. Toilet facilities are to be provided, within the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
16. If the work involved in the erection or demolition of a building:
 - a. is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or
 - b. building involves the enclosure of a public place, a hoarding or fence must be erected between the work site and the public place.

If necessary, an awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place.

The work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place.

Any such hoarding, fence or awning is to be removed when the work has been completed.

17. The proposed development should be designed, such that road traffic noise from Pacific Highway is mitigated by durable materials, in accordance with EPA criteria for new land use developments (The Environmental Criteria for Road Traffic Noise, May 1999). The RTA's Environmental Noise Management Manual provides practical advice in selecting noise mitigation treatments.

Where the EPA external noise criteria would not practically or reasonably be met the RTA recommends that Council apply the following internal noise objectives for all habitable rooms

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under ventilated conditions complying with the requirements of the Building Code of Australia:

- All habitable rooms other than sleeping rooms: 45 dB(A) L_q(Ishr) and 40 dB(A) L_{eq}(9hr) and
- Sleeping rooms: 35 dB(A) qh-

18. The post development storm water discharge from the subject site into the RTA drainage system does not exceed the pre-development discharge.

Detailed design plans and hydraulic calculations of any changes to the stormwater drainage system are to be submitted to the RTA for approval, prior to the commencement of any works.

Details should be forwarded to:
Sydney Asset Management
PO Box 558
Blacktown, NSW 2148

A plan checking fee may will be payable and a performance bond may be required before the RTA's approval is issued. With regard to the Civil Works requirement please contact the RTA's Project Engineer, External Works Ph: 8814 2114 or Fax 8814 2111.

19. Off-street parking associated with the proposed development (such as driveways, aisle widths, aisle lengths, parking bay dimensions and sight distances) should be designed in accordance with AS 2890.1 - 2004.
20. Any redundant driveway on Pacific Highway must be removed and kerb and gutter reinstated to match existing.
21. Suitable provision should be made on site for all construction vehicles to avoid any vehicles parking or standing on Pacific Highway.
22. All vehicles are to enter and exit the site in a forward direction.
23. In order to comply with the noise intrusion requirements, the recommendations made in Report No. 242827-TRP-003812-02 by VIPAC Engineers and Scientists Ltd, dated 28 April 2005 are to be carried out.
24. Stormwater runoff from new hard surfaces generating runoff or landscaped areas that are not at natural ground level shall be piped to the street drainage system.
25. A mandatory rainwater retention and re-use system comprising storage tanks and ancillary plumbing must be provided for the development. The total storage volume of the rainwater tank system, and the prescribed re-use of the water on site, must satisfy the requirements specified in chapter 6 of Ku-ring-gai Council Water Management Development Control Plan 47 (DCP47).

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26. In addition to the mandatory rainwater retention and re-use system provided, an on-site stormwater detention system must be provided for the development to control the rate of runoff leaving the site. The minimum volume of the required on-site detention system must be determined in accordance with chapter 6 of the Ku-ring-gai Council Water Management Development Control Plan 47 (DCP 47) - having regard to the specified volume concession offered in lieu of installing rainwater retention tanks. The design of the on-site detention system must be performed by a qualified civil/hydraulic engineer and must satisfy the design controls set out in appendix 5 of DCP 47.
27. For stormwater control a 200mm wide grated channel/trench drain with a heavy-duty removable galvanized grate is to be provided in front of the garage door/basement parking slab to collect driveway runoff. The channel drain shall be connected to the main drainage system and must have an outlet of minimum diameter 150mm to prevent blockage by silt and debris.
28. To control surface runoff all new exposed impervious areas graded towards adjacent property and/or habitable areas are to be drained via the main drainage system. This may require the installation of suitable inlets pits, cut-off structures (e.g. kerb), and/or barriers that direct such runoff to the formal drainage system. Details for such measures shall be shown on the approved Construction Certificate issue drawings, to the satisfaction of the Principal Certifying Authority.
29. During construction, stormwater runoff must be disposed in a controlled manner that is compatible with the erosion and sediment controls on the site. Immediately upon completion of any impervious areas on the site (including roofs, driveways, paving) and where the final drainage system is incomplete, the necessary temporary drainage systems must be installed to manage and control runoff as far as the approved point of stormwater discharge. Such measures shall be to the satisfaction of the Principal Certifying Authority.
30. A maintenance period of six (6) months applies to all work in the public road reserve carried out by the applicant - **after** the works have been completed to the satisfaction of Ku-ring-gai Council. In that maintenance period, the applicant shall be liable for any section of the completed public infrastructure work which fails to perform in the designed manner, or as would reasonably be expected under the operating conditions. The maintenance period shall commence once the Applicant receives a written indication from Council stating that the works involving public infrastructure have been completed satisfactorily.
31. Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the Applicants full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services at the appropriate stage of development (including water, phone, gas and the like). Council accepts no responsibility whatsoever for any matter arising from its approval of this application involving any influence upon utility services provided by another authority.

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32. All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials and plant must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "*Traffic Control Devices for Work on Roads*". **If pedestrian circulation is not satisfactorily maintained across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.**
33. The provision of temporary sediment and erosion control facilities and measures must be installed, prior to the commencement of any works on the site to eliminate unnecessary erosion and loss of sediment. These facilities must be maintained in working order during construction works up to completion. All sediment traps must be cleared on a regular basis and after each major storm, and/or as directed by the Principal Certifying Authority and Council officers.
34. Driveways and vehicular access ramps must be designed not to scrape the underside of cars. In all respects, the proposed vehicle access and accommodation arrangements must be designed and constructed to comply with the minimum requirements of Australian Standard 2890.1 (2004) "Off-Street car parking".
35. The Applicant must obtain a **Section 73 Compliance Certificate** under the *Sydney Water Act 1994*. An application must be made through an authorised Water Servicing Coordinator. The Applicant is to refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-developer" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
36. In order to allow **unrestricted access at all times** for Ku-ring-gai Council waste collection vehicles into the basement garbage collection area - no doors, grilles, gates or other devices are to be provided in the access driveways to the basement carpark preventing this service.
37. A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee the excavation procedure.
38. The geotechnical and hydrogeological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the report by Jeffery and Katauskas, the Implementation Program and subsequent recommendations.

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39. A Tree Preservation Order exists within the Ku-ring-gai Council area whereby the removal, lopping or destruction of any tree exceeding 5.0 metres in height or 4.0 metres in canopy spread (except where exempt as defined under Council's Tree Preservation Order) without prior written consent of Council is prohibited.
40. Landscape works shall be carried out in accordance with Landscape Drawing No LDA201-LDA502 Rev A prepared by SCAPE and dated 08/03/05 submitted with the Development Application, except as amended by the following:
- A total of six *Eucalyptus saligna* (Bluegum) are to be planted as an evenly spaced formal avenue planting within the proposed ornamental grass garden beds, across the Pacific Hwy site frontage within the proposed deep soil landscape area. The trees are to be planted so that they have a minimum 3.5m setback from the site boundary.
 - The proposed planting of *Syncarpia glomulifera* adjacent to the Greengate lane site frontage are to be deleted and replaced with *Lagerstroemia indica* (Crepe Myrtle), with the same planting specifications and locations.
 - The proposed planting of Eucalypts between the Greengate Hotel and the proposed residential flat building is to be deleted and replaced with *Syncarpia glomulifera* (Turpentine) with the same planting specifications and locations.
 - The proposed paving within the private courtyard on the northern side of Townhouse 1, is to be deleted, with the exception of a 1.0m wide landing outside of any proposed doorways.
 - The proposed courtyard wall on the northern side of Townhouse 1, is to have a minimum setback from the Bruce Ave site boundary of 5.0m. The area outside of the private courtyard is to be maintained as communal open space and planted with two additional native endemic tree species able to attain a minimum height of 13.0m, in addition to the proposed planting.
41. REMOVAL of the following tree/s from Council's nature strip shall be undertaken at no cost to Council by an experienced Tree Removal Contractor/Arborist holding Public Liability Insurance amounting to a minimum cover of \$10,000,000.

Tree/Location

Jacaranda mimosifolia (Jacaranda) x 3
Bruce Ave nature strip

Pistacia chinensis (Chinese Pistacio) x 2
Pacific Hwy nature strip

42. Root pruning of the following tree/s which is necessary to accommodate the approved building works shall be undertaken by an experienced Arborist/Horticulturist, with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate:

Tree/Location

Quercus robur (English Oak) x 2

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Adjacent to the southern site boundary

43. Tree roots between 10mm and 50mm diameter, severed during excavation, shall be cut cleanly by hand and the tree subsequently treated with a root growth hormone and wetting agent, by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate.
44. No tree roots of 50mm or greater in diameter located within the specified radius of the trunk/s of the following, tree/s shall be severed or injured in the process of any site works during the construction period.

Tree/Location	Radius From Trunk
<i>Quercus robur</i> (English Oak) x 2	9.0m
Adjacent to the southern site boundary	

45. The trees to be retained shall be inspected, monitored and treated when necessary by a qualified Arborist before, during and after completion of development works to ensure their long term survival. Regular reports from the Arborist to the principal certifying authority shall be required at three monthly/quarterly intervals. Documentary evidence of compliance with this condition shall be submitted to the principal certifying authority prior to the issue of the Occupation Certificate.
46. All excavation carried out within the specified radius of the trunk/s of the following tree/s shall be hand dug:

Tree/Location	Radius From Trunk
<i>Quercus robur</i> (English Oak) x 2	9.0m
Adjacent to the southern site boundary	

47. The applicant shall ensure that at all times during the construction period no activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order.
48. The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along Pacific Hwy. The trees are to be planted as an evenly spaced avenue planting. The tree/s used shall be 25 litre container size specimen/s:

Tree Species
Jacaranda mimosifolia (Jacaranda) x 6

49. The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along Bruce Ave. The trees are to be planted as an evenly spaced avenue planting. The tree/s used shall be 45 litre container size specimen/s:

Tree Species
Jacaranda mimosifolia (Jacaranda) x 6

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50. Following removal of the *Jacaranda mimosifolia* (Jacaranda) and *Pistacia chinensis* (Chinese Pistacio) from Council's nature strip, the nature strip shall be rehabilitated to the satisfaction of Council, at no cost to Council.

51. Transplanting of the following trees/shrubs shall be directly supervised by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate. The palm is to be transplanted and relocated on site as a feature planting.

Species/Location

Phoenix canariensis (Canary Is Date Palm)

Adjacent to eastern/Greengate Lane site boundary

52. All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.
53. Due to the possibility of relics being contained within the site, during excavation works, the applicant must ensure that should any historical relics be uncovered, excavation or disturbance of the area is to stop immediately. In accordance with section 146(a) of the 'Heritage Act, 1977', the applicant must ensure the Heritage Council of NSW is notified within a reasonable time of discovery or location of these relics. Archaeological assessment and approval, or endorsement, may be required prior to works continuing in the affected area(s) based on the nature of the discovery.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

54. The Long Service Levy is to be paid to Council in accordance with the provisions of Section 34 of the Building and Construction Industry Payments Act 1986 prior to the issue of the Construction Certificate.

Note: Required if cost of works exceed \$25,000.00.

55. It is a condition of consent that the applicant, builder or developer or person who does the work on this residential building project arrange the Builders Indemnity Insurance and submit the Certificate of Insurance in accordance with the requirements of Part 6 of the *Home Building Act 1989* to the Council or other Principal Certifying Authority for endorsement of the plans accompanying the Construction Certificate. It is the responsibility of the applicant, builder or developer to arrange the Builder's Indemnity Insurance for residential building work over the value of \$12,000 and to satisfy the Council or other Principal Certifying Authority by the presentation of the necessary Certificate of Insurance so as to comply with the applicable requirements of Part 6 of the *Home Building Act 1989*. The requirements for the Builder's Indemnity Insurance does not apply to commercial or industrial building work or for residential work less than \$12,000, nor to work undertaken by persons holding an Owner/Builder's Permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).

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56. The Infrastructure Restorations Fee calculated in accordance with the Council's adopted schedule of Fees and Charges is to be paid to the Council prior to any earthworks or construction commencing. The applicant or builder/developer will be held responsible for and liable for the cost any damage caused to any Council property or for the removal of any waste bin, building materials, sediment, silt, or any other article as a consequence of doing or not doing anything to which this consent relates. "Council Property" includes footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, litter bins, trees, shrubs, lawns mounds, bushland, and similar structures or features on road reserves or any adjacent public place. Council will undertake minor restoration work as a consequence of the work at this site in consideration of the "Infrastructure Restorations Fee" lodged with the Council prior to the release of the Construction Certificate. This undertaking by the Council does not absolve the applicant or Builder/developer of responsibility for ensuring that work or activity at this site does not jeopardise the safety or public using adjacent public areas or of making good or maintaining "Council property" (as defined) during the course of this project.
57. Prior to commencing any construction or subdivision work, the following provisions of the Environmental Planning & Assessment Act, 1979 (the 'Act') are to be complied with:
 - a. A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.
 - b. A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act.
 - c. Council is to be notified in writing, at least two (2) days prior to the intention of commencing buildings works, in accordance with Section 81A(2)(c) of the Act.
 - d. Should the development be certified by a Principal Certifying Authority other than Council, a fee for each Part 4A Certificate is to be paid to Council on lodgement of those Certificates with Council.
58. A contribution is to be paid for the provision, extension or augmentation of community facilities, recreation facilities, open space and administration that will, or are likely to be, required as a consequence of development in the area.

TOTAL CONTRIBUTION FOR THIS DEVELOPMENT OF THIRTY-NINE (39) ADDITIONAL DWELLINGS IS CURRENTLY \$672,868.83. The amount of the payment shall be in accordance with the Section 94 charges as at the date of payment. The charges may vary at the time of payment in accordance with Council's Section 94 Contributions Plan to reflect changes in land values, construction costs and the consumer price index.

This contribution shall be paid to Council prior to the release of the Construction Certificate and the amount payable shall be in accordance with the Council's adopted Section 94 Contributions Plan for Residential Development, effective from 30 June 2004, calculated for additional person as follows:

1. Community Facilities	\$1 117.76
2. Park Acquisition and Embellishment Works - Killara	\$6 384.75
3. Sportsgrounds Works	\$1 318.32

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4. Aquatic / Leisure Centres	\$27.82
5. Traffic and Transport	\$150.28
6. Section 94 Plan Administration	\$100.04

To obtain the total contribution figure the following table of occupancy rates is to be used:

OCCUPANCY RATES FOR DIFFERENT DWELLING SIZES

Small dwelling (under 75 sqm)	1.27 persons
Medium dwelling (75 - under 110 sqm)	1.78 persons
Large dwelling (110 – under 150sqm)	2.56 persons
Very Large dwelling (150sqm or more)	3.48 persons
New Lot	3.48 persons
SEPP (Seniors Living) Dwelling	1.3persons

59. Prior to issue of the Construction Certificate, the applicant is to submit the Geotechnical Implementation Program incorporating a Monitoring Program, a Contingency Plan and Construction Methodology, as recommended by Jeffery and Katauskas in their report. The Program is to be submitted to and approved by the Principal Certifying Authority prior to issue of the Construction Certificate.
60. Prior to issue of the Construction Certificate the Applicant must consolidate the existing Torrens lots which will form the development site. Evidence of lot consolidation, in the form of a plan registered with Land and Property Information, must be submitted for approval of the Principal Certifying Authority prior to issue of the Construction Certificate. This condition is imposed to ensure continuous structures will not be placed across separate titles.
61. The Applicant must submit carry out the following infrastructure works in the Public Road:
 - Construct half width road pavement (2.75m) in Greengate Lane (west) for the full frontage of the development, including new upright kerb and gutter.
 - Construct 1.0 metre wide footpath for the full Greengate Lane (west) frontage of the development, adjacent to the kerb in Greengate Lane (west) using porous paving materials.

The applicant is to liaise with Council's Technical Services section as to the position of the carriageway within the road reserve.

Development Consent under the EP&A Act does NOT give approval to these works on Council property. **THE APPLICANT MUST OBTAIN A SEPARATE APPROVAL UNDER SECTION 138 AND 139 OF THE ROADS ACT 1993** for the works in the Public Road, required by this condition. The Construction Certificate must not be issued, and these works must not proceed, until Council has issued a formal written consent under the *Roads Act 1993*.

To obtain consent under the *Roads Act 1993* for the infrastructure works on Council property, full engineering drawings (plans, sections and elevations) and specifications for the infrastructure works are to be prepared by a suitably qualified and experienced consulting civil engineer. These must be submitted and approved by Council prior to issue of the Construction Certificate. Construction of the works must proceed in accordance with any conditions attached to the Council *Roads Act 1993* approval.

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All works are to be designed in accordance with Council's "Specification for Road and Drainage Works". In addition, the drawings must detail existing services and trees affected by the works, erosion control requirements and traffic management requirements during the course of works. Traffic management is to be certified on the drawings as being in accordance with the documents SAA HB81.1 – 1996 – Field Guide for Traffic Control at Works on Roads – Part 1 and RTA Traffic Control at Work Sites (1998).

NOTE 1: A minimum of three (3) weeks will be required for assessment of Roads Act submissions. Early submission is highly recommended to avoid delays in obtaining a Construction Certificate.

NOTE 2: An engineering assessment fee (set out in Council's adopted fees and charges) is payable and Council will withhold any consent and approved plans until full payment of the correct fees.

NOTE 3: Plans and specifications must be marked to the attention of Council's Development Engineers. In addition, a copy of this condition must be provided, together with a covering letter stating the full address of the property and the accompanying DA number.

62. Prior to issue of the Construction Certificate the Applicant must submit, for approval by the Principal Certifying Authority, certified parking layout plan(s) to scale showing all aspects of the vehicle access and accommodation arrangements clearly dimensioned. A qualified civil/traffic engineer must review the proposed vehicle access and accommodation layout and provide written certification on the plans that:

- All parking space dimensions, driveway and aisle widths, driveway grades, transitions, circulation ramps, blind aisle situations and other trafficked areas comply in full with Australian Standard 2890.1 – 2004 "Off-street car parking".
- A clear height clearance of 2.5 metres (required under DCP40 for waste collection trucks) is provided over the designated garbage collection truck manoeuvring areas within the basement.
- No doors or gates are provided in the access driveways to the basement carpark which would prevent unrestricted access for internal garbage collection at any time from the basement garbage storage and collection area.
- A radius is provided on the corner of the hatched pedestrian area adjacent to the entry on the hotel parking level to improve the left turn movement by cars from the bridge ramp to the circulation aisle, as recommended in the report by Masson Wilson Twiney dated May 2005.

The vehicle access and accommodation arrangements are to be constructed in accordance with the certified plans.

63. Prior to issue of the Construction Certificate and prior to commencement of any works that may be subject to erosion, the applicant must submit, for approval by the Principal Certifying

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Authority, a Soil and Erosion Control Plan prepared in accordance with the Landcom document “*Managing Urban Stormwater – Soils and Construction, Volume 1*” (2004). A qualified and experienced civil/environmental engineer shall prepare this plan in accordance with the above guidelines and section 8.2.1 of Councils Water Management Development Control Plan 47.

64. Prior to issue of the Construction Certificate the applicant must submit, for approval by the Principal Certifying Authority, scale construction plans and specifications in relation to the stormwater management and disposal system for the development. The plan(s) must include the following detail:

- Exact location and reduced level of discharge point to the public drainage system.
- Full layout of the property drainage system components, including but not limited to (as required) gutters, downpipes, spreaders, pits, swales, kerbs, cut-off and intercepting drainage structures, subsoil drainage, flushing facilities and all ancillary stormwater plumbing - all designed for a 235mm/hour rainfall intensity for a duration of five (5) minutes (1:50 year storm recurrence).
- Location(s), dimensions and specifications for the required rainwater storage and reuse tanks and systems. Where proprietary products are to be used, manufacturer specifications or equivalent shall be provided.
- Specifications for reticulated pumping facilities (including pump type and manufacturer specifications) and ancillary plumbing to fully utilise rainwater in accordance with the Ku-ring-gai Council Development Control Plan 47 and/or BASIX commitments.
- Details of the required **on-site detention** tanks required under Ku-ring-gai Council Water Management DCP 47 including dimensions, materials, locations, orifice and discharge control pit details as required (refer chapter 6 and appendices 2, 3 and 5 of DCP 47 for volume, PSD and design requirements).
- The required basement stormwater pump-out system to cater for driveway runoff and subsoil drainage (refer appendix 7.1.1 of Development Control Plan 47 for design).

The above construction drawings and specifications are to be prepared by a qualified and experienced civil/hydraulic engineer in accordance with Councils Water Management Development Control Plan 47, Australian Standards 3500.2 and 3500.3 - *Plumbing and Drainage Code* and the BCA. The plans may be generally based on Drawings HS01 to HS04 by Michael Frost & Associates submitted for Development Application approval, which are to be advanced as necessary for construction issue purposes.

65. Prior to issue of the Construction Certificate the Applicant must contact Energy Australia regarding power supply for the subject development. A written response detailing the full requirements of Energy Australia (including any need for underground cabling, substations or similar within or in the vicinity the development) shall be submitted to the Principal Certifying Authority for approval prior to issue of the Construction Certificate. Any structures or other requirements of Energy Australia shall be reflected on the plans issued with the Construction Certificate, to the satisfaction of the Principal Certifying Authority and Energy Australia. The requirements of Energy Australia must be met in full prior to issue of the Occupation Certificate.

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66. Prior to issue of the Construction Certificate the applicant must make contact with all relevant utility providers whose services will be impacted upon by the approved development. A written copy of the requirements of each provider, as determined necessary by the Principal Certifying Authority, must be obtained. All utility services or appropriate conduits for the same, including electricity, gas, telephone, water and sewerage must be provided by the developer in accordance with the specifications of those supply authorities.
67. A CASH BOND/BANK GUARANTEE of \$10 000.00 shall be lodged with Council as a Landscape Establishment Bond prior to the release of the Construction Certificate to ensure that the landscape works are installed and maintained in accordance with the approved landscape plan or other landscape conditions.

Fifty percent (50%) of the this bond will be refunded upon issue of the final Certificate of Compliance, where landscape works as approved have been satisfactorily installed. The balance of the bond will be refunded 3 years after issue of the building certificate, where landscape works has been satisfactorily established and maintained.

It is the responsibility of the applicant to notify Council in relation to the refunding of the bond at the end of the 3 year period. Where a change of ownership occurs during this period it is the responsibility of the applicant to make all arrangements regarding transference of the bond and to notify Council of such.

68. A CASH BOND/BANK GUARANTEE of \$10 000.00 shall be lodged with Council prior to the release of the Construction Certificate to ensure that the following trees are maintained in the same condition as found prior to commencement site development work.

The bond will be returned following issue of the final Certificate of Compliance, provided the trees are undamaged.

In the event that any specified trees are found damaged, dying or dead as a result of any negligence by the applicant or its agent, or as a result of the construction works at any time during the construction period, Council will have the option to demand the whole or part therefore of the bond.

Tree/Location

Quercus robur (English Oak) x 2

Adjacent to the southern site boundary

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

69. Prior to the commencement of any work, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder who intends to carry out the approved works.

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70. To reduce or eliminate the transport of sediment from the construction site onto public roads, a temporary construction exit, together with necessary associated temporary fencing, shall be established prior to commencement of any work on the site and shall be maintained throughout the duration and progress of construction.
71. To preserve and enhance the natural environment, a geofabric filter fence shall be installed along contour immediately downslope of construction and disturbed areas prior to any earthworks or construction commencing. Both ends shall be turned uphill by 1.0 metre. Approved geofabric, such as CSR - Humes "Propex" Terram 1000, Polyfelt TS500, Bidim U24 or Terratrack 2415 or equivalent is to be stretched between posts placed at 2.0 to 3.0 metre centres. The base of the fabric must be buried at least 200mm in the ground on the upslope side. Geofabric material shall be replaced at intervals not exceeding 18 months, or as directed by the Principal Certifying Authority.

The geofabric filter fence shall be maintained in an operational condition until the development activities have been completed and the site fully stabilised. Sediment shall be removed from the structure when 40% capacity has been reached.

72. Prior to the commencement of **any excavation works** on site the Applicant must submit, for approval by the Principal Certifying Authority (with a copy forwarded to Council) a full dilapidation report on the visible and structural condition of the Greengate Hotel. The report must be completed by a consulting structural/geotechnical engineer. Upon submitting a copy of the dilapidation report to Council (or certification that no report is required), a written acknowledgment from Council Development Engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site.
73. Prior to the commencement of **any** works on site the applicant must submit, for review by Council Engineers, a *Construction and Traffic Management Plan*. The following matters must be specifically addressed in the Plan:

A plan view of the entire site and frontage roadways indicating:

- Dedicated construction site entrances and exits, controlled by a certified traffic controller, to safely manage pedestrians and construction related vehicles in the frontage roadways,
- Turning areas within the site for construction and spoil removal vehicles, allowing a forward egress for all construction vehicles on the site,
- The locations of proposed Work Zones in the frontage roadways,
- Location of any proposed crane standing areas
- A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries
- Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected.
- The provision of an on-site parking area for employees, tradesperson and construction vehicles as far as possible

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Traffic Control Plan(s) for the site

- All traffic control devices installed in the road reserve must be in accordance with the RTA publication "Traffic Control Worksite Manual" and be designed by a person licensed to do so (minimum RTA 'red card' qualification). The main stages of the development requiring specific construction management measures are to be identified and specific traffic control measures identified for each.
- Traffic controllers are to be stationed at the intersection(s) of Bruce Avenue and Greengate Lane and at the bend when construction vehicles are approaching the site from Greengate Lane.
- Consideration should be given to using an existing driveway off Bruce avenue for some site access.
- Approval is to be obtained from Ku-ring-gai Council for any temporary road closures or crane use from public property.

A detailed description and route map of the proposed route for vehicles involved in spoil removal, material delivery and machine floatage must be provided.

- Light traffic roads and those subject to a load or height limit must be avoided at all times.
- A copy of this route is to be made available to all contractors, and shall be clearly depicted at a location within the site.

In addition, the plan must address:

- Evidence of RTA concurrence where construction access is provided directly or within 20m of an Arterial Rd.
- A schedule of site inductions to be held on regular occasions and as determined necessary to ensure all new employees are aware of the construction management obligations. These must specify that construction-related vehicles to comply with the approved requirements.
- Minimising construction related traffic movements during school peak periods.
- For those construction personnel that drive to the site, the Applicant shall attempt to provide on-site parking so that their personnel's vehicles do not impact on the current parking demand in the area.
- Employee parking is to be provided in the basement as soon as practicable.

The *Construction and Traffic Management Plan* shall be prepared by a suitably qualified and experienced traffic consultant and be certified by this person as being in accordance with the requirements of the abovementioned documents and the requirements of this condition. The construction management measures contained in the approved plan shall be implemented in accordance with the plan prior to the commencement of, and during, works on-site including excavation. As the plan has a direct impact on the local road network, the plan shall be submitted to and reviewed by Council, attention Development Engineer. A written acknowledgment from Council engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the

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commencement of any works on site. A fee is payable for the assessment of the plan by Ku-ring-gai Council.

74. If a Works Zone is proposed, the Applicant must make a written application to the Ku-ring-gai Local Traffic Committee to install the 'Work Zone'. The application must be made at least 15 days prior to the commencement of any works on site approved under this consent. Works Zones are provided specifically for the set down and pick up of materials and not for the parking of private vehicles associated with the site. Works Zones will generally not be approved where there is sufficient space on-site for the setting down and picking up of goods being taken to or from a construction site. If the Works Zone is approved by the Committee, the Applicant must obtain a written copy of the related resolution from the Ku-ring-gai Local Traffic Committee and submit a copy of this to the Principal Certifying Authority for approval prior to commencement of any works on the site. Where approval of the 'Work Zone' is resolved by the Committee, the necessary 'Work Zone' signage shall be installed (at the cost of the Applicant) and the adopted fee paid prior to commencement of any works on the site. Further, at the expiration of the Works Zone approval, the Applicant is required to remove the Works Zone signs and reinstate any previous signs, all at the Applicant's cost.

75. Prior to the commencement of any works on site the applicant shall submit to Ku-ring-gai Council a full dilapidation report on the visible and structural condition (**including a photographic record**) of the following public infrastructure:

- Full road pavement width, including kerb and gutter, of Bruce Avenue over the site frontage.
- Southbound lane of Pacific Highway, including kerb and gutter, over the site frontage.

The report must be completed by a consulting structural/civil engineer. Particular attention must be paid to accurately recording (both via photo and in written format) *existing* damaged areas on the aforementioned infrastructure so that Council is fully informed when assessing any damage to public infrastructure caused as a result of the development.

76. If the use of temporary rock anchors extending into the road reserve is proposed, then approval must be obtained from Council in accordance with Section 138 of the Roads Act 1993. The Applicant is to submit details of all the work that is to be considered, and the works are not to commence until approval has been granted. The designs are to include details of the following:

- How the temporary rock anchors will be left in a way that they will not harm or interfere with any future excavation in the public road
- That the locations of the rock anchors are registered with Dial Before You Dig
- That approval of all utility authorities likely to use the public road has been obtained. All temporary rock anchors are located outside the allocations for the various utilities as adopted by the Streets Opening Conference.
- That any remaining de-stressed rock anchors are sufficiently isolated from the structure that they cannot damage the structure if pulled during future excavations or work in the public road.

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- That signs will be placed and maintained on the building stating that de-stressed rock anchors remain in the public road and include a contact number for the building manager. The signs are to be at least 600mm x 450mm with lettering on the signs is to be no less than 75mm high. The signs are to be at not more than 60m spacing. At least one sign must be visible from all locations on the footpath outside the property. The wording on the signs is to be submitted to Council 's Director Technical Services for approval before any signs are installed.

Permanent rock anchors are not to be used where any part of the anchor extends outside the development site into public areas or road reserves.

All works in the public road are to be carried out in accordance with the Conditions of Construction issued with any approval of works granted under Section 138 of the Roads Act 1993.

77. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s is fenced off at the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

Tree/Location	Radius in Metres
<i>Quercus robur</i> (English Oak) x 2	8.0m
Adjacent to the southern site boundary	

78. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
79. Tree protection signage is to be attached to each tree Protection Zone and displayed in a prominent position and the sign repeated at 10m intervals or closer where the fence changes direction. Each sign to advise as minimum details, the following:
1. Tree Protection Zone
 2. This fence has been installed to prevent damage to the trees and their growing environment both above and below ground, and access is restricted.
 3. If encroachment or incursion into this Tree Protection Zone is deemed to be essential the consulting Arborist should be informed prior to the undertaking of such works
 4. Name, address, and telephone number of the developer/principal certifying authority.
80. The area of the Tree Protection Zone is to be mulched to a depth of 100mm with organic material being 75% leaf litter and 25% wood, and this being composted material preferably from the same genus and species of tree as to that where the mulch is to be applied, ie species specific mulch. The depth of mulch and type as indicated, to be maintained for the duration of the project.

Item 2

81. No services either temporary or permanent are to be located within the Tree protection Zone. If services are to be located within the Tree Protection Zone, special details will need to be provided by a qualified consulting Arborist for the protection of the tree regarding the location of the service/s.
82. In the event of prolonged dry periods, or where a tree has been transplanted, or where excavation nearby, especially up slope, leads to drying out of soil profiles closest to the tree/s, the tree/s is to be deep root watered thoroughly at least twice a week. The need for such watering is determined readily by observing the dryness of the soil surface within the dripline of the tree by scraping back some mulch. Mulch to be reinstated afterwards. In the event of disrupted ground or surface water flows to the tree due to excavation, filling or construction, an irrigation system may be required to be installed, consideration must be given to volume, frequency, and drainage of water delivered, and this should be in consultation with a qualified consulting Arborist.
83. If a tree is growing down slope from an excavation, a silt fence located along the contours of the site in the area immediately above the Tree Protection Zone fencing may be need to be installed and regularly maintained to prevent burial and asphyxiation of the roots of the tree. To allow for the maintenance of both fences, the silt fence must be constructed separately to the tree protection fence and the two fences must be constructed independently of each other and stand alone. To reduce competition the Tree Protection Zone is to be kept free of weeds for the duration of the development works.
84. Upon completion of the installation of the required tree protection measures you are required to contact the principal certifying authority to arrange an inspection of the site. Following the carrying out of a satisfactory inspection and subject to the payment of all relevant monies and compliance with any other conditions of approval, work may commence.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A SUBDIVISION
CERTIFICATE

85. The applicant must create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the owner with the requirement to maintain the on-site stormwater detention facilities on the lot. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instrument for protection of on-site detention facilities" (refer to appendices of Ku-ring-gai Council Water Management DCP 47) and to the satisfaction of Council. The relative location of the On-Site Detention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.
86. The applicant must create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site stormwater retention and re-use facilities on the property. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instruments for protection of retention and re-use facilities" (refer to appendices of Ku-ring-gai Council Water Management DCP 47) and to the satisfaction of Council. The relative

Item 2

location of the reuse and retention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

87. Prior to release of the linen plan/issue of the subdivision certificate, all necessary road, footpath and/or drainage works in the public road must be completed in full. Such works shall be in full accordance with the Council approved drawings and to the satisfaction of Council's Development Engineer. The applicant's designing engineer must supervise the works. This engineer is to provide certification upon completion that the works were constructed in accordance with the Council approved drawings. This certification shall be provided prior to release of the linen plan/issue of the subdivision certificate. The works are also to be subject to inspection by Council as noted on the approved drawings and any conditions attached to the approved drawings for these works must be met. The completed works are to be approved by Council's Development Engineer prior to release of the linen plan/issue of the subdivision certificate.
88. An easement for waste collection is to be created. This is to permit legal access for Council, Council's contractors and their vehicles over the subject property for the purpose of collecting waste from the property. The terms of the easement are to indemnify Council and Council's contractors against damages to private land or property whilst in the course of carrying out waste collection services. The terms of the easement are to be generally in accordance with Council's draft terms for an easement for waste collection.
89. Prior to release of the linen plan/issue of the subdivision certificate, the Section 73 Sydney Water compliance certificate **which refers to the subdivision application** must be obtained and submitted to the Council.
90. For endorsement of the linen plan/issue of the subdivision certificate, the Applicant shall submit an original plan of subdivision plus six (6) copies, suitable for endorsement by the consent authority. The following details **must** be submitted with the plan of Subdivision and its (5) copies, where Council is the consent authority:
 - a. The endorsement fee current at the time of lodgment.
 - b. The 88B Instruments plus six (6) copies,
 - c. A copy of the Occupation Certificate,
 - d. The Consulting Engineer's certification of the on-site stormwater detention facility. This must be on the standard Council on-site detention certification sheet, available from Council's customer services.
 - e. A copy of all works-as-executed plans required under the consent,
 - f. All Surveyor's and/or Consulting Engineer's certification(s) required under this consent,
 - g. The Section 73 (Sydney Water) Compliance Certificate.

Council officers will check the consent conditions on the subdivision. Failure to submit the required information will delay endorsement of the linen plan, and may require payment of rechecking fees.

Item 2

- Note 1: Plans of subdivision and copies must not be folded.
Note 2: Council will not accept bonds in lieu of completing subdivision works.
Note 3: If the certifying authority is not Council, then a copy of all of the above must be provided to Council

91. For endorsement of the linen plan / subdivision certificate issue, the Applicant shall submit an original instrument under Section 88B of the Conveyancing Act with the plan of subdivision, plus six (6) copies. This is to create any required easements, rights-of-carriageway, positive covenants, restrictions-on-use or other burdens/benefits as may be required. Ku-ring-gai Council must be named as the authority whose consent is required to release, vary or modify the same.
92. Prior to release of the linen plan/issue of the subdivision certificate, the applicant shall create all burdens including but not limited to drainage easements, easements for services and rights-of-carriageway, as required. A registered surveyor is to certify, prior to release of the linen plan/issue of the subdivision certificate, that all existing interallotment drainage lines, services and/or driveways are fully contained within the proposed burdens and/or that future provision of such are fully covered by the proposed burdens. Alternatively, where the surveyor is of the opinion that no interallotment easements or rights-of-carriageway are required, then certification to this effect must be submitted to the Principal Certifying Authority (PCA).
93. All parking spaces and all areas of common property, including visitor car parking spaces and on-site detention facilities, which are to be common property, must be included on the final plans of strata subdivision.

CONDITIONS TO BE COMPLIED WITH PRIOR TO OCCUPATION

94. Prior to the release of any occupation certificate, a compliance certificate must be obtained from an accredited certifier, certifying that the building works for the building to be occupied comply with the plans and specifications approved by this development consent; and any construction certificate associated with this consent for the buildings to be occupied. If the PCA is not the Council, then this compliance certificate must be submitted to the Council at the same time as the occupation certificate is submitted to the Council in accordance with Clause 151(2) of the E P & A Act regulations.
95. Prior to issue of the Occupation Certificate, the Principal Certifying Authority (where not Council) must provide Ku-ring-gai Council with a signed declaration that the following works in the road reserve have been completed in full:
- New road pavement and kerb and gutter in accordance with the plans approved by Council under the Roads Act.
 - Removal of **all** redundant driveway crossings and kerb laybacks (or sections thereof) and reinstatement of these areas to footpath, turfed verge and upright kerb and gutter. 1 (Reinstatement works to match surrounding adjacent infrastructure with respect to integration of levels and materials).
 - Full repair and resealing of any road surface damaged during construction.

Item 2

- Full replacement of damaged sections of grass verge with a non-friable turf of native variety to match existing.

All works must be completed in accordance with the *General Specification for the Construction of Road and Drainage Works in Ku-ring-gai Council*, dated November 2004. The Occupation Certificate must not be issued until all damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council and/or RTA. Repair works shall be at no cost to Council or RTA.

96. Prior to issue of the Occupation Certificate the following must be provided to Council (attention Development Engineer):

- A copy of the approved Construction Certificate stormwater detention/retention design for the site, and
- A copy of any works-as-executed drawings required under this consent
- The Engineer's certification of the as-built system.

This condition is required so Council may maintain its database of as-constructed on-site stormwater detention systems, and applies particularly where the appointed Principal Certifying Authority (PCA) is not Ku-ring-gai Council.

97. Prior to issue of an Occupation Certificate the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.
98. Prior to the issue of an Occupation Certificate, the applicant is to obtain approval of the Ku-Ring-Gai Traffic Committee to the extension of the No Parking length along the Pacific Highway frontage of the site, as recommended in the report by Masson Wilson Twiney dated May 2005, and arrange for the signs to be installed accordingly. A parking "P" sign is also to be installed on the gate post at the start of the driveway.
100. Prior to issue of an Occupation Certificate the applicant must submit certification from a suitably qualified and experienced traffic/civil engineer to the Principal Certifying Authority. This certification must be based on a site inspection of the constructed vehicle access and accommodation areas, with dimensions measurements as necessary, and must make specific reference to the following:
- That the as-constructed carpark complies with the approved Construction Certificate plans,
 - That the completed vehicle access and accommodation arrangements comply in full with Australian Standard 2890.1 – 2004 "Off-Street car parking" in terms of minimum parking space dimensions provided,
 - That finished driveway gradients and transitions will not result in the scraping of the underside of cars.

Item 2

- That no doors, gates, grilles or other structures have been provided in the access driveways to the basement carpark, which would prevent unrestricted access for internal garbage collection from the basement garbage storage and collection area.
 - That the vehicular headroom requirements of:
 - Australian Standard 2890.1 - "Off-street car parking",
 - 2.44m height clearance for waste collection trucks (refer DCP 40) are met from the public street into and within the applicable areas of the basement carpark.
 - A radius is provided on the corner of the hatched pedestrian area adjacent to the entry on the hotel parking level to improve the left turn movement by cars from the bridge ramp to the circulation aisle, as recommended in the report by Masson Wilson Twiney dated May 2005.
101. Prior to issue of the Occupation Certificate a qualified and experienced consulting civil/hydraulic engineer must undertake a site inspection of the completed stormwater drainage and management system. The engineer is to provide written certification based on the site inspection to the Principal Certifying Authority, prior to issue of the Occupation Certificate, which makes specific reference to all of the following:
- That the stormwater drainage works have been satisfactorily completed in accordance with the approved Construction Certificate drainage plans.
 - That the minimum retention and on-site detention storage volume requirements of BASIX and Ku-ring-gai Council Water Management DCP 47 respectively, have been achieved in full.
 - That retained water is connected and available for uses including toilet flushing, laundry and garden irrigation.
 - That basement and subsoil areas are able to drain via a pump/sump system installed in accordance with AS3500.3 and appendix 7.1.1 of Ku-ring-gai Council Water Management DCP 47.
 - That all grates potentially accessible by children are secured.
 - That components of the new drainage system have been installed by a licensed plumbing contractor in accordance with the Plumbing and Drainage code AS3500.3 2003 and the BCA, and
 - All enclosed floor areas, including habitable and garage floor levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices.
- The following certification sheets **must be accurately completed and attached** to the certification:
- Rainwater retention certification sheet contained at appendix 13 of Water Management DCP 47
 - On-site detention certification sheet contained at appendix 4 of Water Management DCP 47.
102. Prior to issue of the Occupation Certificate a registered surveyor must provide a Works-as-Executed (WAE) survey of the completed stormwater drainage and management systems. The WAE plan(s) must be submitted to the Principal Certifying Authority for approval prior to issue of the Occupation Certificate. The WAE survey must indicate:

Item 2

- As built (reduced) surface and invert levels for all drainage pits.
- Gradients of drainage lines, materials and dimensions.
- As built (reduced) level(s) at the approved point of discharge to the public drainage system.
- As built location and internal dimensions of all detention and retention structures on the property (in plan view) and horizontal distances to nearest adjacent boundaries and structures on site.
- The achieved storage volumes of the installed retention and detention storages and derivative calculations.
- As built locations of all access pits and grates in the detention and retention system(s), including dimensions.
- The size of the orifice or control fitted to any on-site detention system.
- Dimensions of the discharge control pit and access grates.
- The maximum depth of storage possible over the outlet control.
- Top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system.

The WAE plan(s) must show the as-built details above in comparison to those shown on the drainage plans approved with the Construction Certificate prior to commencement of works. All relevant levels and details indicated must be marked **in red** on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.

103. Prior to issue of the Occupation Certificate a maintenance regime shall be prepared for the basement stormwater pump-out system and submitted to Principal Certifying Authority. The regime shall specify that the system is to be regularly inspected and checked by qualified practitioners.
104. Prior to issue of the Occupation Certificate a suitably qualified and consulting geotechnical engineer is to provide certification to the Principal Certifying Authority that excavation and construction of the basement level, including temporary and permanent shoring and retention measures, have been carried out :
 - According the relevant Australian Standards and guidelines, and
 - According to the Monitoring Program submitted with the Construction Certificate documentation, and
 - In a manner that ensures that the structural amenity of adjoining structures and property is fully maintained.
105. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring with certifications as specified in the Report on Geotechnical Investigation by Jeffery and Katauskas and the professional geotechnical input over the course of the works, must be compiled in report format and submitted to the Principal Certifying Authority for approval.

Item 2

106. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate (and at the completion of the works) the Applicant shall submit to the Principal Certifying Authority (PCA) a follow up dilapidation report on the visible and structural condition of the Greengate Hotel.

The Report must be completed by a practicing consulting structural engineer and be submitted for Council records prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate.

107. The landscape works shall be completed prior to release of the Certificate of Occupation and maintained in a satisfactory condition at all times.
108. On completion of the landscape works/tree planting or screen planting, a Landscape Architect or qualified Landscape Designer shall submit a report certifying correct installation, faithful to the landscape plan to the Principal Certifying Authority with a copy to Council, prior to issue of the Occupation Certificate.

BUILDING CONDITIONS

109. The following are required details and must be submitted to the Principal Certifying Authority *prior to issue of the Construction Certificate*. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.
- a. Details prepared by a practicing structural engineer for all or any reinforced concrete, structural steel or timber framing.
 - b. Retaining walls and associated drainage.
 - c. Wet area waterproofing details complying with the Building Code of Australia.
 - d. Mechanical ventilation details complying with Australian Standard 1668-1993 Mechanical Ventilation & Airconditioning.
 - e. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
110. For the purpose of safety and convenience a balustrade of 1.0 metre minimum height shall be provided to any landing, verandah, balcony or stairway of a height exceeding 1.0 metre above finished ground level. The design may consist of vertical or horizontal bars but shall not have any opening exceeding 125mm. For floors more than 4.0 metres above the ground, any horizontal elements within the balustrade or other barrier between 150mm and 760mm above the floor must not facilitate climbing.
111. For the purpose of safe ingress and egress the stairs are to be constructed within the following dimensions:

Risers:	Maximum 190mm	Minimum 115mm
Going (Treads):	Maximum 355mm	Minimum 240mm

Item 2

Note: Dimensions must also comply with limitations of two (2) Risers and one (1) going equalling a maximum 700mm or minimum 550mm. The Risers and Goings shall be uniform throughout the length of the stairway.

112. Termite protection which will provide whole of building protection in accordance with Australian Standard 3660 - *"Protection of Buildings from Subterranean Termites"* is to be provided.

Council has a non chemical policy for termite control but will consider proposals involving physical barriers in combination with approved chemical systems. Handspraying is prohibited.

Where a monolithic slab is used as part of a termite barrier system, the slab shall be constructed in accordance with Australian Standard 2870.1 or as designed by a structural engineer but in either case shall be vibrated to achieve maximum compaction.

To ensure compliance with this condition, a Compliance Certificate or documentary evidence from a suitably qualified person is to be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.

G Bolton
Executive Assessment Officer

R Kinninmont
Team Leader
Development Assessment - South

M Prendergast
Manager
Development Assessment Services

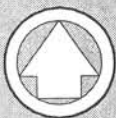
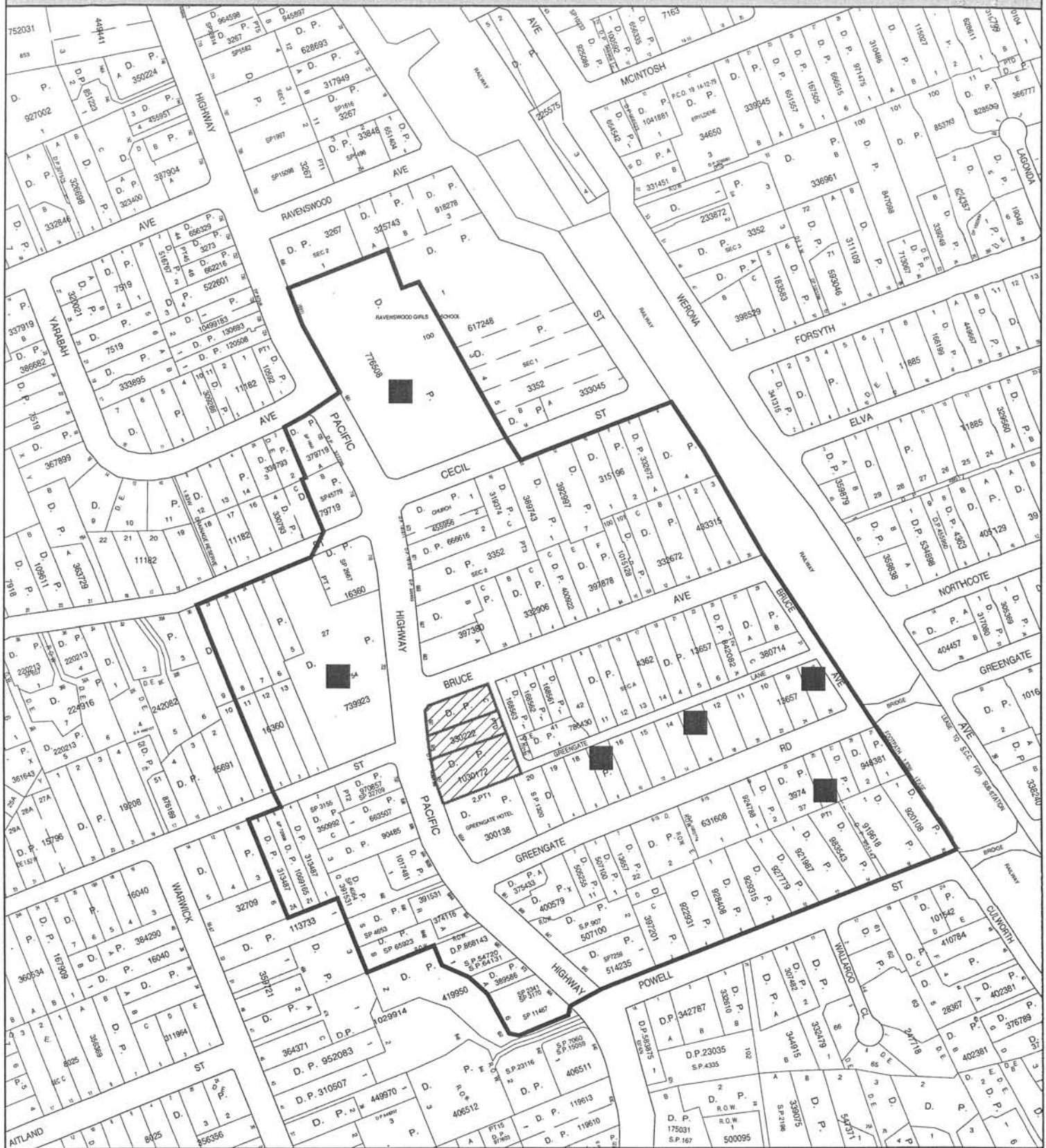
M Miocic
Director
Development & Regulation

Attachments:
Site location plan - 558031
Zoning extract - 558033
Site analysis - 558035
Survey plan - 558037
Elevations - 558039
Shadow diagrams - 558041
Landscape plan - 558042

LOCATION SKETCH

657 - 661 Pacific Highway, KILLARA NSW

DEVELOPMENT APPLICATION No 677/05



Scale : 1:4000

17-11-2005



AGREEMENT



OBJECTION



SUBJECT LAND



PETITION



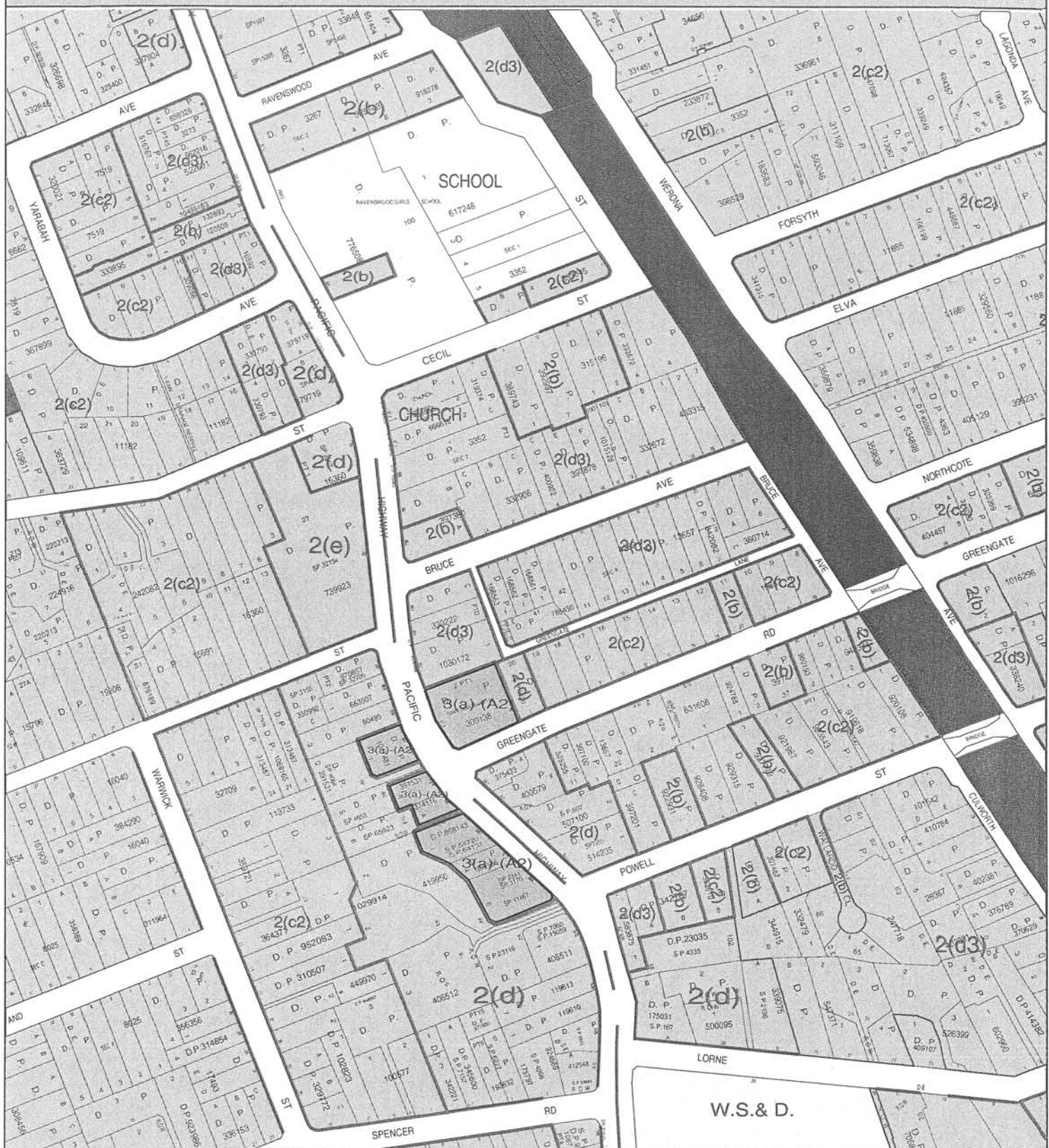
SUBMISSION



CIRCULATED AREA



657-661 Pacific Hwy KILLARA DA 667/05



17-11-2005

Scale = 1:4000

- | | | | |
|--------------------------|--------------------|-------------------|---------------------------------|
| 3(a) | BUSINESS 3(a)-(A2) | 2(d) | RESIDENTIAL 2(d) |
| EXISTING COUNTY ROAD | 2(d3) | RESIDENTIAL 2(d3) | |
| RECREATION EXISTING 6(a) | 2(e) | RESIDENTIAL 2(e) | |
| 2(b) | RESIDENTIAL 2(b) | SCH | SPECIAL USES 5(a) (Schools etc) |
| 2(c) | RESIDENTIAL 2(c) | | SPECIAL USES 5(b) (Railway) |
| 2(c2) | RESIDENTIAL 2(c2) | | |





Notes:


- *TREE SIZES ARE ESTIMATES ONLY
- *ONLY VISIBLE SERVICES HAVE BEEN LOCATED IN THIS SURVEY.
- *SERVICE DETAILS SHOULD BE CONFIRMED WITH THE RELEVANT SERVICE AUTHORITY DURING DESIGN & PRIOR TO ANY CONSTRUCTION.
- *THIS PLAN HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF FERNSWOOD GROUP.
- *BOUNDARIES SHOULD BE MARKED IF CONSTRUCTION IS PROPOSED ON THE SITE.

0m 5 10 15 20m
SCALE 1:200

A circular forensic scale with a vertical line through the center. The text 'CHAMBER SERVICE' is visible within the circle. A label '20m' is positioned to the left of the scale.

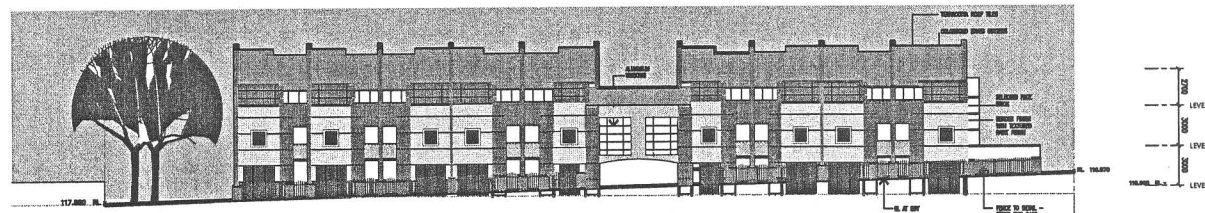
DS Degotardi, Smith & Partners
Incorporating Morrow & Young Consulting Surveyors
Established 1957

Email: surveys@degotardi.com.au
11/10-23 Bridge Street, Pyrmont NSW 2073 - (02) 9440 1100 - FAX (02) 9440 1055 - 018720 GORDON
Branch: 3 Fleet Street, Pyrmont 2028 - (02) 8554 7988 - PO BOX 510 PYRMONT
Branch: 21-23 Orindal Road, Greendale NSW 2171 - (02) 4774 8560

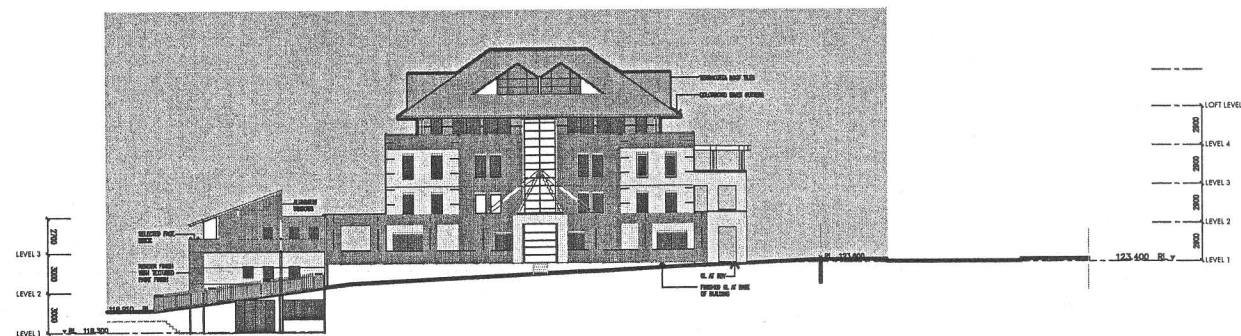
 McGraw-Hill	L&A		SHEET 1 OF 1	
	KU-RING-GAI			
	REVISION DATE		CAD FILE NO.	
E	02/07/02	27195A01.DWG		



BUILDING A: WEST ELEVATION



BUILDING B: EAST ELEVATION



BUILDING A&B: NORTH ELEVATION

**DA ISSUE 25.05.2005
NOT FOR CONSTRUCTION**

REVISION	DATE	BY	REASON
1	25.05.2005	DA ISSUE	

REVISION	DATE	BY	REASON
1	25.05.2005	DA ISSUE	

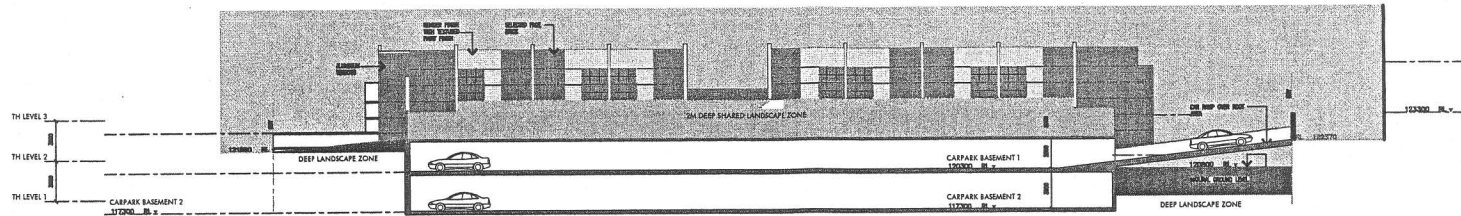
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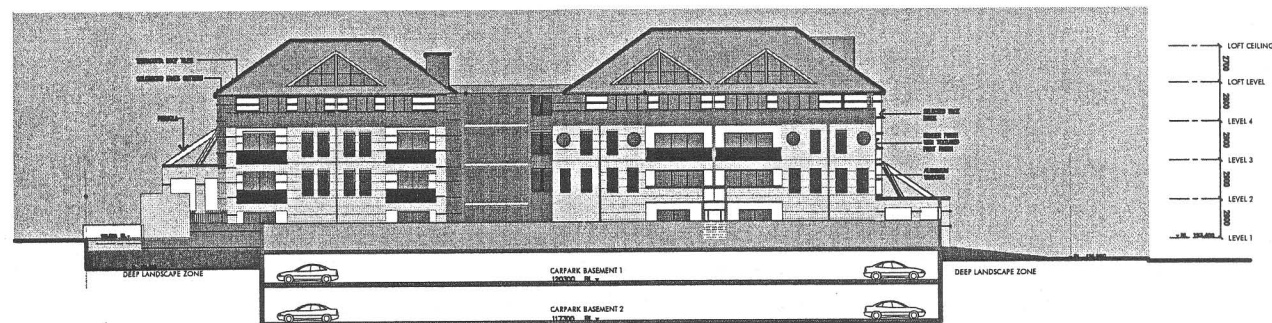
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REVISION	DATE	BY	REASON
1	25.05.2005	DA ISSUE	

REVISION	DATE	BY	REASON
1	25.05.2005	DA ISSUE	



BUILDING B: WEST ELEVATION



BUILDING A: EAST ELEVATION



BUILDING A&B: SOUTH ELEVATION

DA ISSUE 25.05.2005
NOT FOR CONSTRUCTION

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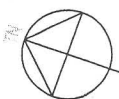
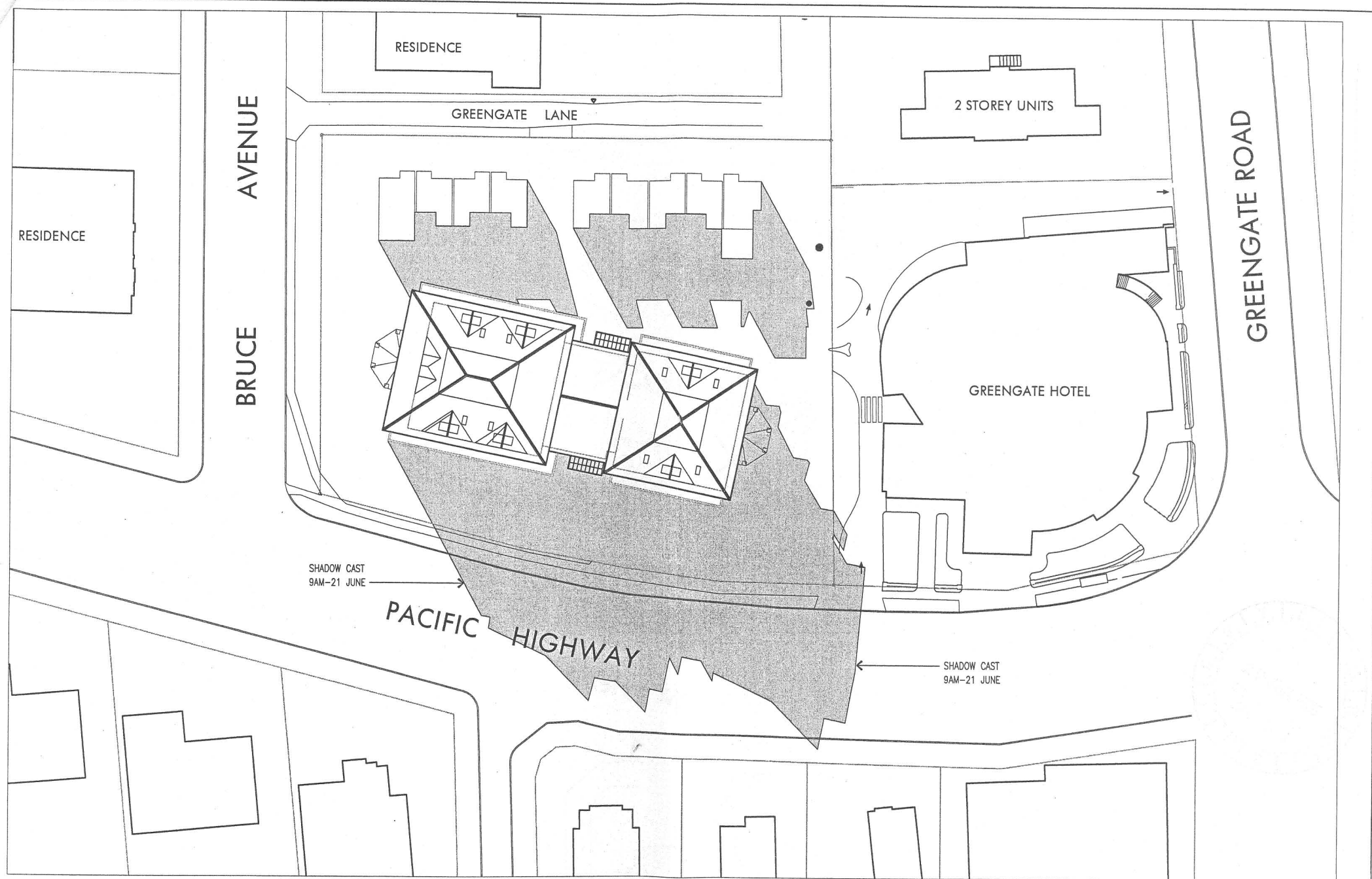
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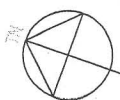
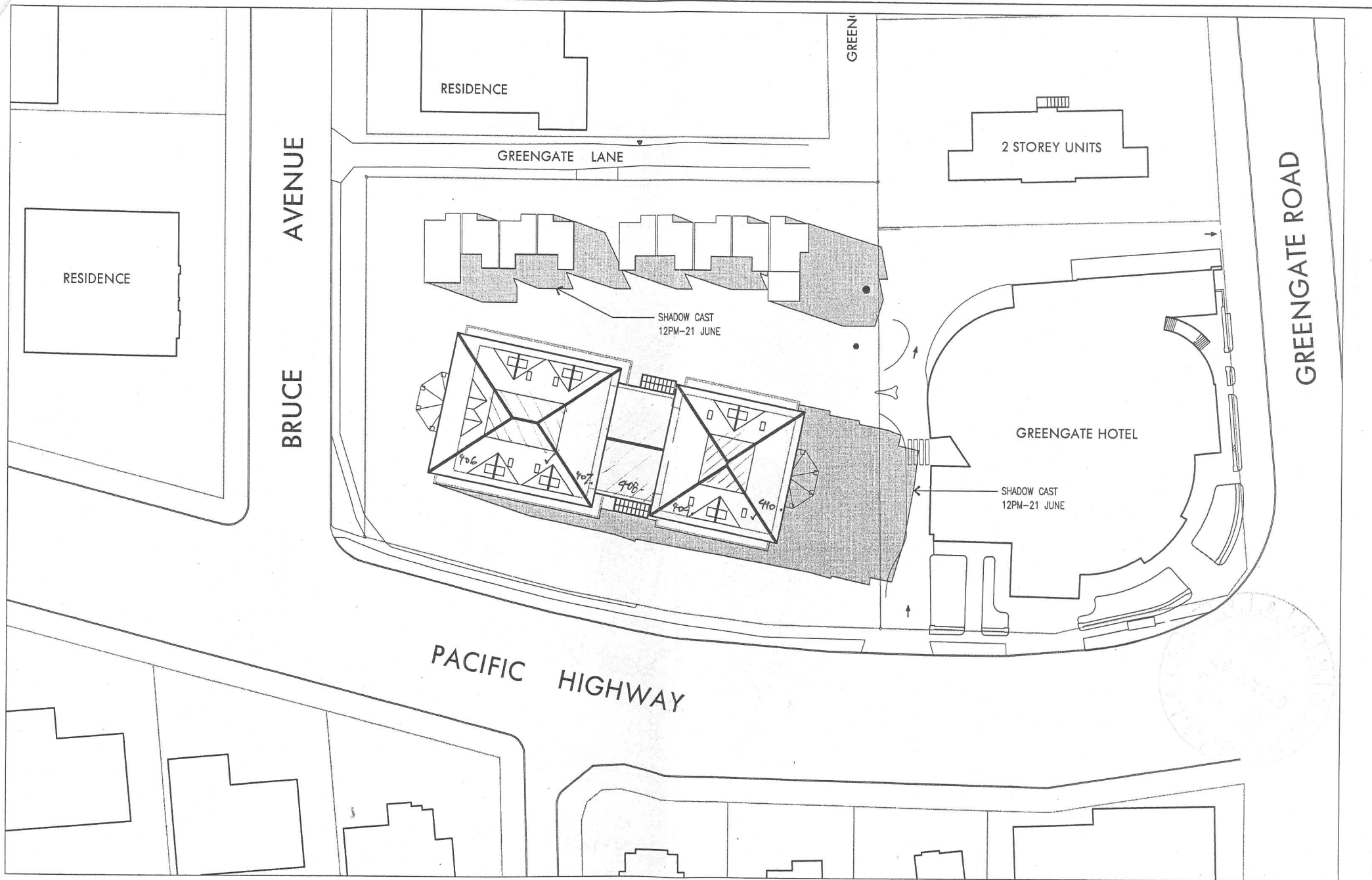


REV A DATE - AMENDMENTS DEVELOPMENT APPLICATION ISSUE

BY VT

ARCHITECTS - INTERIOR DESIGNERS - FACILITY PLANNERS - LANDSCAPE ARCHITECTS 262 CASTLEREAGH STREET SYDNEY NSW 2000 = Ph: 02 9261 8933 Fax: 02 9261 8932 (ACN 001 770 396)			
PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 657-661 PACIFIC HIGHWAY - KILLARA	DRAWING TITLE SHADOW DIAGRAMS 21 JUNE - 9AM	SCALE 1:500	DRAWING NO.: SH - 04
CLIENT FERNWOOD GROUP	DATE MAR 2005	JOB NO. 073	DRAWN VT

THIESSEN
ARCHITECTS

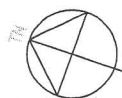
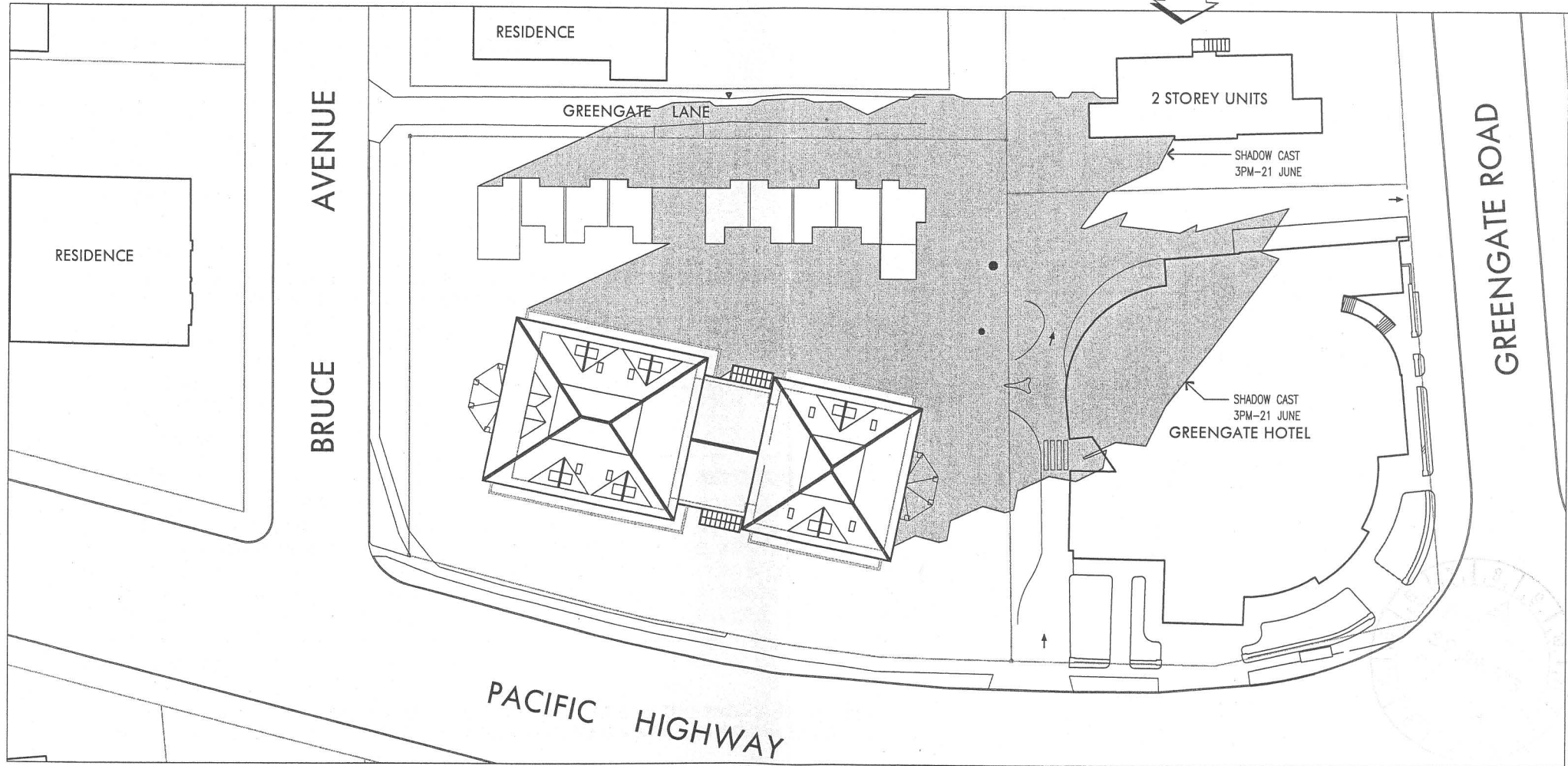
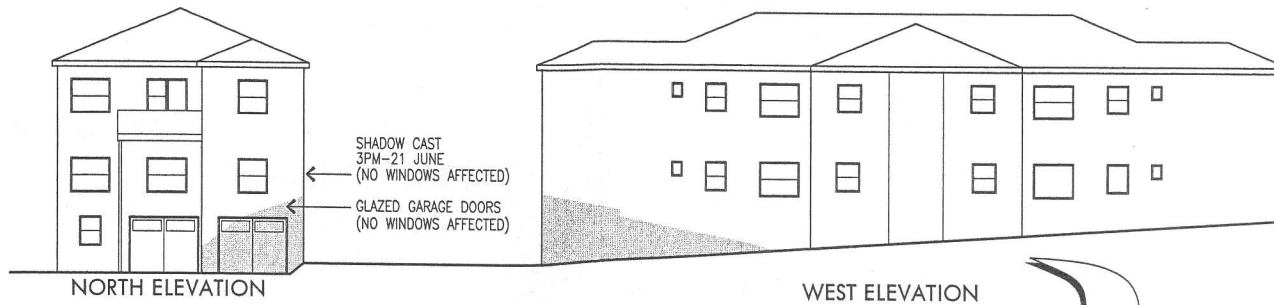


REV A DATE - AMENDMENTS DEVELOPMENT APPLICATION ISSUE

BY VT

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PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 657-661 PACIFIC HIGHWAY - KILLARA	DRAWING TITLE SHADOW DIAGRAMS 21 JUNE - 12PM	SCALE 1:500	DRAWING NO.: SH - 05
CLIENT FFRMW000 000000		DATE MAR 2005	
		JOB NO. D73	DRAWN VT

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ARCHITECTS



REV A DATE - AMENDMENTS DEVELOPMENT APPLICATION ISSUE

BY VT

ARCHITECTS - INTERIOR DESIGNERS - FACILITY PLANNERS - LANDSCAPE ARCHITECTS 262 CASTLEREAGH STREET SYDNEY NSW 2000 = Ph: 02 9261 8933 Fax: 02 9261 8932 (ACN 001 770 396)			
PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 657-661 PACIFIC HIGHWAY - KILLARA	DRAWING TITLE SHADOW DIAGRAMS 21 JUNE - 3PM	SCALE 1:500	DRAWING NO.: SH - 06
DATE MAR 2005	JOB NO. D73	REVISION A	CHECKED VT
CLIENT FERNWOOD GROUP			

THIESSEN
ARCHITECTS

DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	25A, 27 & 29 LORNE AVENUE, KILLARA - DEMOLITION OF EXISTING DWELLINGS AND CONSTRUCTION OF TWO RESIDENTIAL FLAT BUILDINGS COMPRISING 40 UNITS, BASEMENT CAR PARKING, LANDSCAPING AND STRATA SUBDIVISION
WARD:	Gordon
DEVELOPMENT APPLICATION N^o:	425/05
SUBJECT LAND:	25A, 27 & 29 Lorne Avenue, Killara
APPLICANT:	Paul Barber c/- Greencliff (CPL) Developments Pty Ltd
OWNER:	R S Curtis, J Koo, S M McAdam
DESIGNER:	Alexander Tzannes Associates
PRESENT USE:	Residential
ZONING:	2(d3)
HERITAGE:	No
PERMISSIBLE UNDER:	Ku-ring-gai Planning Scheme Ordinance
COUNCIL'S POLICIES APPLICABLE:	KPSO, DCP 40, DCP 43, DCP 47, DCP 55
COMPLIANCE WITH CODES/POLICIES:	Yes
GOVERNMENT POLICIES APPLICABLE:	SEPP 1, SEPP 10, SEPP 55, SEPP 65
COMPLIANCE WITH GOVERNMENT POLICIES:	Yes
DATE LODGED:	6 May 2005
40 DAY PERIOD EXPIRED:	15 June 2005
PROPOSAL:	Demolition of existing dwellings and construction of two residential flat buildings comprising 40 units, basement car parking, landscaping and strata subdivision
RECOMMENDATION:	Approval

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DEVELOPMENT APPLICATION N^o 425/05
PREMISES: 25A, 27 & 29 LORNE AVENUE, KILLARA
PROPOSAL: DEMOLITION OF EXISTING DWELLINGS
AND CONSTRUCTION OF TWO
RESIDENTIAL FLAT BUILDINGS
COMPRISING 40 UNITS, BASEMENT CAR
PARKING, LANDSCAPING AND STRATA
SUBDIVISION
APPLICANT: PAUL BARBER C/- GREENCLIFF (CPL)
DEVELOPMENTS PTY LTD
OWNER: R S CURTIS, J KOO, S M MCADAM
DESIGNER ALEXANDER TZANNES ASSOCIATES

PURPOSE FOR REPORT

To determine Development Application No.425/05 which seeks consent for the demolition of existing structures, the construction of two residential flat buildings comprising 40 dwellings, basement carparking and associated landscaping.

EXECUTIVE SUMMARY

Issues: Access, building height, setbacks, visual privacy
Submissions: 4 submissions to amended plans
Pre-DA Consultation: Yes
Land & Environment Court Appeal: Not applicable
Recommendation: Approval

HISTORY

Site History

The site is used for residential purposes. There is no history of the site relevant to the subject development application.

Development application history

10 February 2005 Pre-development application meeting.
6 May 2005 Application lodged.
25 May 2005 Application is notified.

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19 July 2005 Applicant requested to address concerns in respect of access, height, setbacks, energy efficiency, solar access and drainage.

7 October 2005 Amended plans received.

11 October 2005 Re-notification of amended plans

THE SITE

Zoning:	2(d3)
Visual Character Study Category:	1920 - 1945
Lot Number:	1 & 2, B
DP Number:	547371, 339075
Area:	7022m ²
Side of Street:	Northern
Cross Fall:	Yes
Stormwater Drainage:	To Lorne Avenue
Heritage Affected:	No
Required Setback:	13-15 metres
Integrated Development:	No
Bush Fire Prone Land:	No
Endangered Species:	No
Urban Bushland:	No
Contaminated Land:	No

THE SITE AND SURROUNDING DEVELOPMENT

Dimensions and topography

The site is rectangular in shape and has a total area of 4022m². The frontage to Lorne Avenue measures 56.7 metres. The northern boundary is 50 metres, the eastern boundary 84.13 metres and the western boundary is approximately 75.6 metres in length.

The site exhibits a considerable cross-fall, sloping 9.5 metres from Lorne Avenue to the north-eastern corner. The topography was modified substantially to accommodate the existing structures which include some terraces and an in-ground swimming pool in the north-eastern corner.

Improvements

The site comprises three lots, containing three two storey dwellings. Nos 25a and 27 Lorne Avenue share a battle axe configuration, while No. 29 has a conventional street frontage arrangement.

Vegetation

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The site is characterised by an established landscape setting, with mature trees and shrubs within formal garden beds and lawns. The site frontage along Lorne Avenue is characterised by established informal screen planting behind a low sandstone wall.

Easements

The site is benefitted by a drainage easement over No. 25 Lorne Avenue. Part of the site shares a 7 metres wide driveway with the adjoining properties at Nos 23 and 25 Lorne Avenue. The driveway occupies a 3.5 metres wide strip along the eastern boundary and is approximately 30 metres long. No's 23 and 25 Lorne Avenue have a Right of Carriageway over this portion of the driveway.

Zoning and surrounding use zones

A zoning map is attached to this report. The site forms part of the Pacific Highway and railway corridor, an area comprising low density residential development that was rezoned to Residential 2(d3) for multi-unit residential development under LEP 194. All the adjoining properties are zoned Residential 2(d3) except for the three storey residential flat building at No. 31 Lorne Avenue which is zoned Residential 2(d). Regimental Park across Lorne Avenue, zoned Special Uses 5(a), is developed as a water reservoir with sports facilities provided on top.

Surrounding development applications

The following development applications have been lodged and are currently being assessed in the vicinity of the site:

- Development Application No. 997/05 (No's 3 to 7 Lorne Avenue) proposes the construction of three residential flat buildings containing 64 units.
- Development Application No. 989/05 (No's 2 to 6 Wallaroo Close, 10 to 19 Powell Street) proposes 41 units.

THE PROPOSAL

The application entails the following:

- Demolition of existing dwellings and associated structures on site
- Construction of two 5 storey residential flat buildings of 40 units in total, comprising 20 x 2 bedroom apartments and 20 x 3-bedroom apartments
- A total of 72 parking spaces, consisting of 62 resident spaces and 10 visitor spaces over 2 basement levels
- Vehicular access from Lorne Avenue
- Disposal of stormwater to the rear of the site, incorporating a retention and detention system with water re-use for toilet flushing, laundries and irrigation

The structures above and below ground are set back 13 to 15 metres from Lorne Avenue. Side and rear setbacks are generally in excess of 6 metres, while some private courtyards project into these setback areas.

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The two building components comprise 5 levels and straddle a shared 2 level basement car park. All units are accessible via four lift cores that are serviced by two pedestrian access bridges off Lorne Avenue. The two entry foyers in Building A (situated closest to Lorne Avenue) are located at RL 119.3 and RL 118.6, respectively. The buildings feature a split level design which reflects the cross fall, stepping down to the rear of the site. The individual floor levels are as follows:

	Building A (front)	Building B (rear)
Level 1	RL 119.3/118.6	RL 118.3/116.4
Level 2	RL 122.4/121.7	RL 121.4/119.5
Level 3	RL 125.5/124.8	RL 123.3/122.6
Level 4	RL 126.6/127.9	RL 127.6/125.7
Level 5	RL 131.7/131.0	RL 129.5/128.8

More than 600m² of communal open space is provided within the centre of the site and the side setbacks.

Amended plans lodged 7 October 2005

Amendments to the original design entailed the following:

- Re-alignment of the driveway to increase its' setback to the eastern boundary from 3.3m to 3.7m. This was made possible by changes to the gradient and car park entry.
- Internal modifications to the basement car park.
- Minor changes to the façade.
- Adjustments to the drainage design to enable stormwater to drain to Lorne Avenue.

CONSULTATION - COMMUNITY

In accordance with Council's Notification's Policy, owners of surrounding properties were given notice of the application. In response, submissions from the following were received:

- | | | |
|-----|------------------------------|-------------------------------|
| 1. | <i>A Brown</i> | <i>3-7 Lorne Avenue</i> |
| 2. | <i>M Bartholemew</i> | <i>10 Lorne Avenue</i> |
| 3. | <i>R Mullins</i> | <i>14 Lorne Avenue</i> |
| 4. | <i>R & G Hooper</i> | <i>21 Lorne Avenue</i> |
| 5. | <i>J Burke</i> | <i>23 Lorne Avenue</i> |
| 6. | <i>D Martin & K Dinh</i> | <i>25 Lorne Avenue</i> |
| 7. | <i>J & V Fabbro</i> | <i>3 Powell Street</i> |
| 8. | <i>C Covington</i> | <i>12/635 Pacific Highway</i> |
| 9. | <i>I & L Hackney</i> | <i>8 Wallaroo Close</i> |
| 10. | <i>M Wyatt</i> | <i>PO Box 355, Killara</i> |

Amended plans

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In accordance with Council's Notification DCP, adjoining owners were given notice of the amended plans on 11 October 2005. In response, submissions from the following were received:

1. *D & V Tso* 9 Lorne Avenue
2. *J Burke* 23 Lorne Avenue
3. *D Martin & K Dinh* 25 Lorne Avenue
4. *I & L Hackney* 8 Wallaroo Close

The submissions raised the following issues:

Encroachment onto the right of carriageway

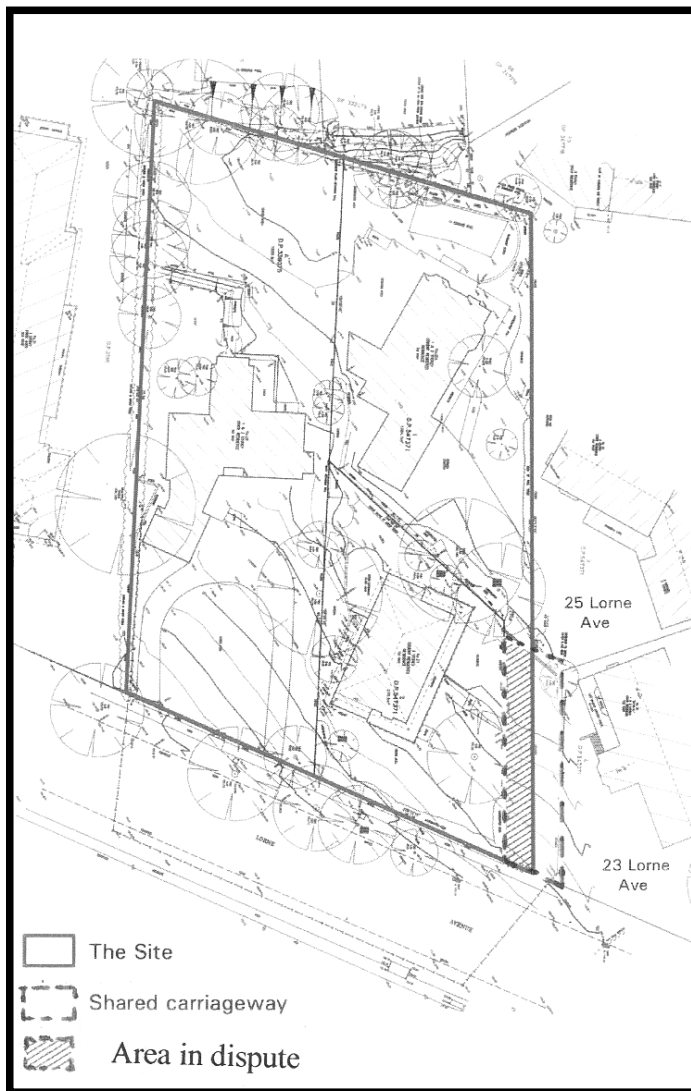


Figure 1

23 November 2005

A condition is recommended requiring the construction of an acoustic fence along this boundary (following the alignment of the altered driveway as per **Figure No. 2**) to ensure that any adverse impacts to No. 23 and 25 Lorne Avenue are further minimised (Refer **Condition No 89**). The fence will be 1.2 metres high in the front setback area but will step up in height to 1.8 metres approximately 15 metres from the street boundary.

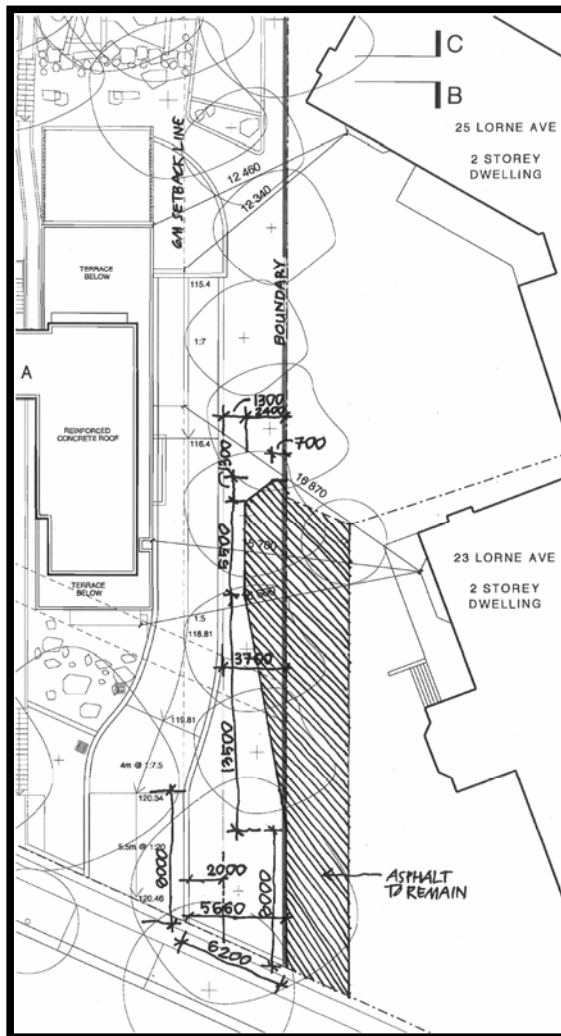


Figure 2

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The existence of the right of carriageway does not prevent Council granting Development Consent. Council has the power under Clause 28(2) of the Environmental Planning and Assessment Act and Clause 68(2) of the KPSO to approve landscaping within the easement. These clauses enable the Development Consent to modify the easement to the extent necessary to allow the development to be carried out. It is Council's responsibility to ensure that the proposed modifications to the easement satisfy Council's access requirements and do not affect the owners' of No's 23 and 25 Lorne Avenue reasonable right to access. Council's Development Engineer, Kathy Hawken, raised no objection to the proposal on these grounds and is satisfied that reasonable access to those properties will be maintained. **Figure No. 2** illustrates that Nos 23 and 25 Lorne Avenue will have sufficient room for manoeuvring to ensure egress to Lorne Avenue in a forward direction and the 3.66 metres carriageway through No. 23 Lorne Avenue complies with the relevant Australian Standard (A.S. 2890).

Cumulative effect of the development on traffic and parking

The rezoning of this site under LEP 194 to permit medium density development confers a development potential pursuant to the development standards and controls set out in LEP 194 and DCP 55. In accordance with these statutory planning and policy controls, sites within the Residential 2(d3) zone have the potential to be developed for the purposes of residential flat buildings to a maximum height of five storeys and a footprint of 35% of the site area. The intent of rezoning for multi-unit development is to establish medium density living in proximity to transport nodes, educational and health facilities and local business centres.

The Traffic and Transport Base Study prepared for Council by Gutteridge Haskins & Davey Pty Ltd in 2000 formed the basis of Council's Residential Strategy. The report found that high density development along the Pacific Highway associated with the Targeted Sites under SEPP 53 and the Stage 1 Residential Development Strategy associated with LEP194 will place additional pressure and demand on the Pacific Highway during peak traffic conditions. On various occasions prior to the gazettal of LEP 194 the Department of Infrastructure, Planning and Natural Resources (DIPNR) was advised on the findings of the study. It was also suggested by Council that DIPNR assess the level of improvements required to meet the expected traffic growth from urban consolidation.

Any cumulative impacts on residential character and density resultant from development of the subject site and similarly zoned allotments in accordance with LEP194 and DCP 55 provisions were therefore anticipated and have been provided for in the zoning.

Access to and egress from the site are considered satisfactory. The proposal is also consistent with the objectives of SEPP 65, The Residential Flat Design Code, LEP194 and DCP 55 and will not result in a cumulative impact beyond that which is provided for under the zoning and associated controls that apply to the site.

Impact of excavation on adjoining properties

Based on the geotechnical report and location of excavations on this site, Council's Development Engineers are satisfied that the geotechnical and excavation/construction aspects of this proposal

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can be addressed through suitable conditions of consent. These conditions will require geotechnical and hydro-geological monitoring, excavation, construction and further professional geotechnical input as warranted. A condition is also recommended which will require ongoing investigation by a consulting geotechnical engineer, with action as appropriate. Dilapidation reports are to be completed on neighbouring properties and infrastructure (See **Conditions Nos 98 and 99**).

Character, style and scale of development is not appropriate

In the absence of a Design Review Panel provided by SEPP 65, the application was referred to Council's Urban design Consultant, Russell Olsson. Mr. Olsson finds that the development proposal satisfactorily addresses all ten SEPP 65 Design Principles and he considers the design to be of an acceptable standard.

Council's Heritage Advisor, Paul Dignam finds the proposed materials, textures and colours acceptable and will provide a reasonable fit with the streetscape and adjoining Urban Conservation Area.

Excessive building height; general non-compliance with development standards and controls

The development achieves substantial compliance with the development standards in LEP 194. A SEPP 1 objection seeking a variation to Clause 25I(8) (perimeter ceiling height) of the Ku-ring-gai Planning Scheme Ordinance (KPSO) has been prepared and lodged with the application.

The application exceeds the perimeter ceiling height control by approximately 400mm over approximately 8m² of the building footprint. The variation occurs in the north-eastern corner of Building B and is considered to be minor. The SEPP 1 Objection has demonstrated that the underlying objectives of the standard are satisfied and that compliance with standard would tend to hinder the attainment of the objects specified in Section 5(a)(i) and (iii) of the Act. In the circumstances, compliance with the development standard is unreasonable and unnecessary. The SEPP 1 Objection has adequately addressed the requisite aspects of the Policy, is well founded and in this instance the development standard should be allowed to be varied. A detailed analysis of the SEPP 1 Objection is provided elsewhere in this report.

The proposal complies with the majority of the controls in DCP 55. Where the development does depart from some DCP 55 numeric standards, it is considered that the development still satisfies the objectives of these DCP controls, with the departures being minor in nature and indiscernible in the context. Areas of non-compliance are indicated in the DCP 55 compliance table and discussed in detail in Part No's 4.3, 4.5 and 4.8 of this report.

Tree removal and inadequate landscaping along the eastern boundary

Council's Landscape and Tree Assessment Officer, Geoff Bird, did not raise any objection to the trees nominated for removal and is satisfied that the species nominated for planting along the eastern boundary will provide adequate screening. It is proposed to plant an additional 38 trees as part of the landscape works which exceeds Council's requirements under DCP 55.

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Isolation of No's 23 and 25 Lorne Avenue and No. 8 Wallaroo Close

This is incorrect. The lot amalgamation will not result in any isolated lots smaller than 1200m². No.'s 23, 25 and 9 Lorne Avenue with No's 7 & 8 Wallaroo Close measure more than 6600m² combined, whilst the combined frontage would amount to more than 30 metres.

Impact from additional traffic noise and from waste collection

The site has been designed to permit multi-unit development and the minor additional traffic noise expected is consistent with that expected in an urban area for this form of development. The waste collection area is in the basement, well removed from adjoining properties.

Disruption during construction works (impact of construction vehicles and noise)

A detailed construction and traffic management plan is required via a condition of consent, for review and approval by Council Engineers prior to the commencement of any works on site (**refer Condition No 100**).

For the purpose of residential amenity, noise generating work carried out in connection with building and construction operation, including deliveries of building materials and equipment, is restricted to the following hours (**refer Condition No.8**):

Mondays to Fridays inclusive: 7.00am to 5.30pm.

Saturdays: 8.00am to 12.00 noon. Whilst work on Saturdays may be performed until 5.30pm, such work or any associated activities shall not involve the use of any noise generating processes or equipment.

Sundays and Public Holidays: Not permitted.

Increased flooding to Nos 23 and 25 Lorne Avenue

The existing developments do not include stormwater detention systems, resulting in uncontrolled runoff to either overland or through pipes to the drainage depression in the rear of the site. The proposal includes the retention and detention of stormwater on the site, which will control the amount of stormwater leaving the site and will substantially reduce the volume and intensity of water that now discharges from the property during heavy rain.

Council's Development Engineer is satisfied that the stormwater Management Plan proposed is satisfactory, complies with DCP 47 and will not result in adverse drainage impacts.

Overshadowing

DCP 55 makes a distinction between solar access requirements for single detached dwellings and other types of development. Clause 4.5 C-6 only refers to single detached homes (i.e. 3 hours direct sunlight on 21 June to habitable rooms and outdoor living areas of adjoining houses in Residential 2(c1) and 2 (c2) zones) and is silent on the amount of sunlight acceptable to other types of development.

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The application is made under the KPSO and LEP 194, which include only the requirement that Council should take into account the amount of overshadowing likely to be caused by the proposal and ensure sunlight access to neighbours (Clauses 25D(k) and 25I(b)).

The Australia-wide resource document for residential development, AMCORD, suggests that a development should not reduce the sunlight received by the north-facing windows of living areas of neighbouring properties to less than 3 hours between 9am and 5pm at the winter solstice. The NSW-specific *Residential Flat Design Code*, which applies only to apartment buildings of three storeys and over, recommends 3 hours of sunlight to the living rooms and private open spaces of 70% of apartments between 9am and 3pm, reducing it to 2 hours in dense urban areas. The code does not specifically deal with the impact on sunlight received by neighbouring buildings, though one may assume that the same criteria should apply.

The development will not result in any unreasonable overshadowing and will ensure that more than 3 hours of sunlight (between 9am and 3pm is maintained) to the living rooms and private open spaces of adjoining properties.

Privacy impact on Nos 23 and 25 Lorne Avenue and 8 Wallaroo Close

With development to the density and scale allowed by LEP 194, a degree of privacy loss is inevitable. At low densities, there is a reasonable expectation that a dwelling will retain high levels of privacy but at higher densities privacy impacts are harder to protect and the claim to retain it to the same level as low density development is not as strong. It should be noted that all adjoining properties (except for the existing residential flat building at No. 31 Lorne Avenue) are zoned 2(d3) which allows for unit development up to 5 storeys, similar in scale to the current proposal. When these properties are redeveloped, buildings would be set back further in accordance with DCP 55, improving future separation. On average, the proposal's setbacks to the rear and side boundaries exceed the minimum 6 metres required by DCP 55.

Separation to No. 23 Lorne Avenue ranges from approximately 14 to 15 metres and impacts are limited to the southern (front) façade, garage area and vehicle manoeuvring area adjacent to the existing shared access handle (refer **Figure No. 3**). The private open space to the rear (north) of the dwelling and adjacent to the access handle in the front setback area will not be unreasonably impacted upon by the development. The largely oblique view of the northern elevation of No. 23 Lorne Avenue does not warrant any additional privacy measures as it is compliant with DCP 55 separation controls. However, the development's fifth floor setback from the verandah at No. 23 Lorne Avenue breaches the required 18 metres by 5 metres at its closest point. **Condition No. 89** is recommended which requires privacy screens of 1.8 metres high to the eastern elevation of the terrace areas of unit no. A-5 09. Part of the terrace area will also be made non-trafficable as per **Condition No.89**.

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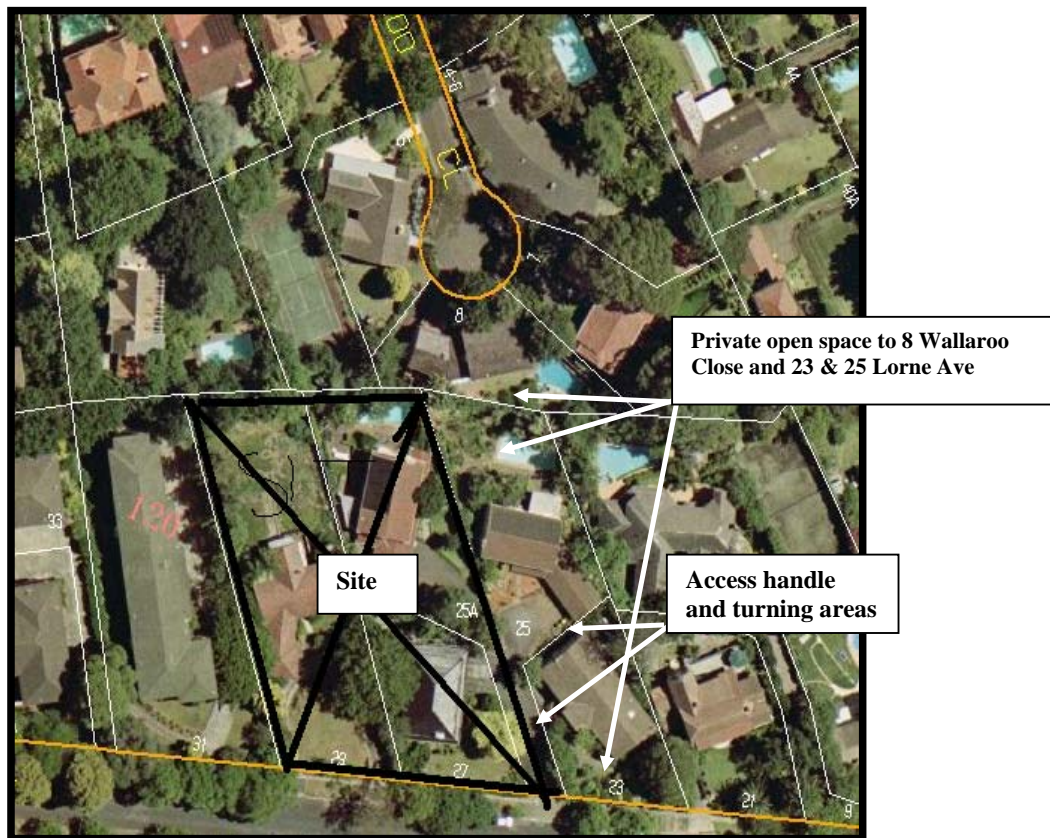


Figure 3

The driveway and turning area of No. 25 Lorne Avenue is similarly impacted upon as No. 23 Lorne Avenue and the screening proposed in **Condition No. 89** will therefore also serve to ensure an appropriate level of privacy is maintained. The private open space and pool area of No. 25 Lorne Avenue located to its rear (north) is screened by substantial vegetation and is orientated away from the proposal in the north-east corner of that site.

The development further ameliorates amenity impacts by minimising fenestration of Building B (rear) to its eastern elevation and equipping the living room and bedroom windows with aluminium louvres. Other fenestration along this façade is limited to low-use rooms such as bedrooms and additional physical screening is not considered appropriate.

The balconies to Units Nos D2 35, 37, 39 and 40 may result in overlooking to the rear yard of No. 25 Lorne Avenue and **Condition No. 89** requires the balconies of those units to be equipped with suitable privacy screening devices. The 1.8 metres high screens shall be affixed to their respective eastern elevations.

The fifth floor terrace of Unit D-5 40 breaches the separation controls to three windows along the southern and south-eastern elevations of No. 8 Wallaroo Close. DCP 55 requires 18 metres separation while 11 - 13 metres (measured from the edge of the terrace) is proposed. The two

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windows on the southern elevation, adjacent to an air-conditioning unit are low-use rooms and not used in conjunction with the main private open space area. The bay window on the south-eastern elevation is affected but the 1.8 metres privacy screens to the eastern elevation (**Condition No. 89**) will ensure that an acceptable level of privacy is maintained.

The main outdoor living area includes a pool and is located in the south-eastern corner of No. 8 Wallaroo Close, more than 30 metres from the development. The area is well screened by vegetation and will retain a high level of privacy (refer **Figure No. 3**).

The measures contained in **Condition No.89** will reduce the opportunity for direct overlooking and ensure a reasonable degree of privacy is maintained, commensurate with a medium density environment.

Inadequate visitor car spaces

The development proposes 10 visitor car spaces and is compliant with LEP 194 and DCP 55 in this regard. Council's Development Engineer, Kathy Hawken, raised no objection to the proposal.

Insufficient information

The information submitted with the application is adequate for assessment purposes and complies with the provisions of Schedule 1 of the Environmental Planning and Assessment Regulation. The site survey plan, photographs, arborist's report, architectural plans and other documents are utilised in the assessment of the application. This documentation is further augmented by site inspections and the Council's own GIS system.

CONSULTATION - WITHIN COUNCIL

Urban Design Consultant

Council's Urban Design Consultant, Russell Olsson, commented on the original plans in the context of SEPP 65 and Residential Flat Design Code considerations as follows:

Context

The built form context for this proposed development is comprised of

- *a 3 storey residential flat building adjacent to the site to the west*
- *a 2 storey detached house adjacent to the site to the north*
- *a 2 storey detached house adjacent to the site to the north-east*
- *a 2 storey detached house adjacent to the site to the east*
- *the Regimental Park Water Reservoir on the opposite side of Lorne Avenue*

The area is undergoing transition. The subject site is zoned 2(d3), as are the sites to the east and north of the site. The site to the west is zoned 2(d) and zone transition controls in LEP 194 apply to the western boundary of the subject site. This is the first site in this area to have

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a DA submitted for 5 storey development under LEP 194. The sites to the east and north of the site have the potential to re-develop as 5 storey buildings. The existing detached houses will not provide the built form context in the future.

The proposed development relates well to its existing built form context. as it is set back sufficiently from the existing 3 storey flat building to the west (which may remain) and is set back sufficiently from the existing houses, which are likely to be redeveloped in any case. The proposed development should relate well to its future built form context, as it complies with all setback and height controls.

The existing context in terms of the natural environment is comprised of:

- *a relatively steeply sloping site, which slopes at 7.5:1 away from Lorne Avenue.*
- *substantial water movement down the site*
- *23 on-site trees, 19 of which are to be removed*

The steep slope is addressed by excavating toward the southern end of the site, to minimise building heights. The water movement is addressed by creating a series of weirs as landscape features. The arborists report describes the need for each tree removal.

The proposed future landscape context within LEP 194 and DCP 55 is to contain substantial mature tree planting within the front and side setbacks of the development, to provide a landscaped setting for detached object buildings. This has been achieved in this proposal.

Scale

The proposed building heights exceed the 13.4m building height in minor areas, however the relatively steep fall on the site makes full compliance difficult, and undesirable. Further excavation would negatively impact on the landscape design of the site and access to the development. Given the proposed building heights and the highly articulated building forms, the scale is acceptable.

Built Form

The buildings are sufficiently set back from front, side and rear boundaries. There is sufficient building separation across the courtyard. The proposed apartment layout, of having 2 or 3 apartments per lift core, and providing natural light and ventilation to the lift core, has created a highly articulated built form which emphasises the buildings as object buildings within a landscaped setting, which is an objective of LEP 194 and DCP 55. The built form is acceptable.

Density

The density complies with LEP 194 and DCP 55.

Resource, energy and water efficiency

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100% of apartments have natural ventilation. All apartments have 3 aspects, and many have openings on all sides. Although a number of apartments are greater than 18m deep, they have potential ventilation through side bedroom and bathroom windows. It is recommended that the side bedroom and bathroom windows in the gaps between buildings A, B, C and D are designed as translucent partially opening hopper or casement windows, to avoid potential privacy problems while allowing natural ventilation. All lift lobbies are naturally lit and ventilated.

A high percentage of apartments have north oriented living rooms, and there are no south oriented living rooms. Extensive sun shading is provided to windows. The stormwater discharge is 6 times less than the maximum permissible.

While the development does not comply with the DCP control for Nathers ratings, all apartments achieve an acceptable Nathers rating and many achieve 4 to 5 stars. It is recommended that the Nathers ratings provided are accepted as complying.

Landscape

The landscape design provides a substantial landscape setting for the buildings. The removal of existing trees is compensated by the replacement of new trees. The design demonstrates good practice in terms of water management.

Amenity

The development performs well in terms of natural ventilation, sun access and sun control. Visual privacy across boundaries and the courtyard is acceptable, due to the side, front, rear and courtyard setbacks. A privacy problem exists across the north-western corner of the courtyard. It is recommended to provide screening to the study and living/dining windows in apartments C1 - 19, C1 - 22 and C1 25/28, to provide the opportunity for the occupants of these apartments to screen potential views from the bedroom balconies in apartments C 3 -21 etc.

Safety and Security

Safety and security is not perceived to be an issue in this development.

Social Dimensions

New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood, or, in the case of precincts undergoing transition, provide for the desired future community.

The mix of apartment sizes and types is acceptable in this area.

Aesthetics

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The design demonstrates great care in the composition and proportioning of facades.

The buildings are highly articulated, which reduces the perceived bulk of the buildings.

The building structure is expressed and sunshading and glass louvres contribute to the detailed articulation of surfaces. Windows are grouped to avoid punched windows within facades. Balconies are expressed as discrete architectural elements.

Conclusion and recommendations

It is recommended that the design is given development approval, with the following amendments. It is recommended that

- *the side bedroom and bathroom windows in the gaps between buildings A, B, C and D are designed as translucent partially opening hopper or casement windows, to avoid potential privacy problems while allowing natural ventilation (Refer Condition No.89)*
- *screening is provided to the study and living/dining windows in apartments C1 - 19, C1 - 22 and C1 25/28, to provide the opportunity for the occupants of these apartments to screen potential views from the bedroom balconies in apartments C 3-21 etc.(Refer Condition No. 89).*

Landscaping

Council's Landscape and Tree Assessment Officer, Geoff Bird, commented on the proposal as follows:

The site

It is proposed to demolish the existing dwellings and associated structures and construct a residential flat building (RFB) on the existing amalgamated site of 4 021sqm with vehicular access from Lorne Ave. The site is characterised by an established landscape setting with mature trees and shrubs within formal garden beds and lawn areas. The site is dominated by a centrally located Liquidambar styraciflua (Liquidambar), while the rear of the site has numerous small tree plantings that provide amenity to the immediate site and neighbours.

Impacts on trees/tree removal/tree replenishment

The proposed development will result in the clearing of the site of all existing understorey shrub planting and the removal of existing trees centrally located on site. Of the twenty nine (29) trees identified as being located on or associated with the site, four (4) are to be retained on site and five (5) retained off site including the existing street trees. No objection is raised by Landscape Services with the nominated tree removal. Existing trees located on site that are to be retained include the Casuarina species (Sheoak) located adjacent to the western site boundary and the existing trees located adjacent to the northern (rear) site boundary. The retained trees will help maintain neighbour amenity and privacy and will be supplemented

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with additional trees and shrub planting. A total of thirty eight (38) additional trees are to be planted on site, which exceeds Council's minimum requirements under DCP55. Previous concerns about the limited plant palette have been satisfactorily resolved and include endemic species.

Deep soil

By the applicant's calculations, 50% (2 011sqm) of the site area is designated as deep soil as per LEP194 definitions, which complies with LEP194 requirements. Without having undertaken specific calculations, Landscape Services is in agreement with the areas shown as being included within the deep soil calculable area.

Setbacks

Landscape services raises no objections to the proposed setbacks as it is considered from a landscape viewpoint that the objectives of the LEP and DCP have been achieved through tree replenishment and screen planting. Previous concerns regarding the eastern side setback and adequate tree planting have been addressed.

Landscape plan

A revised landscape plan has been submitted addressing previous concerns about the landscape character and limited plant selection within the Lorne Ave site frontage. The landscape as proposed, although contemporary in style, utilises traditional plant species that is more reflective of the broader Killara landscape. Consent conditions will address detail planting concerns.

Subject to conditions, Landscape Services can support the application.

Engineering

Council's Engineering Assessment Officer, Kathy Hawken, commented on the proposal as follows:

The application is for the demolition of the existing three dwellings and the construction of a residential flat building comprising 40 units (20x2br and 20x3br) .

Strata subdivision is indicated on the application form, so subdivision conditions are included.

The following documentation was used for the assessment:

- *JBA Urban Planning Consultants Statement of Environmental Effects dated May 2005;*
- *Preliminary Construction Management Plan submitted for DA purposes.*
- *Survey plan by Denny Linker & Co. dated 27.07.05;*
- *Transport Report by Colston Budd Hunt and Kafes, reference 5844, dated April 2005.*
- *Vehicle Turning Analysis prepared by Colston Budd Hunt and Kafes.*

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- *Report on Geotechnical and Hydrogeological study by Douglas Partners, project 37952, dated April 2005.*
- *Architectural plans by Alexander Tzannes Associates, dated 03/05/05 (scale 1:200 only).*
- *Hyder Consulting Overland Flow Investigation, dated 10 March 2005.*
- *Amended Stormwater Concept Plan and Statement by Harris Page and Associates, dated 5 October 2005.*

The application is supported, subject to conditions.

Site drainage comments

The applicant has submitted amended stormwater drainage plans which indicate that roof runoff can be piped to the street drainage system via a combined retention/ detention system located under the proposed entry ramp.

Runoff from the driveway and basement may be pumped to the detention system in the usual way.

Along the rear of the site is a depression, which is shown on the deposited plan as a natural watercourse. A site inspection indicates that the depression has been altered and obstructed such that it could not be called a watercourse and could not be used for discharge of hard surface runoff without drainage easements and works through downstream properties. Flow would only occur in the depression after rainfall.

The investigation found that the development would not affect overland flow along this depression and that habitable floor levels would have the freeboard required by DCP 47 above the 100 year level.

Traffic generation and vehicle access and accommodation arrangements

The site is located less than 400 metres from Killara Station. Therefore, under LEP 194, 40 resident and 10 visitor parking spaces are required. The development includes 72 spaces and therefore complies.

The development is expected to generate 16 to 22 vehicles per peak hour, a relatively low generation. This is not expected to have a significant effect on traffic flows in the vicinity.

Sight distances for entering and exiting traffic comply with the acceptable sight distance requirements of Australian Standard 2890.1 – 2004 “Off-Street car parking”.

The internal vehicle access and accommodation arrangements are to (conditionally) comply with Australian Standard 2890.1 – 2004 “Off-Street car parking”. The traffic report contains a recommendation for traffic lights to control the relatively long one way entry ramp. This is included in the recommended conditions.

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There is provision for the small waste collection vehicle to enter the site, collect the garbage and leave the site in a forward direction. However the area titled refuse room is on the other side of a security door and behind three parking spaces. The waste collection area should be on the same side as the service bay, possibly in the location of space Vis 01. This could be amended on the Construction Certificate plans. A condition is recommended to that effect.

The right of carriageway along the eastern boundary of 27 Lorne Avenue benefits 23 and 25 Lorne Avenue. Swept paths have been submitted to confirm that with some landscaping of the right of way, access can still be obtained to the garage at No. 23, Although the supplementary information submitted does not contain a report, and does not indicate whether the engineer was aware of the steep entry to this garage, the figures indicate that a vehicle could reverse straight out of each garage (required because plates have been used to facilitate access to the northern garage). For that reason the proposal has been accepted. It is noted that the matter of works in the right of carriageway remains a matter between the property owners.

Construction Management

The transport report contains a short discussion of construction traffic issues, and a Preliminary Construction Management Plan prepared by Greencliff has also been submitted.

A Works Zone will probably be required along the Lorne Avenue frontage of the site. Traffic control will be required at the entry/ exit point.

Maintenance of access to the properties 23 and 25 Lorne Avenue will need to be addressed, and it is expected that the construction access point will be via the existing driveway to 29 Lorne Avenue.

A detailed and site specific construction traffic management plan must be submitted for review by Council Engineers prior to the commencement of any works on site. This has been conditioned.

Geotechnical Report

A desktop review and walkover inspection were carried out, supplemented by Douglas Partners' experience opposite the site in Regimental Park and on sites in Marian Street. An investigation comprising boreholes is planned, which may be carried out after demolition of existing structures. Vibrations and excavation support are identified as matters requiring further investigation. Dilapidation reporting of structures at 23, 25 and 31 Lorne Avenue and 8 Wallaroo Close will be required.

Heritage

Council's Heritage Advisor, Paul Dignam, commented on the proposal as follows:

Existing development on site

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A site inspection was undertaken on 29 July 2005. The existing buildings include a single storey house on a relatively large lot at No 29 Lorne Avenue, a two storey house at No 27 Lorne Avenue and a two storey house accessed via an access handle at 25A Lorne Avenue. The sites have associated built structures including drives, retaining walls, paths and plantings. No 25A has a swimming pool at the rear of its site.

Heritage assessment of existing buildings.

The application includes a Statement of Heritage Impact prepared by Noel Bell Ridley Smith and Partners. It does not raise any heritage issues with demolition of the existing houses and associated built elements.

Comment

The house at No 29 Lorne Avenue is a brick building that is sited away from the street and was most likely built during the Inter War period. In my opinion it appears to have some design quality but has relatively low heritage value. However, I do not object to demolition provided archival recording is provided before demolition.

The houses at No 25A & 27 Lorne Avenue are more recent development and they are not considered to have heritage significance. As Ku-ring-gai is going through such a rapid development period, I recommend archival recording before demolition (attached condition).

Nearby heritage items

Nearby heritage items include No 8, 10, 14 & 21 Lorne Avenue. No 14 is directly opposite the subject site with No 8 & 10 further to the east. No 21 is separated from the subject site by an access handle to No 25 and the house at No 23 Lorne Avenue. The water reservoir, also opposite the subject site is a draft heritage item which is included in Draft LEP 19. The draft LEP has been with DIPNR since 2/12/2002 and is awaiting gazettal. Inventory information is attached.

Heritage impact on nearby items

The heritage items opposite the site at 8, 10 & 14 Lorne Avenue evidence high quality grand bungalows set on large lots with substantial front and side setbacks.

The applicant's heritage report states that:

The two houses opposite the site are set well back on their sites and are extensively screened from the proposal by existing vegetation.

I accept the above statement and note the site is separated by the street and the setback requirements in DCP 55 are satisfied. The proposed development will result in some change to the low density residential development in the street and existing character. The fall on the

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site from the street will assist in reducing the bulk and visual impacts when seen from the streetscape.

The existing subdivision pattern in the street remains legible and early estate boundaries are still discernible. The proposal will alter this existing pattern and will have some impact on the area but given the rezoning and guidelines in DCP 55 the heritage impacts are considered satisfactory. As the proposed development is a contemporary design it will clearly read as a new element in the existing streetscape and will not confuse the historical development of the street.

The slope of this site will assist in reducing visual impacts on the existing heritage items and residential character of the street as it will be less visually dominant.

Regimental Park with the water reservoir below is an assertive streetscape element which has a distinctive streetscape character. It is considered that the proposed development would have negligible heritage impact on it.

The proposed development would not impact on existing views to or from listed heritage items, overshadow the gardens of items or cause any physical impacts.

UCA

The subject site falls outside all existing National Trust UCAs, however the southern side of the street, which includes the majority of the heritage items, is included in UCA No 10 – Culworth.

The existing development in UCA 10 is masonry with a predominance of mid to dark brick with slate or tiled roofs with hipped and gabled roof forms. The predominant character is the landscape with many mature street trees and gardens. The proposed building has a mix of face brick, stone cladding, rendered finishes and prefinished metal louvers. The colours and fairly neutral earthy tones are consistent with the existing UCA and streetscape.

The building presents a well articulated façade to the streetscape and is visually broken into three blocks. This is considered a good response to the context of the existing subdivision pattern and nearby buildings in the UCA.

PROVISIONS OF RELEVANT LEGISLATION

State Environmental Planning Policy No 55 - Remediation of Land

The provisions of SEPP 55 require Council to consider the potential for a site to be contaminated. The subject site has a history of residential use and, as such, it is unlikely to contain any contamination and further investigation is not warranted in this case.

State Environmental Planning Policy No 65 - Design quality of residential flat development

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The application includes a design verification statement by the project architect Mr Alexander Tzannes of Alexander Tzannes Associates. Mr Tzannes has verified that he is a qualified designer and member of the NSW Architects Registration Board and has designed the proposal in accordance with the design quality principles set out in Part 2 of SEPP 65.

The application has been assessed in terms of the Design Quality Principles set out in SEPP65. The design quality principles do not generate design solutions but provide a guide to achieving good design and the means of evaluating the merit of the proposal.

Context:

The development is permissible and largely complies with the prescribed requirements of LEP194, including maximum height, site coverage, number of storeys and deep soil landscaping. The building setbacks to Lorne Avenue are also compliant.

A number of residential flat building development proposals in the vicinity of the development are currently under consideration by Council or have recently obtained approval. Accordingly, the proposed development relates to its context by responding to the provisions of LEP194 and DCP55 that have been formulated to provide higher density 5 storey development.

Scale:

The development meets the prescribed building envelope requirements of LEP194, including deep soil landscaping, site coverage and setbacks, with the exception of a minor non-compliance with the building height control which is acceptable on merit. The scale of built form proposed is appropriate to the context and future character and form of the locality as envisaged by the LEP.

Built form:

The built form is acceptable and consistent with the desired future character of the locality. It complies with prescribed building envelope controls and will have an appearance of appropriately proportioned buildings set in landscaped open space.

The development provides for 40 units and features a combination of rendered masonry elements and a low, flat roof with the penthouse level set in from the perimeter walls. The built form is varied and utilises steps and changes in materials, vertical and horizontal articulation to create visual interest.

Accordingly, the design techniques incorporated in the proposal result in an acceptable built form.

Density:

The proposed building density is appropriate to the site, having regard to development guidelines contained in LEP 194 and DCP 55 and the envisaged future character of the area. The locality is

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well serviced in terms of services and open space and the site itself is in close proximity to the Killara railway station and bus transport along Pacific Highway.

Further, the development itself is compliant with the floor space control and can be adequately serviced by existing infrastructure. The proposed density is therefore acceptable.

Resource, energy and water efficiency:

The development incorporates energy efficient design and construction elements; including re-usable building materials, masonry construction of high thermal mass, efficient insulation and passive solar design. It achieves acceptable results in terms of energy efficiency and cross flow ventilation, with all apartments being cross ventilated and almost 90% of apartments achieving a mid to high 4 star energy rating. The proposal also incorporates a retention and detention stormwater system with water re-use for toilet flushing, laundries and irrigation.

Landscape:

The proposal provides for 50% of the site being a deep soil zone and complies with the prescribed control of LEP 194. The landscape design combines native and exotic plants and trees to provide sustainable planting that harmonise with the existing surrounding character of the area and provide privacy screening to both residents within the development and to neighbouring properties.

The layout and distribution of communal and private open space ensure high levels of access, usability and privacy.

The proposed landscaping is consistent with the desired future character of the area, which seeks large canopy trees to soften the buildings and contribute to the streetscape. Overall, the proposed landscape scheme is appropriate to the physical context of the site and will create a pleasant environment. The proposed landscaping is practical, will not present any difficulty for long term management and is to the satisfaction of Council's Landscape and Tree Assessment Officer.

Amenity:

The development contains 40 units, ranging from 97m² to approximately 158m² providing good solar access, cross ventilation and visual and acoustic privacy. Terraces and balconies are well sized, ranging from 12m² to 16m², with larger areas to the ground floor and penthouse units.

The development provides an acceptable level of internal amenity.

Safety and security:

The proposal provides for good levels of safety and security through siting, internal planning and design. The proposal maximises opportunities for casual surveillance of communal open space areas on site, provides quality common spaces, a clear definition between public and private spaces and enhances the street level activity.

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Examples of safety and security measures taken include provision of lift and stair access directly from the basement car parks to apartment levels, a front gate to the street frontage of the site, secure ground floor terrace areas through individual fencing, key and remote controlled access to the basement car park only and visibility of pathways throughout the site from units within the development where possible.

Social dimensions:

The application contains a balanced mix of two (20) and three (20) bedroom apartments providing variety in housing choice. The apartments are of an acceptable size (108m² to 158m²) and will provide high quality living for residents of the development. The development is in an accessible location, in close proximity to public transport nodes and to the Lindfield commercial centre.

Accessibility for the disabled and elderly has been considered by provision of single level units throughout the development and lift access to all levels, including the basement car park.

Aesthetics:

The building is of a high design standard and reflects the design principles of the Residential Flat Design Pattern Book and the Design Code. It's external appearance and composition of building elements, textures, materials and colours satisfactorily reflects the use, internal design and structure of the development.

Residential Flat Design Code

The considerations contained in the Residential Flat Design Code are as follows:

Relating to the local context:

The proposal, sited over three allotments, will require their consolidation. This amalgamation will result in a site area of 4022m², which is capable of accommodating the proposed density of five storeys.

The development complies with the prescribed building envelope controls of LEP194 and DCP55. In particular, number of storeys, top floor percentage, site coverage, floor space ratio and setbacks are all satisfactory. The development therefore is of a scale and density anticipated for the area within these planning instruments and policy documents.

Surrounding sites within the locality have been zoned for multi-unit development. Several applications for development of residential flat buildings are currently under consideration by Council. In some cases, planning approval for such developments has already been obtained as mentioned earlier in the report. The development therefore reflects the desired future built form context of the area as envisaged by LEP 194 and DCP55.

Site analysis

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A satisfactory site analysis was submitted, indicating how the proposal performs in terms of building edges, landscape response, access and parking and overall building performance in respect of overall energy sustainability.

In terms of site configuration, the proposal will ensure adequate areas for private and common open space and deep soil landscaping. The orientation of the building ensures adequate solar access to habitable areas and private open space within the development.

Building design:

The proposal is satisfactory in terms of internal configuration of the proposed buildings and will achieve the objectives of providing function and organised space and a high level of residential amenity. In addition, the proposal provides adequate habitable space, having access to north, east and west facing windows.

All other relevant matters under 'Building Design' have been assessed elsewhere in the report and are satisfactory.

Ku-ring-gai Planning Scheme Ordinance (KPSO) - LEP 194

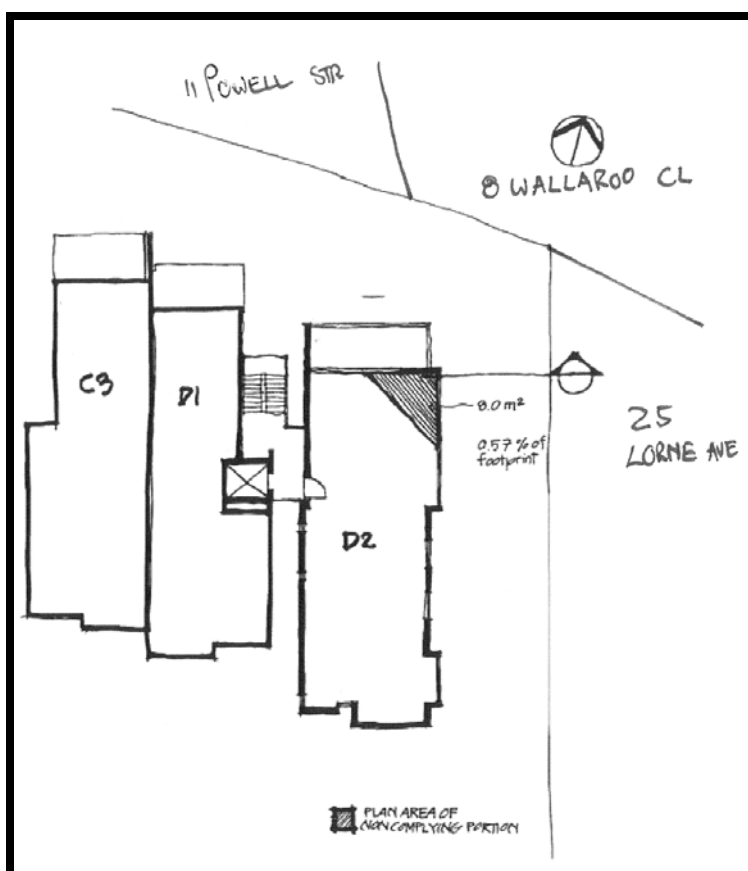
COMPLIANCE TABLE		
Development standard	Proposed	Complies
Site area (min): 1800m ² -2400m ²	4022m ²	YES
Deep landscaping (min): 50%	50.5%	YES
Street frontage (min): 30m	56.7m	YES
Number of storeys (max): 5 cl. 25I(5)	5	YES
Site coverage (max): 35%	35%	YES
Top floor area (max): 60% of level below	58%.	YES
Storeys and ceiling height (max) cl 25I(8): 4 storeys and max 13.4 metres in height	4 storeys and 13.8 metres	NO (SEPP 1)
Zone Interface • 3 rd and 4 th floors setback 9m from land not zoned 2(d3)	9 metres	YES
Car parking spaces (min): Residents spaces: One space per dwelling, and one additional space for dwellings of three + bedrooms (total of 40 required)	62 resident spaces provided.	YES
Visitor spaces: 10 spaces	10 visitors spaces provided	YES

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COMPLIANCE TABLE		
Development standard	Proposed	Complies
Manageable housing (min): 10% (4 units)	4	YES
Lift access: required if greater than three storeys	Provided to all units	YES

Storeys and ceiling height (cl.25I(8)):

The proposal does not meet the standard for perimeter ceiling height and breaches the control in the north-eastern corner of the rear building (Building B) by 400mm over an area of 8m². This non-compliance constitutes 0.57% of the total building footprint as is shown in **Figure No. 4**.

**Figure 4**

A SEPP 1 objection seeking a variation to a development standard of the Ku-ring-gai Planning Scheme Ordinance (KPSO) has been prepared and lodged with the application. SEPP 1 provides flexibility to Council's development standards and it enables Council to vary such a standard where strict compliance with that standard would be unnecessary, unreasonable or tend to hinder the objectives of the Environmental Planning & Assessment Act, 1979.

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Where an applicant wishes to vary a development standard, the application must be accompanied by a well founded, written objection which demonstrates that compliance with the particular standard:

- a. is consistent with the objectives of the relevant development standard;
- b. strict compliance would hinder obtainment of the objectives of SEPP1 or the objectives specified in Section 5(a)(i) and (ii) of the Environmental Planning and Assessment Act and
- c. is unreasonable or unnecessary in the circumstances of the case.

In the absence of specific underlying objectives of the standard for the perimeter height control the assumed object or purpose of this provision is considered to ensure that the building design is of a high quality and that there is a level of control provided in respect of building heights. The provisions ensure that buildings have consistent height, designed having regard to the topography of a site and does not dominate its surroundings. The control also ensures that there is an appropriate curtilage around the perimeter of a building capable of sustaining vegetation of a scale which will soften the proposed development and protect the amenity of adjacent properties.

In regard to the objectives for the characteristics and topography of the site, issues of overshadowing and dominance of neighbouring dwellings as a result of the breach are relevant. The following summary of the objection provides justification for the non-compliance:

The proposal meets the objects of section 5(a)(i) and (ii) of the Environmental Planning and Assessment Act “*as it would unreasonably restrict the development of the site in circumstances where the proposed variation is considered minor and does not result in any detrimental impacts*”. The circumstances are addressed in the following section.

Compliance with the standard is unreasonable or unnecessary in the circumstances of the case:

- The non-compliance is minor, in that the height standard is exceeded by a maximum of 400mm over a triangular area of 8 m² which equates to 0.57% of the building footprint area;
- The breach occurs in area where substantial changes to the natural ground level has occurred in the past. The ground level *before the erection of any building or carrying out of any work* is not known and the proposal can therefore not demonstrate strict compliance with the development standard. (The natural ground level has been extrapolated to approximately 900mm below the current pool surround level.
- The non-compliance is at the rear of the building and will not be visible from the street;
- The section of the building has adequate separation with a 6 metres setback from the building to the boundary;
- This setback is dedicated to landscaping and supports a variety of screening and tree species, which will largely screen this section of the building from view;
- No overshadowing, loss of privacy or loss of view result from the breach;
- To comply with the standard this part of the building would have to be stepped resulting in a design which would leave five of the units not complying with accessibility

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requirements of Council. The proposal increases the number of apartments that can be utilised by residents requiring disabled access.

The non-compliance with the height control will result in a better planning outcome for the site, the community and the locality. The SEPP 1 Objection has demonstrated that the underlying objective of the standard has been satisfied and that compliance with standard in regard to the number of storeys would tend to hinder the attainment of the objects specified in Section 5(a)(i) and (iii) of the Act. The SEPP 1 objection has shown that, in the circumstances, compliance with the development standard is unreasonable and unnecessary. The SEPP 1 Objection has adequately addressed the requisite aspects of the Policy, is well founded and in this instance the development standard should be allowed to be varied.

Residential zone objectives

The development satisfies the objectives for residential zones as prescribed in clause 25D.

Clause 68(2) - Suspension of Acts, covenants, etc

Section 28(2) of the Environmental Planning and Assessment Act confers upon Council, through the Ku-ring-gai Planning Scheme Ordinance, the ability to suspend (wholly or partially) easements for the purpose of enabling development to be carried out in accordance with an environmental planning instrument or in accordance with a consent granted.

Clause 68(2) of the KPSO provides for the suspension of covenants, agreements or instruments that affect development in use zones such as Residential 2(d3) in accordance with Section 82(2) of the EP & A Act:

In respect of any land which is comprised within any zone, other than within Zone No. 2(a), 2(b), 2(c), 2(d), 2(e), 2(f), 2(g) or 2(h) the operation of any covenant agreement or instrument imposing restrictions as to the erection or use of buildings for certain purposes or as to the use of land for certain purposes is hereby suspended to the extent to which any such covenant, agreement or instrument is inconsistent with any provision of this Ordinance or with any consent given thereunder.

The development proposes deep soil landscaping of 50% of the site area as required by the KPSO (LEP 194). However, due the existence of a right of carriageway affecting approximately 130m² of the site, the applicant will be unable to physically provide landscaping over this area.

Figure No. 1 illustrates the extent of the current shared driveway arrangement. The hatched area constitutes that part of the right of carriageway located on the subject site (130m²). It is envisaged to demolish the hatched part of the driveway and utilise it for landscape purposes in order to comply with the deep soil area. The existing carriageway is designed to provide access for four dwellings and, after the completion of the development, will only be required to service two dwellings (Nos 23 and 25 Lorne Ave). Part of the driveway area will be retained to ensure reasonable and safe access to both Nos 23 and 25 Lorne Avenue is maintained. **Figure No. 2** gives an indication of the applicant's intention for this part of the site.

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The existence of the easement does not prevent Council granting Development Consent. Council has the power under the said clauses of the EP & A Act and the KPSO to approve landscaping within the easement. These clauses enable the Development Consent to modify the easement to the extent necessary to allow the development to be carried out. It is Council's responsibility to ensure that the proposed modifications to the easement satisfies Council's access requirements and that it does not affect the owners of No's 23 and 25 Lorne Avenue's reasonable right to access. Council's Development Engineer, Kathy Hawken, raised no objection to the proposal on these grounds and is satisfied that reasonable access to those properties will be maintained.

Clause 25H - Strata subdivision

The subject site is zoned Residential 2(d3) and under Clause 25H subdivision is permissible with the consent of Council. The objective of Clause 25H is to permit the subdivision of multi-unit housing with consent of the Council. From a planning point of view, there is no objection to the strata subdivision as it will constitute no additional environmental impacts apart from allowing individual ownership. Council's Development Engineer has no objection to the strata subdivision element of the application subject to standard conditions. A special condition is imposed that requires the consolidation of the existing three Torrens Title lots prior to issue of the Construction Certificate. **(Refer Condition No 73)**

The proposed subdivision is consistent with the aims and objectives of the zone and the objectives of the residential controls. The strata subdivision does not entail any additional construction works. The site will retain the same physical relationship to the street and adjoining properties.

As the buildings to be subdivided do not yet exist, the subdivision certificate will only be issued once the construction works are complete and certain conditions have been satisfied. **(Refer Conditions Nos 105 to 112)**

Car parking and common property

The proposal exceeds the parking requirements of both DCP 55 and DCP 43 by providing 62 resident car spaces and 10 visitor spaces as discussed earlier in the report. The parking allocation to the dwellings is reasonable as the majority of units can be provided with two parking spaces. The Common Property and visitor's parking spaces are indicated as such on the subdivision plans.

Relationship to adjoining development

The proposed subdivision will not alter the site's relationship to adjoining properties. The subdivision will permit the dwellings to be independently owned, but does not alter their form, capacity or the facilities available to each. The impact of the proposed works on the amenity of the adjoining properties is acceptable.

State Environmental Planning Policy No 10 - Retention of Low Cost Rental Accommodation

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The aim of the Policy is to provide a mechanism for the retention of low cost rental accommodation. The Policy does not apply to the proposed development as it does not affect any existing low cost rental accommodation.

The proposed subdivision is acceptable and will not result in any significant adverse impacts.

POLICY PROVISIONS**Development Control Plan No 55 - Railway/Pacific Highway Corridor & St Ives Centre**

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 4.1 Landscape design:		
Deep soil landscaping (min) 150m ² per 1000m ² of site area = 603m ²	> 603m ²	YES
No. of tall trees required (min): 13 trees	4 trees to be retained 38 canopy trees to be planted	YES
Part 4.2 Density:		
Building footprint (max): 35% of total site area	35%	YES
Floor space ratio (max): 1.3:1 (5229m ²)	1.23:1 (4930m ²)	YES
Part 4.3 Setbacks:		
setback (min): 13 - 15 metres (<40% of the zone occupied by building footprint)	13-15 metres & 40%	YES
Northern (rear) and Western (side) boundary setback (min): 6 metres	6 metres	YES
Eastern (side) boundary setback (min): 6 metres	3.7 metres to basement	NO
Setback of ground floor terraces/courtyards to street boundary (min): Lorne Avenue – 8m	8 metres	YES
% of total area of front setback occupied by private courtyards (max):		

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COMPLIANCE TABLE		
Development control	Proposed	Complies
15%	25%	NO
Part 4.4 Built form and articulation:		
Façade articulation:		
• Wall plane depth >600mm	All wall plane depths >600mm	YES
• Wall plane area <81m ²	<81m ²	YES
Built form:		
• Building width < 36m	35 metres to Lorne Avenue	YES
• Balcony projection < 1.2m	complies	YES
Part 4.5 Residential amenity		
Solar access:		
• >70% of units receive 3+ hours direct sunlight in winter solstice	70% (28)	YES
• 3 hours sunlight to habitable rooms and outdoor living areas of adjoining houses in Residential 2(c1) and 2 (c2) zones	>3 hours	YES
• >50% of the principle common open space of the development receives 3+ hours direct sunlight in the winter solstice	50%	YES
• <15% of the total units are single aspect with a western orientation	No single aspect units proposed.	YES
Visual privacy: Separation b/w windows and balconies of a building and any neighbouring building on site or adjoining site:		

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COMPLIANCE TABLE		
Development control	Proposed	Complies
<ul style="list-style-type: none"> Storeys 1 to 4 <ul style="list-style-type: none"> - 12m to windows of habitable rooms - 9m to windows of habitable and non-habitable rooms - 6m to windows of non-habitable rooms 5th Storey <ul style="list-style-type: none"> - 18m b/w habitable rooms - 13m b/w habitable and non-habitable rooms - 9m b/w non-habitable rooms 	<p>11.5 metres from balconies to No. 8 Wallaroo Cl</p> <p>>12 metres</p> <p>>12 metres</p> <p>11.5 metres: terrace to No. 8 Wallaroo Close 13.5 metres to No. 23a Lorne avenue 14 metres between units (terrace to terrace)</p> <p>>13 metres</p> <p>> 14 metres</p>	<p>NO</p> <p>YES</p> <p>YES</p> <p>NO</p> <p>YES</p> <p>YES</p>
<p>Internal amenity:</p> <ul style="list-style-type: none"> Habitable rooms have a minimum floor to ceiling height of 2.7m Non-habitable rooms have a minimum floor to ceiling height of 2.4m 3+ bedroom units have a minimum plan dimension of 3m in at least two bedrooms Single corridors: <ul style="list-style-type: none"> - serve a maximum of 8 units - >1.5m wide - >1.8m wide at lift lobbies 	<p>2.7 metres</p> <p>>2.4 metres</p> <p>All bedrooms >3.0 metres</p> <p>Maximum 3 units</p> <p>1.8 metres</p> <p>1.8 metres</p>	<p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p>
Outdoor living:		

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COMPLIANCE TABLE		
Development control	Proposed	Complies
<ul style="list-style-type: none"> Ground floor apartments have a terrace or private courtyard greater than 25m² in area 	>26m ²	YES
<ul style="list-style-type: none"> Balcony sizes: <ul style="list-style-type: none"> 12m² – 2 bedroom unit 15m² – 3 bedroom unit 	>12m ² >15m ²	YES YES
<ul style="list-style-type: none"> NB. At least one space >10m² Primary outdoor space has a minimum dimension of 2.4m 	2.4 metres	YES
Part 4.7 Social dimensions:		
Visitable units (min): 70% (28)	90% (36 units)	YES
Housing mix: Mix of sizes and types	2 and 3 bedroom units	YES
Part 4.8 Resource, energy and water efficiency:		
Energy efficiency: <ul style="list-style-type: none"> >65% of units are to have natural cross ventilation 	100% (40 units)	YES
<ul style="list-style-type: none"> single aspect units are to have a maximum depth of 10m 	No single aspect units proposed.	YES
<ul style="list-style-type: none"> 25% of kitchens are to have an external wall for natural ventilation and light 	50% (20) all kitchens have access to natural light and ventilation	YES

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COMPLIANCE TABLE		
Development control	Proposed	Complies
<ul style="list-style-type: none"> >90% of units are to have a 4.5 star NatHERS rating (36) with no more than 10% only achieving the minimum 3.5 star rating - (4) 	4.5 to 5 star rating = 42.5% (17) 4 star rating = 17.5% (7) 3.5 star rating = 40% (16)	NO NO
Part 5 Parking and vehicular access:		
Car parking spaces (min): 40 x resident, 10 x visitor	62 x resident, 10 x visitor	YES

Part 4.3 Setbacks

Overall, the proposed buildings provide a variety of front, side and rear setbacks in order to achieve good articulation and interest to the streetscape.

The basement of Building A is set back 3.7 metres from the eastern boundary and fails to comply with the 6 metres requirement of DCP 55. The driveway within the side setback also encroaches over this part of the basement and does not comply with Clause 4.1 C-3 of DCP 55. The encroachment is supported due to mitigating site circumstances. Although the site is not classified as a steep slope site, it is nonetheless constrained with a slope of 12% across its footprint area (Clause 25K of the KPSO only allows concessions for developments on sites where the slope is more than 15%). The location of the driveway is prescribed by the requirement to meet the relevant Australian Standard (AS 2890) pertaining to driveway gradients and to maintain clear sightlines at the vehicle crossing. The access point is located at the lowest point of the site relative to Lorne Avenue to ensure that these standards are met.

The encroachment is supported as the bulk of the driveway will be located below the street level. Approximately 7 metres of the driveway in the front setback area will be substantially compliant as it is set back 5.66 metres from the eastern boundary. In addition, the car park entry is provided perpendicular to the street and therefore not visible from the public domain and does not detract from the building façade. A condition is recommended requiring the construction of an acoustic fence along this boundary (following the alignment of the altered driveway as per **Figure No. 2**) to ensure that any adverse impacts to No. 23 and 25 Lorne Avenue are minimised (**Refer Condition No 89**). The fence will be 1.2 metres high in the front setback area but will step up in height to 1.8 metres approximately 15 metres from the street boundary.

More than 30% of the front setback area is occupied by ground floor terraces and fails to comply with Clause 4.3C-8 which specifies a maximum of 15%. **Condition No. 89** requires that the depth of these terrace areas be reduced by 3 metres in order to comply; thus ensuring adequate common deep soil planting area within the front setback area. These units will remain compliant with the minimum terrace size control of groundfloor units as their primary open space areas are located on the northern elevation.

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Part 4.5 Residential amenity

The non-compliance with the separation requirements is mainly attributable to the proximity of structures adjoining properties to their respective boundaries. On average, the proposal's setbacks to these boundaries exceed the minimum 6 metres required by DCP 55. To ensure acceptable solar access the majority of units are orientated north, resulting in overlooking of surrounding properties. In this regard it should be noted that:

- The proposal's setbacks to these boundaries generally exceed the minimum 6 metres required.
- These properties are also zoned 2(d3) and may be redeveloped in which case some buildings would be set back further in accordance with DCP 55, improving future separation.
- At low densities, there is a reasonable expectation that a dwelling will retain high levels of privacy but at higher densities privacy impacts are harder to minimise and the claim to retain it to the same level as low density development is not as strong.

Part 4.5 of DCP 55 requires 12 metres separation (for Levels 1-4) between habitable rooms on adjoining properties. Separation to No. 8 Wallaroo Close ranges from 11.5 to 13 metres. The breach of 500mm is considered negligible and, considering the landscaping proposed, will not result in an unreasonable impact.

The fifth floor terrace of Unit D-5 40 also breaches the separation controls to the same three windows along the southern and south-eastern elevations of No. 8 Wallaroo Close. DCP 55 requires 18 metres separation while 11 - 13 metres (measured from the edge of the terrace) is proposed. The two windows on the southern elevation, adjacent to an air-conditioning unit are low-use rooms and not used in conjunction with the main private open space area (located 25 to 30 metres to the east). The bay window on the south eastern elevation is affected but the 1.8 metres privacy screens required to the eastern elevation **Condition No. 89** will ensure that an acceptable level of privacy is maintained. An oblique view to the bay window will still be possible. It is reasoned that amenity impacts can only be partly ameliorated through the use of privacy screens but cannot be completely eliminated in this instance. It would be unreasonable to require privacy screens on this aspect of the proposal as it is crucial to ensure adequate sunlight is maintained to living areas. Physical screening of the non-compliant terrace areas is not considered appropriate as it will detrimentally affect their functionality with very little real benefit.

There is a breach of the top floor separation control within the development affecting the terraces of units with northern and southern aspects over the central courtyard area. This breach is considered minor and **Condition No. 89** requires privacy screens, 1.8 metres high to be erected along the southern elevation of unit nos D-5 40 and C-5 31.

These variations are supported as a reasonable degree of privacy is maintained, commensurate with a medium density residential environment.

Part 4.8 Resource, energy and water efficiency

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DCP 55 requires 90% or 36 units to meet the NatHERS rating of 4.5 stars and above. Only 42.5% or 17 of the units achieve this control. The applicant, after re-considering the non-compliance, has indicated that improving the environmental performance of the development is not feasible. The proposal has, through building orientation, the cross ventilated design, stepping of the buildings and by limiting building depth, attempted to achieve an acceptable climatic responsive outcome. All units achieve a NatHERS rating of 3.5 stars and 60% of the units achieve 4 stars or above.

Given that other energy efficiency controls prescribed by DCP 55 are complied with, the NatHERS non-compliance is acceptable and does not constitute reason enough to refuse the application.

Development Control Plan 31 - Access

Matters for assessment under DCP 31 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 40 - Construction and Demolition Waste Management

Matters for assessment under DCP 40 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan No 43 - Car Parking

Matters for assessment under DCP 43 have been taken into account in the assessment of this application against DCP 55 and the proposal is satisfactory in this regard.

Development Control Plan 47 - Water Management

Matters for assessment under DCP 47 have been taken into account in the assessment of this application against DCP 55 and the proposal is satisfactory in this regard.

Section 94 Plan

The development attracts a section 94 contribution of \$772,138.79 which is required to be paid (Refer **Condition No. 72**).

Likely Impacts

All likely impacts of the proposal have been assessed elsewhere in this report.

Suitability of The Site

The site is suitable for the proposed development.

Any Submissions

All submissions received have been considered in the assessment of this application.

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Public Interest

The approval of the application is considered to be in the in the public interest.

Any other Relevant Matters Considerations Not Already Addressed

There are no other matters for assessment.

CONCLUSION

Having regard to the provisions of section 79C of the Environmental Planning and Assessment Act 1979, the proposed development is considered to be satisfactory. Therefore, it is recommended that the application be approved.

RECOMMENDATION

Pursuant to Section 80(1) of the Environmental Planning and Assessment Act, 1979

THAT the Council, as the consent authority, is of the opinion that the objection under *State Environmental Planning Policy No 1 - Development Standards* to the Perimeter Ceiling Height Control (cl. 25I(8)) of the Ku-ring-gai Planning Scheme Ordinance is well founded. The Council is also of the opinion that strict compliance with the development standard is unreasonable and unnecessary in the circumstances of this case as the SEPP 1 Objection has demonstrated that the underlying objective or purpose of the standard has been satisfied.

AND

THAT the Council, as the consent authority, being satisfied that the objection under SEPP No 1 is well founded and also being of the opinion that the granting of consent to DA 425/05 is consistent with the aims of the Policy, grant development consent to DA 425/05 for the demolition of existing structures and construction of 5 residential flat buildings comprising 40 dwellings including, basement parking, landscaping, storm water reticulation and strata subdivision on land at 25a, 27 and 29 Lorne Avenue, Killara, for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

GENERAL

1. The development must be carried out in accordance with plans identified within the following table, and endorsed with Council's approval stamp, except where amended by the following conditions:

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Architectural Plans

Dwg. No.	Rev	Description	Author	Dated	Lodged
DA-04039-01	2	Site & Roof Plan	Alexander Tzannes Assoc	30 Sept 2005	21 Nov 2005
DA-04039-02	2	Basement 1 & 2 Plan	Alexander Tzannes Assoc	30 Sept 2005	21 Nov 2005
DA-04039-03	3	Level 1 & 2 Plan	Alexander Tzannes Assoc	30 Sept 2005	21 Nov 2005
DA-04039-04	2	Level 3, 4 & 5 Plan	Alexander Tzannes Assoc	30 Sept 2005	21 Nov 2005
DA-04039-05	2	Elevations	Alexander Tzannes Assoc	30 Oct 2005	21 Nov 2005
DA-04039-06	2	Sections	Alexander Tzannes Assoc	30 Sept 2005	21 Nov 2005

Subdivision Plans

041014/DSP.dwg	Strata subdivision of Lot B in DP 339075 and Lots 1&2 in DP 547371	Denny Linker & Co	Sheets 1-20	28 Nov 2005
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2. All building works shall comply with the Building Code of Australia.
3. The submission of the approved plans to Sydney Water, before any work is commenced to ensure that the proposed structure meets that Authority's By-Laws. Failure to submit these plans before commencing work will render the owner liable to a penalty and may result in the demolition of work.
4. The approved building shall not be occupied unless the development has been completed in accordance with all conditions of consent and the approved plans and an Occupation Certificate has been issued.
5. The opening of any footway, roadway, road shoulder or any part of the road reserve shall not be carried out without a Road Opening Permit being obtained from the Council (upon payment of the required fee) beforehand.
6. A copy of all stamped approved plans, specifications and documents (including the Construction Certificate if required for the work incorporating certification of conditions of approval) shall be kept on site at all times so as to be readily available for perusal by any officer of Council or the Principal Certifying Authority. *(Reason: To ensure that the form of the development undertaken is in accordance with the determination of Council, Public Information and to ensure ongoing compliance).*
7. For the purpose of safety and amenity of the area, no building materials, plant or the like are to be stored on the road or footpath without the written approval being obtained from the Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.

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8. HOURS OF WORK: For the purpose of residential amenity, noise generating work carried out in connection with building and construction operation, including deliveries of building materials and equipment, is restricted to the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted. The use of the following items of plant on the site is also restricted to the abovementioned hours: compressors, bulldozers, power operated woodworking machines, excavators and loaders, jackhammers, Ramset guns, concrete mixers and concrete delivery wagons, hoists, winches, welding and riveting plant.

Whilst work on Saturdays may be performed until 5.30pm, such work or any associated activities shall not involve the use of any noise generating processes or equipment.

9. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.
10. A sign shall be erected in a prominent position on the site which states the name and contact details of the Principal Certifying Authority.
11. All excavations shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.
12. To maintain existing ground levels all excavated material shall be removed from the site.
13. Any excavation of rock involving hydraulic or compressed air rock hammers or other excavation equipment shall comply with the requirements of Council's Code for the Control and Regulation of Noise on Building Sites.
14. No rock breaking or other machinery for the excavation, drilling or removal of rock shall be used on the site without the prior approval of the Principal Certifying Authority. Should rock breaking or associated machinery be required, the following details are to be submitted to the Principal Certifying Authority for consideration:
- a. The type and size of machinery proposed.
 - b. The routes of all trucks to convey material to and from the site.
 - c. A report by a Geotechnical Engineer detailing the measures recommended in undertaking the work so as to prevent any damage to any adjoining or nearby buildings.
15. The applicant is advised that the Construction Certificate plans and specifications must comply with the provisions of the Building Code of Australia.
16. All excavations and backfilling associated with the erection or demolition of a building must be executed safely and in accordance with appropriate professional standards.

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All excavations associated with the erection or demolition of a building must be properly guarded and protected to prevent them from being dangerous to life or property.

17. If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation to be made:
- must preserve and protect the building from damage, and
 - if necessary, must underpin and support the building in an approved manner, and
 - must, at least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished.

The owner of the adjoining allotment of land is not liable for any part of the cost of work carried out for the purposes of this clause, whether carried out on the allotment of land being excavated or on the adjoining allotment of land.

In this clause, allotment of land includes a public road and any other public place.

18. Toilet facilities are to be provided, within the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
19. Any fencing and associated footings shall be constructed entirely within the boundaries of the property.
20. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
21. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
22. Demolition work, including removal of material or debris from the site, on any building in a residential area shall only be carried out during the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted.
23. A person taking down or demolishing or causing to be taken down or demolished any building or part thereof shall, upon identifying or suspecting that asbestos is present in the building, immediately notify the Workcover Authority. The Authority is the controlling body for the safe removal, handling and disposal of asbestos. The Authority supervises and monitors contractors engaged in asbestos removal.

The requirements and standards imposed by the Authority, its consultants or contractors shall be complied with.

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24. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.
25. Dust control measures shall be taken on all demolition sites so as to avoid a nuisance to adjoining properties and harm to the environment.
 - a. A person taking down or demolishing or causing to be taken down or demolished any building or portion of any building shall:
 - i. cause the windows or other openings in the external walls to be close boarded or otherwise covered;
 - ii. cause screens of canvas, hessian, boards, mats or other suitable material to be fitted in appropriate locations;
 - iii. cause areas, components and debris to be wetted down; in such a manner as to minimise, as far as practicable, the nuisance arising from the escape of dust during such taking down or demolition.
 - b. Such person shall not chute, throw or let fall or cause to chute, throw or let fall from the floor to floor or into any basement of such building any building materials or any other matter so as to cause dust to escape from the building or cause any such material to fall or cast upon a public way to the annoyance, inconvenience, or danger of persons using such public way.
26. Soil on vacant sites is to be stabilised as soon as possible to prevent erosion and the site shall be kept clear of excess vegetation.
27. A temporary construction exit and sediment trap to reduce the transport of sediment from the site onto public roads shall be provided before demolition commences.
28. Existing stormwater lines on the site are to be blocked and made inoperable after buildings are demolished so as to prevent the conveyance of silt or sediments into the gutter or street drainage system.
29. All combustible material shall be removed from the site on a daily basis. Material shall not be burnt on the site.
30. Materials salvaged from a demolition may be stored on site provided they are non combustible, neatly and safely stockpiled and not likely to become a harbourage for vermin.
31. Trees and vegetation on a site shall not be disturbed except with the approval of the Council.
32. Fire hoses are to be maintained on site during the course of demolition.
33. Adequate precautions shall be taken to ensure the protection of adjoining premises and persons therein from damage and injury during the process of demolition.

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34. Buildings built prior to the 1970's may contain lead based paint. Lead dust is a hazardous substance. You are advised to follow the attached WorkCover guidelines to prevent personal and environmental contamination.
35. The applicant or builder/developer is responsible for the cost of making good any damage that may be caused to any Council property as a result of work associated with the demolition.
36. A photo record of the buildings to be demolished and vegetation on site is to be submitted to Council for archival purposes.
37. A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:
 - a. stating that unauthorised entry to the work site is prohibited, and
 - b. showing the name of the person in charge of the work site and a telephone number at which that person may be contacted outside working hours.

Any such sign is to be removed when the work has been completed.

This clause does not apply to:

- a. building work carried out inside an existing building, or
 - b. building work carried out on premises that are to be occupied continuously (both during and outside working hours) while the work is being carried out.
38. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.
39. "Peep holes" shall be provided to the entrance doors of all units for personal security.
40. Compliance with the notations overdrawn on the consent plans.

Engineering

41. Stormwater runoff from roof areas shall be piped to the street drainage system via the approved site water management facilities. New drainage line connections to the street system shall conform and comply with the requirements described in sections 5.3 and 5.4 of Councils Water Management Development Control Plan 47, available in hard copy at Council and on the Council website.
42. A mandatory rainwater retention and re-use system comprising storage tanks and ancillary delivery plumbing must be provided for each building. The (minimum) total storage volumes of the rainwater tank systems are to be as required by Council's DCP 47 Water Management. The prescribed re-use of the water on site, must be toilet flushing (each unit), preferably cold

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laundry (each unit) and garden irrigation, as specified in chapter 6 of Ku-ring-gai Council Water Management Development Control Plan 47 (DCP47).

43. In addition to the mandatory rainwater retention and re-use system provided, an **on-site stormwater detention** system must be provided for each building to control the rate of runoff leaving the development site. The minimum volumes of the required on-site detention systems must be determined in accordance with chapter 6 of the Ku-ring-gai Council Water Management Development Control Plan 47 (DCP 47) - having regard to the specified volume concession offered in lieu of installing rainwater retention tanks. The design of the on-site detention system must be performed by a qualified civil/hydraulic engineer and must satisfy the design controls set out in appendix 5 of DCP 47.
44. For stormwater control a 200mm wide grated channel/trench drain with a heavy-duty removable galvanized grates are to be provided to collect driveway runoff. The channel drains shall be connected to the main drainage system and must have an outlet of minimum diameter 150mm to prevent blockage by silt and debris.
45. This development consent does not set aside or affect in any way the exercise of any rights-at-law which may be conferred upon any parties by the existence and/or terms of the grant of any easements or rights-of-carriageway on or over the subject lot(s). It is the applicant's full responsibility to ensure that any rights-at-law are investigated and upheld. Council accepts no responsibility whatsoever, at any time, for any claim for any matter or thing arising from its approval to this application involving any encroachment or other influence upon any easement or right-of-carriageway. The applicant's attention is further directed to the rights of persons benefited by any easement or right-of-carriageway concerning the entry and breaking up of a structure approved by this consent. In the event that such a structure causes damage, blockage or other thing requiring maintenance to infrastructure within the easement or right-of-carriageway, or access is required to carry out maintenance, Council accepts no responsibility in this regard now or in the future.
46. During construction, stormwater runoff must be disposed in a controlled manner that is compatible with the erosion and sediment controls on the site. Immediately upon completion of any impervious areas on the site (including roofs, driveways, paving) and where the final drainage system is incomplete, the necessary temporary drainage systems must be installed to manage and control runoff as far as the approved point of stormwater discharge. Such measures shall be to the satisfaction of the Principal Certifying Authority.
47. A maintenance period of six (6) months applies to all work in the public road reserve carried out by the applicant - **after** the works have been completed to the satisfaction of Ku-ring-gai Council. In that maintenance period, the applicant shall be liable for any section of the completed public infrastructure work which fails to perform in the designed manner, or as would reasonably be expected under the operating conditions. The maintenance period shall commence once the Applicant receives a written indication from Council stating that the works involving public infrastructure have been completed satisfactorily.

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48. Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the Applicants full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services at the appropriate stage of the development (including water, phone, gas and the like). Council accepts no responsibility whatsoever for any matter arising from its approval of this application involving any influence upon utility services provided by another authority.
49. All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials and plant must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "*Traffic Control Devices for Work on Roads*". **If pedestrian circulation is not satisfactorily maintained across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.**
50. The provision of temporary sediment and erosion control facilities and measures must be installed, prior to the commencement of any works on the site to eliminate unnecessary erosion and loss of sediment. These facilities must be maintained in working order during construction works up to completion. All sediment traps must be cleared on a regular basis and after each major storm, and/or as directed by the Principal Certifying Authority and Council officers.
51. Driveways and vehicular access ramps must be designed not to scrape the underside of cars. In all respects, the proposed vehicle access and accommodation arrangements must be designed and constructed to comply with the minimum requirements of Australian Standard 2890.1 (2004) "Off-Street car parking".
52. The Applicant must obtain a **Section 73 Compliance Certificates** under the *Sydney Water Act 1994*, which relates to the proposed RFB and the Strata Subdivision approved under this DA. An application must be made through an authorised Water Servicing Coordinator. The Applicant is to refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-developer" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
53. In order to allow unrestricted access at all times for Ku-ring-gai Council waste collection vehicles into the basement garbage collection area - no lockable or remote control doors,

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grilles, gates or other devices are to be provided in the access driveways to the basement carparks preventing this service. Contractors will not accept keys or remote controls.

54. A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee the excavation procedure. Geotechnical aspects of the development work, namely:

- Appropriate excavation methods and techniques,
- Vibration management and monitoring,
- Support and retention of excavated faces,
- Hydrogeological considerations,

Must be undertaken in accordance with the recommendations of the Geotechnical and Hydrogeological Report prepared by Douglas Partners (37952 dated April 2005), and all subsequent geotechnical investigation reports and inspections carried out during the excavation and construction phase. Approval must be obtained from all affected property owners, including Ku-ring-gai Council, where rock anchors (both temporary and permanent) are proposed below adjacent private or public property.

Over the course of the works a qualified Geotechnical/hydrogeological Engineer must complete the following:

- Further geotechnical investigations and testing recommended in the above report(s) and as determined necessary,
- Further monitoring and inspection at the hold points recommended in the above report(s) and as determined necessary,
- Written report(s) including certification(s) of the conducted geotechnical inspection, testing and monitoring programs.

Heritage

56. Demolition of a non-heritage item or not in a UCA – Nos 25a, 27 and 29 Lorne Avenue, Killara.

A report is to be submitted and approved to the heritage officer's satisfaction prior to commencement of the work and prior to issue of a Construction Certificate.

The report is to be prepared by a heritage consultant included in the NSW Heritage Office list of recognized consultants or other suitably qualified consultants who have knowledge and experience in preparing archival recording documents.

The report is to be a bound A4 report. Three copies of the report must be submitted, one copy with negatives.

All photographs to be mounted, labelled and cross-referenced to the relevant site plan and floor plans and showing position of camera. Photographs of the following:

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- Each elevation and selected interiors.
- All structures on site such as sheds, outhouses and significant landscape features
- Several photographs of house from public streets or laneways including several views showing relationship to neighbouring buildings.

Minimum requirements:

- Title page
- Statement of reasons the recording was made
- Site plan (survey or sketch) showing all structures and site elements
- Sketch of the floor plan showing the location of the camera for each photograph.
- Black & White archival quality photography, contact prints with negatives and selected prints (one copy of negatives other copies with contact sheets and selected prints)

Digital images and CDs may be submitted as supplementary information.

Landscaping

58. The trees to be retained shall be inspected, monitored and treated when necessary by a qualified Arborist before, during and after completion of development works to ensure their long term survival. Regular inspections and documentation from the Arborist to the Principal Certifying Authority are required at the following times or phases of work.

Tree/location	Time of inspection
All existing trees nominated to be retained	Prior to demolition
	After completion of demolition
	Prior to excavation
	After completion of demolition
	Prior to construction works
	Monthly intervals during construction works
	After completion of all works on site

59. REMOVAL of the following tree/s from Council's nature strip to permit vehicular access shall be undertaken at no cost to Council by an experienced Tree Removal Contractor/Arborist holding Public Liability Insurance amounting to a minimum cover of \$10,000,000.

Tree/Location

Eucalyptus nicholii (Narrow leaf peppermint)
Lorne Ave nature strip

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60. If tree roots are required to be severed for the purposes of constructing the approved works they shall be cut cleanly by hand, by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate
61. No tree roots of 30mm or greater in diameter located within the specified radius of the trunk/s of the following, tree/s shall be severed or injured in the process of any site works during the construction period.

Tree/Location	Radius From Trunk
#10 <i>Magnolia grandiflora</i> (Bull Bay Magnolia) Adjacent to northern (rear) site boundary	3.0m
#18 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#19 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#20 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#21 <i>Brachychiton acerifolius</i> (Illawarra Flame Tree) Adjacent to western (side) site boundary	5.0m
#24 <i>Ficus benjamina</i> (Weeping Fig) Adjacent to western (side) site boundary in neighbouring property	6.0m
#26 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	5.0m
#27 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	5.0m
#28 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	3.0m

62. All excavation carried out within the specified radius of the trunk/s of the following tree/s shall be hand dug:

Tree/Location	Radius From Trunk
#10 <i>Magnolia grandiflora</i> (Bull Bay Magnolia) Adjacent to northern (rear) site boundary	3.0m

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#18 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#19 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#20 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#21 <i>Brachychiton acerifolius</i> (Illawarra Flame Tree) Adjacent to western (side) site boundary	5.0m
#24 <i>Ficus benjamina</i> (Weeping Fig) Adjacent to western (side) site boundary in neighbouring property	6.0m
#26 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	5.0m
#27 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	5.0m
#28 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	3.0m

63. The applicant shall ensure that at all times during the site works no activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order.
64. The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along Lorne Ave. The tree/s used shall be a minimum 25 litre container size specimen/s trees :

Tree Species	Quantity
<i>Pistacia chinensis</i> (Chinese Pistacio)	4

65. Following removal of the *Eucalyptus nicholii* (Narrow leaf peppermint) from Council's nature strip, the nature strip shall be rehabilitated to the satisfaction of Council at no cost to Council.
66. The following noxious and/or undesirable plant species shall be removed from the property prior to completion of the proposed building works. Documentary evidence of compliance with this condition shall be submitted to the Principal Certifying Authority prior to the release of the final Compliance Certificate:

Plant Species

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Cupressocyparis x leylandii 'Leighton's Green' (Leighton Green Cypress)

67. All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

68. The Long Service Levy is to be paid to Council in accordance with the provisions of Section 34 of the Building and Construction Industry Payments Act 1986 prior to the issue of the Construction Certificate.

Note: Required if cost of works exceed \$25,000.00.

69. It is a condition of consent that the applicant, builder or developer or person who does the work on this residential building project arrange the Builders Indemnity Insurance and submit the Certificate of Insurance in accordance with the requirements of Part 6 of the *Home Building Act 1989* to the Council or other Principal Certifying Authority for endorsement of the plans accompanying the Construction Certificate. It is the responsibility of the applicant, builder or developer to arrange the Builder's Indemnity Insurance for residential building work over the value of \$12,000 and to satisfy the Council or other Principal Certifying Authority by the presentation of the necessary Certificate of Insurance so as to comply with the applicable requirements of Part 6 of the *Home Building Act 1989*. The requirements for the Builder's Indemnity Insurance does not apply to commercial or industrial building work or for residential work less than \$12,000, nor to work undertaken by persons holding an Owner/Builder's Permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).
70. The Infrastructure Restorations Fee calculated in accordance with the Council's adopted schedule of Fees and Charges is to be paid to the Council prior to any earthworks or construction commencing. The applicant or builder/developer will be held responsible for and liable for the cost any damage caused to any Council property or for the removal of any waste bin, building materials, sediment, silt, or any other article as a consequence of doing or not doing anything to which this consent relates. "Council Property" includes footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, litter bins, trees, shrubs, lawns mounds, bushland, and similar structures or features on road reserves or any adjacent public place. Council will undertake minor restoration work as a consequence of the work at this site in consideration of the "Infrastructure Restorations Fee" lodged with the Council prior to the release of the Construction Certificate. This undertaking by the Council does not absolve the applicant or Builder/developer of responsibility for ensuring that work or activity at this site does not jeopardise the safety or public using adjacent public areas or of making good or maintaining "Council property" (as defined) during the course of this project.
71. Prior to commencing any construction or subdivision work, the following provisions of the Environmental Planning & Assessment Act, 1979 (the 'Act') are to be complied with:

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- a. A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.
 - b. A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act.
 - c. Council is to be notified in writing, at least two (2) days prior to the intention of commencing buildings works, in accordance with Section 81A(2)(c) of the Act.
 - d. Should the development be certified by a Principal Certifying Authority other than Council, a fee for each Part 4A Certificate is to be paid to Council on lodgement of those Certificates with Council.
72. A contribution is to be paid for the provision, extension or augmentation of community facilities, recreation facilities, open space and administration that will, or are likely to be, required as a consequence of development in the area.

TOTAL CONTRIBUTION FOR THIS DEVELOPMENT OF THIRTY-SEVEN (37) ADDITIONAL DWELLINGS IS CURRENTLY \$772,138.79. The amount of the payment shall be in accordance with the Section 94 charges as at the date of payment. The charges may vary at the time of payment in accordance with Council's Section 94 Contributions Plan to reflect changes in land values, construction costs and the consumer price index.

This contribution shall be paid to Council prior to the release of the Construction Certificate and the amount payable shall be in accordance with the Council's adopted Section 94 Contributions Plan for Residential Development, effective from 30 June 2004, calculated for additional person as follows:

1. Community Facilities	\$1 117.76
2. Park Acquisition and Embellishment Works	\$6 384.75
3. Sportsgrounds Works	\$1 318.32
4. Aquatic / Leisure Centres	\$27.82
5. Traffic and Transport	\$150.28
6. Section 94 Plan Administration	\$100.04

To obtain the total contribution figure the following table of occupancy rates is to be used:

OCCUPANCY RATES FOR DIFFERENT DWELLING SIZES

Small dwelling (under 75 sqm)	1.27 persons
Medium dwelling (75 - under 110 sqm)	1.78 persons
Large dwelling (110 - under 150sqm)	2.56 persons
Very Large dwelling (150sqm or more)	3.48 persons
New Lot	3.48 persons
SEPP (Seniors Living) Dwelling	1.3persons

Engineering

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73. Prior to issue of any Construction Certificate the Applicant must consolidate the existing Torrens lots which will form the development site. Evidence of lot consolidation, in the form of a plan registered with Land and Property Information, must be submitted for approval of the Principal Certifying Authority prior to issue of the Construction Certificate. This condition is imposed to ensure continuous structures will not be placed across separate titles. Note that Ku-ring-gai Council does **not** necessarily need to approve or endorse lot *consolidation* plans.
74. Prior to issue of the Construction Certificate for the related building, driveway and associated footpath levels for the new driveway crossing between the property boundary and road alignment must be obtained from Ku-ring-gai Council. Such levels are only able to be issued by Council under the *Roads Act 1993*. All footpath crossings, laybacks and driveways are to be constructed according to Council's specifications "Construction of Gutter Crossings and Footpath Crossings" or as specified by Council. Specifications are issued with alignment levels after completing the necessary application form at Customer Services and payment of the assessment fee. When completing the request for driveway levels application from Council, the applicant must attach a copy of the relevant Development Application drawing which indicates the position and proposed level of the proposed driveway at the boundary alignment. Failure to submit this information may delay processing.

Approval of this Development Application is for works wholly within the property. DA consent does not imply approval of footpath or driveway levels, materials or location within the road reserve regardless of whether this information is shown on the Development application plans. The grading of such footpaths or driveways outside the property shall comply with Council's standard requirements. The suitability of the grade of such paths or driveways *inside* the property is the sole responsibility of the applicant and the required alignment levels fixed by Council may impact upon these levels. The construction of footpaths and driveways outside the property, in materials other than those approved by Council, is not permitted and Council may require immediate removal of unauthorised installations.

75. Prior to the issue of the Construction Certificate, longitudinal driveway sections are to be prepared by a qualified civil/traffic engineer and be submitted for approval by the Principal Certifying Authority (PCA). These profiles are to be at 1:100 scale along both edges of the proposed driveway, starting from the centreline of the frontage street carriageway to the proposed basement parking slab. The driveway profiles must demonstrate the following:
 - a. That vehicular access can be obtained using grades of 25% (1 in 4) maximum and
 - b. That all changes in grade (transitions) comply with Australian Standard 2890.1 – "Off-street car parking" (refer clause 2.5.3) to prevent the scraping of the underside of vehicles.

If a new driveway crossing is proposed then the longitudinal sections must incorporate the driveway crossing levels as issued by Council upon prior application.

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76. The waste collection area is to be relocated to the street side of the roller door, possibly in visitor space 1. The area is to be designed to accommodate the requisite number of bins in accordance with DCP 40. Amended plans are to be submitted to and approved by the Principal Certifying Authority prior to issue of the Construction Certificate.
77. Prior to issue of the Construction Certificate for the related building the Applicant must submit, for approval by the Principal Certifying Authority, certified parking layout plan(s) to scale showing all aspects of the vehicle access and accommodation arrangements clearly dimensioned. A qualified civil/traffic engineer must review the proposed vehicle access and accommodation layout and provide written certification on the plans that:
- a) All parking space dimensions, driveway and aisle widths, driveway grades, transitions, circulation ramps, blind aisle situations and other trafficked areas comply in full with Australian Standard 2890.1 – 2004 “Off-street car parking”.
 - b) A clear height clearance of 2.5 metres (required under DCP40 for waste collection trucks) is provided over the designated garbage collection truck manoeuvring areas within the basement.
 - c) No doors or gates are provided in the access driveways to the basement carpark which would prevent unrestricted access for internal garbage collection at any time from the basement garbage storage and collection area.
 - d) Traffic lights will be provided at each end of the one way entry ramp as recommended by Colston Budd Hunt & Kafes in their report dated April 2005.

The vehicle access and accommodation layout is to be constructed in accordance with the certified plans.

78. Prior to issue of any Construction Certificate and prior to commencement of any works that may be subject to erosion, the applicant must submit, for approval by the Principal Certifying Authority, a Soil and Erosion Control Plan prepared in accordance with the Landcom document “*Managing Urban Stormwater – Soils and Construction, Volume 1*” (2004). A qualified and experienced civil/environmental engineer shall prepare this plan in accordance with the above guidelines and section 8.2.1 of Councils Water Management Development Control Plan 47.
79. Prior to issue of the Construction Certificate for the related building the Applicant must submit, for approval by the Principal Certifying Authority, scaled construction plans and specifications in relation to the stormwater management and disposal system for the development. The plan(s) must include the following detail:
- Exact locations and reduced level of discharge point(s) to the public drainage system.
 - Full layout of the property drainage system components, including but not limited to (as required) gutters, downpipes, spreaders, pits, swales, kerbs, cut-off and intercepting drainage structures, subsoil drainage, flushing facilities and all ancillary stormwater plumbing - all designed to carry for the 235mm/hour rainfall intensity for a duration of five (5) minutes (1:50 year storm recurrence).

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- Location(s), dimensions and specifications for the required rainwater storage and reuse tanks and systems. Measures to prevent mosquito breeding and other issues.
- Specifications for reticulated pumping facilities (including pump type and manufacturer specifications) and ancillary plumbing/holding facilities/first flush to fully utilise rainwater in accordance with the Ku-ring-gai Council Development Control Plan 47.
- Details of the required **on-site detention** tanks required under Ku-ring-gai Council Water Management DCP 47 including dimensions, materials, locations, orifice and discharge control pit details as required (refer chapter 6 and appendices 2, 3 and 5 of DCP 47 for volume, PSD and design requirements).
- The required basement stormwater pump-out system to cater for driveway runoff and subsoil drainage (refer appendix 7.1.1 of Development Control Plan 47 for design).

The above construction drawings and specifications are to be prepared by a qualified and experienced civil/hydraulic engineer in accordance with Councils Water Management Development Control Plan 47, Australian Standards and 3500.3 - *Plumbing and Drainage Code* and the BCA. The plans may be generally based on Stormwater Management Plans by Harris Page Associates dated 5 October 2005, submitted for Development Application approval, which are to be revised/advanced as necessary for construction issue purposes.

80. Prior to issue of any Construction Certificate the Applicant must contact Energy Australia regarding power supply for the subject development. A written response detailing the full requirements of Energy Australia (including any need for underground cabling, substations or similar within or in the vicinity the development) shall be submitted to the Principal Certifying Authority for approval prior to issue of the Construction Certificate. Any structures or other requirements of Energy Australia shall be reflected on the plans issued with the Construction Certificate, to the satisfaction of the Principal Certifying Authority and Energy Australia. The requirements of Energy Australia must be met in full prior to issue of the Occupation Certificate.
81. Prior to issue of any Construction Certificate the applicant must make contact with all relevant utility providers whose services will be impacted upon by the approved development. A written copy of the requirements of each provider, as determined necessary by the Principal Certifying Authority, must be obtained. All utility services or appropriate conduits for the same, including electricity, gas, telephone, water and sewerage must be provided by the developer in accordance with the specifications of those supply authorities.

Landscape

82. The submitted landscape plan LP01 (Landscape Plan) Rev M & PP&WS (planting plan and water strategy) 02 Rev D prepared by McGregor Partners and dated September 2005 is not approved. An amended, detailed plan of the proposed landscape works for the site shall be prepared by a Landscape Architect or qualified Landscape Designer. The plan must be submitted to, and approved by the Principal Certifying Authority prior to the release of the Construction Certificate. The landscape works shall be carried out and installed in general accordance with the above landscape plan/s. The following amendments to these plans shall apply:

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- The proposed planting of *Clivea miniata* on the Lorne Ave nature strip is to be deleted and the nature strip maintained as a grassed/turf area.
- The proposed planting of 334 *Callistemon citrinus* (Bottlebrush) is to be reduced in number by approximately 50% so that planting has a minimum of 1.5m spacing.
- The proposed planting of 234 *Callistemon citrinus* (Bottlebrush) is to be reduced in number by approximately 50% so that planting has a minimum of 1.5m spacing.

83. A CASH BOND/BANK GUARANTEE of \$10 000.00 shall be lodged with Council as a Landscape Establishment Bond prior to release of the Construction Certificate to ensure that the landscape works are installed and maintained in accordance with the approved landscape plan/s and other landscape conditions.

Fifty percent (50%) of this bond will be refunded upon verification by Council that the landscape works as approved have been satisfactorily installed. The balance of the bond will be refunded 3 years after the initial satisfactory inspection, where landscape works have been satisfactorily established and maintained.

It is the responsibility of the applicant to notify Council in relation to the refunding of the bond at the end of the 3 year period. Where a change of ownership occurs during this period it is the responsibility of the applicant to make all arrangements regarding transference of the bond and to notify Council of such.

84. A CASH BOND/BANK GUARANTEE of \$13 500.00 shall be lodged with Council prior to the release of the Construction Certificate to ensure that the following trees are maintained in the same condition as found prior to commencement site development work.

The bond will be returned following issue of the Occupation Certificate, provided the trees are undamaged.

In the event that any specified trees are found damaged, dying or dead as a result of any negligence by the applicant or its agent, or as a result of the construction works at any time during the construction period, Council will have the option to demand the whole or part therefore of the bond.

Tree/Location	Bond Value
#10 <i>Magnolia grandiflora</i> (Bull Bay Magnolia) Adjacent to northern (rear) site boundary	\$1 000.00
#18 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	\$2 000.00
#19 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	\$2 000.00

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#20 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	\$2 000.00
#21 <i>Brachychiton acerifolius</i> (Illawarra Flame Tree) Adjacent to western (side) site boundary	\$1 000.00
#24 <i>Ficus benjamina</i> (Weeping Fig) Adjacent to western (side) site boundary in neighbouring property	\$3 000.00
#26 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	\$1 000.00
#27 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	\$1 000.00
#28 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	\$500.00

Special

85. An acoustic report shall be prepared by a suitably qualified person detailing the devices to be fitted and ongoing maintenance required, in relation to the automatic door to the garage, air-conditioning and car park ventilation system to ensure their operation does not result in the emission of noise in excess of 5dB(A) above background measured at the nearest residential property boundary. The report shall be provided for approval with the Construction Certificate and shall include recommendations with regard to the ongoing maintenance of the noise attenuating devices. Certification of compliance with the recommendations contained in the report shall be submitted to the Principal Certifying Authority prior to the release of the final compliance certificate or occupation certificate. The burden of ongoing maintenance of these noise attenuating measures shall remain with the Managing body of the development.
86. Any exhaust ventilation from the car parks is to be ventilated away from the property boundaries of the adjoining dwellings, and in accordance with the provisions of AS1668.1. Details demonstrating compliance are to be provided with the Construction Certificate (*Reason: To preserve community health and ensure compliance with acceptable standards*).
87. Four (4) of the proposed apartments are to be designed with accessible features for disabled persons, and to incorporate level entries and wider doorways and corridors, slip resistant surfaces, reachable power points, disabled toilet, and lever door handles and taps; such features to be designed generally in accordance with Australian Standards 1428.1 and 4299. Details demonstrating compliance are to be submitted with the Construction Certificate. (*Reason: To ensure equity of access and availability of accommodation in the future for an ageing population*).

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88. All plant and equipment (including but not limited to air conditioning equipment) is to be located within the basement or other areas of the building and is not to be located on the roof. Details demonstrating compliance are to be submitted with the Construction Certificate application. (*Reason: Minimise impact on surrounding properties, improved visual appearance and amenity for locality*).
89. To ensure privacy and amenity to the adjoining properties at Nos 8 Wallaroo Close, 23 and 25 Lorne Avenue and residents the following amendments shall be made to both the eastern elevations:
- Privacy screens measuring 1.8 metres high shall be affixed to the eastern elevation of the Level 5 terraces of units nos A-5 09 and D-5 40 as notated in red on approved Plan no. DA-04039-04 Rev. no. 2.
 - Privacy screens measuring 1.8 metres high shall be affixed to the eastern elevation of the Level 1 - 4 balconies of units nos D2 35, 37 and 39 as notated in red on approved Plans nos DA-04039-03 Rev. no. 3 and DA-04039-04 Rev. no. 2.
 - The sun shading louvres and aluminium louvres proposed for **all** fenestration on Levels 1 to 5 on the eastern elevation (referenced as "SL" and "ALV" on approved Plan no. DA-04039-05 Rev. 2 shall serve to ensure that privacy impacts are reduced (i.e. restricting overlooking to the east) and offer functional sun shading benefits to the affected units.
 - Terrace areas as noted in red on Level 5 shall be non-trafficable for general use and limited access shall only be allowed for maintenance purposes.
 - To ensure the amenity of Nos 23 and 25 Lorne Avenue is maintained an acoustic fence shall be constructed along the entire common boundary with the development site. The fence shall be in accordance with the driveway alignment notated in red on approved plan DA-04039-03 Rev. 3. The fence shall be 1.2 metres high in the front setback area but will step up in height to 1.8 metres approximately 15 metres from the street boundary.
 - The side bedroom and bathroom windows in the gaps between buildings A, B, C and D shall be designed as translucent partially opening hopper or casement windows, to avoid potential privacy problems while allowing natural ventilation.
 - Screening shall be provided to the study and living/dining windows in apartments C1 - 19, C1 - 22 and C1 25/28, to provide the opportunity for the occupants of these apartments to screen potential views from the bedroom balconies in apartments C 3-21 etc.
 - The depth of the terrace areas to the ground floor (Level 1) units fronting the Lorne Avenue frontage shall be reduced in width by 3 metres as notated in red on the approved Plan No. DA-04039-01. This will ensure adequate common deep soil planting area is maintained within the front setback area.
 - To ensure privacy between the terrace areas of the units on Level 5 is maintained screens of 1.8 metres high shall be erected along the southern elevation of unit nos D-5 40 and C-5 31.

Details demonstrating compliance with the condition shall be submitted to the PCA prior to the release of the Construction Certificate.

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90. The following are required details and must be submitted to the Principal Certifying Authority *prior to issue of the Construction Certificate*. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.
- Details prepared by a practicing structural engineer for all or any reinforced concrete, structural steel or timber framing.
 - Retaining walls and associated drainage.
 - Wet area waterproofing details complying with the Building Code of Australia.
 - Mechanical ventilation details complying with Australian Standard 1668-1993 Mechanical Ventilation & Air-conditioning.
 - Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
 - Stormwater disposal details complying with Council's Stormwater Management Manual and/or other conditions of this consent.

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

91. Prior to the commencement of any work, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder who intends to carry out the approved works.

Landscaping

92. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s is fenced off at the specified radius from the trunk/s to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

Tree/Location	Radius in Metres
#10 <i>Magnolia grandiflora</i> (Bull Bay Magnolia) Adjacent to northern (rear) site boundary	3.0m
#18 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#19 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#20 <i>Casuarina cunninghamiana</i> (River Sheoak) Adjacent to western (side) site boundary	4.0m
#21 <i>Brachychiton acerifolius</i> (Illawarra Flame Tree) Adjacent to western (side) site boundary	4.0m

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#24 <i>Ficus benjamina</i> (Weeping Fig) Adjacent to western (side) site boundary in neighbouring property	5.0m
#26 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	5.0m
#27 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	5.0m
#28 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	1.0m

93. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s excluding that area of the pedestrian pathway shall be fenced off for the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site:

Tree/Location	Radius From Trunk
#26 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	3.0m
#27 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	3.0m
#28 <i>Pistacia chinensis</i> (Chinese Pistacio) Lorne Ave nature strip	2.5m

94. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
95. Prior to works commencing tree protection signage is to be attached to each tree Protection Zone and displayed in a prominent position and the sign repeated at 10m intervals or closer where the fence changes direction. Each sign shall advise in a clearly legible form, the following minimum information:
1. Tree Protection Zone
 2. This fence has been installed to prevent damage to the trees and their growing environment both above and below ground, and access is restricted.
 3. If encroachment or incursion into this Tree Protection Zone is deemed to be essential the consulting Arborist should be informed prior to the undertaking of such works
 4. Name, address, and telephone number of the developer/principal certifying authority.

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96. Prior to works commencing the area of the Tree Protection Zone is to be mulched to a depth of 100mm with composted organic material being 75% Eucalyptus leaf litter and 25% wood, The depth of mulch and type as indicated, to be maintained for the duration of the project & Principal Certifying Authority.
97. Upon completion of the installation of the required tree protection measures you are required to arrange for an inspection of the site by the Principal Certifying Authority to verify that tree protection measures comply with all relevant conditions. Following the carrying out of a satisfactory inspection and subject to the payment of all relevant monies and compliance with any other conditions of approval, work may commence.

Engineering

98. Prior to the commencement of bulk excavation works on site, the applicant is to submit the results of the geotechnical investigation comprising cored boreholes. The recommendations of the report in relation to vibration monitoring and excavation methods and support are to be implemented during the course of the works. The report is to be submitted to the Principal Certifying Authority and approved.
99. Prior to the commencement of **any excavation works** on site the Applicant must submit, for approval by the Principal Certifying Authority (with a copy forwarded to Council) a full dilapidation report on the visible (including colour photos) and structural condition of all adjacent structures potentially influenced by the works. The report must be completed by an independent consulting structural/geotechnical engineer as determined necessary by that professional based on the excavation depth, offset from boundaries and the founding material. It is expected that structures at 23, 25 and 31 Lorne Avenue and 8 Wallaroo Close will require survey. The dilapidation report must be verified by all relevant stakeholders. Upon submitting a copy of the dilapidation report to Council, a written acknowledgment from Council development engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site. Where the consulting structural/geotechnical engineer is of the opinion that no dilapidation reports are required, then certification to this effect must be provided in lieu.
100. Prior to the commencement of **any** works on site the applicant must submit, for review by Council Engineers, a *Construction and Traffic Management Plan*. The following matters must be specifically addressed in the Plan:
 1. **A plan view of the entire site and frontage roadways indicating:**
 - Dedicated construction site entrances and exits, controlled by a certified traffic controller, to safely manage pedestrians and construction related vehicles in the frontage roadways and footpaths;
 - No construction vehicle access is to be obtained via the eastern driveway.
 - Turning areas within the site for construction and spoil removal vehicles, allowing a forward egress for all construction vehicles on the site;
 - The locations of proposed Work Zones in the frontage roadways;

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- Location of any proposed crane standing areas;
- A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries;
- Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected;
- The provision of an on-site parking area for employees, tradesperson and construction vehicles as far as possible;

2. Traffic Control Plan(s) for the site

- All traffic control devices installed in the road reserve must be in accordance with the RTA publication “Traffic Control Worksite Manual” and be designed by a person licensed to do so (minimum RTA ‘red card’ qualification – to be verified on the plan). The main stages of the development requiring specific construction management measures are to be identified and specific traffic control measures identified for each;
- Approval is to be obtained from Ku-ring-gai Council for any temporary road closures or crane use from public property.

3. A detailed description and route map of the proposed route for vehicles involved in spoil removal, material delivery and machine floatage must be provided.

- Light traffic roads and those subject to a load or height limit must be avoided at all times.
- A copy of this route is to be made available to all contractors, and shall be clearly depicted at a location within the site.

In addition, the plan must address:

- A schedule of site inductions to be held on regular occasions and as determined necessary to ensure all new employees are aware of the construction management obligations. These must specify that construction-related vehicles are to comply with the approved requirements.
- For those construction personnel that drive to the site, the Applicant shall provide on-site parking so that their personnel’s vehicles do not impact on the current on-street parking amenity in the area.

The *Construction and Traffic Management Plan* shall be prepared by a suitably qualified and experienced traffic engineering consultant and be certified by this person as being in accordance with the requirements of the abovementioned documents and the requirements of this condition. The construction management measures contained in the approved plan shall be implemented in accordance with the plan prior to the commencement of, and during, works on-site including excavation. As the plan has a direct impact on the local road network, the plan shall be submitted to and reviewed by Council, attention Development Engineer. A written acknowledgment from Council engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site. A fee is payable for the assessment of the plan by Ku-ring-gai Council Engineers. Allow sufficient time (3 weeks) for review by Council.

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101. If a Works Zone is proposed, the Applicant must make a written application to the Ku-ring-gai Local Traffic Committee to install the 'Work Zone'. The application must be made at least 15 days prior to the commencement of any works on site approved under this consent. Works Zones are provided specifically for the set down and pick up of materials and not for the parking of private vehicles associated with the site. Works Zones will generally not be approved where there is sufficient space on-site for the setting down and picking up of goods being taken to or from a construction site. If the Works Zone is approved by the Committee, the Applicant must obtain a written copy of the related resolution from the Ku-ring-gai Local Traffic Committee and submit a copy of this to the Principal Certifying Authority for approval prior to commencement of any works on the site. Where approval of the 'Work Zone' is resolved by the Committee, the necessary 'Work Zone' signage shall be installed (at the cost of the Applicant) and the adopted fee paid prior to commencement of any works on the site. Further, at the expiration of the Works Zone approval, the Applicant is required to remove the Works Zone signs and reinstate any previous signs, all at the Applicant's cost.
102. Prior to the commencement of any works on site the applicant shall submit to Ku-ring-gai Council a full dilapidation report on the visible and structural condition (**including a colour photographic record**) of the following public infrastructure:

- a) Lorne Avenue road reserve including kerb and gutters.

The report must be completed by a consulting civil engineer or equivalent. Particular attention must be paid to accurately recording (both via photo and in written format) *existing* damaged areas on the aforementioned infrastructure so that Council is fully informed when assessing any damage to public infrastructure caused as a result of the development.

The developer may be held liable to any recent damage to public infrastructure in the vicinity of the site, where such damage is not accurately recorded under the requirements of this condition prior to the commencement of works.

103. If the use of temporary rock anchors extending into the road reserve is proposed, then approval must be obtained from Council and/or the Roads and Traffic Authority in accordance with Section 138 of the Roads Act 1993. The Applicant is to submit details of all the work that is to be considered, and the works are not to commence until approval has been granted. The designs are to include details of the following:
- How the temporary rock anchors will be left in a way that they will not harm or interfere with any future excavation in the public road
 - That the locations of the rock anchors are registered with Dial Before You Dig
 - That approval of all utility authorities likely to use the public road has been obtained. All temporary rock anchors are located outside the allocations for the various utilities as adopted by the Streets Opening Conference.
 - That any remaining de-stressed rock anchors are sufficiently isolated from the structure that they cannot damage the structure if pulled during future excavations or work in the public road.

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- That signs will be placed and maintained on the building stating that de-stressed rock anchors remain in the public road and include a contact number for the building manager. The signs are to be at least 600mm x 450mm with lettering on the signs is to be no less than 75mm high. The signs are to be at not more than 60m spacing. At least one sign must be visible from all locations on the footpath outside the property. The wording on the signs is to be submitted to Council's Director Technical Services for approval before any signs are installed.

Permanent rock anchors are not to be used where any part of the anchor extends outside the development site into public areas or road reserves.

All works in the public road are to be carried out in accordance with the Conditions of Construction issued with any approval of works granted under Section 138 of the Roads Act 1993.

104. Approval is to be obtained from the property owner for any anchors proposed beneath adjoining private property. If such approval cannot be obtained, then the excavated faces are to be shored or propped in accordance with the recommendations of the geotechnical and structural engineers.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A SUBDIVISION CERTIFICATE

105. The subdivision certificate must not be issued until a *final* Occupation Certificate is issued for the development by the Principal Certifying Authority. This condition is imposed to ensure that all development works related to the subdivision are completed to an acceptable standard prior to transfer of responsibility for the site and development.
106. Prior to release of the linen plan/issue of the subdivision certificate, the Section 73 Sydney Water compliance certificate **which refers to the subdivision application** must be obtained and submitted to the Council.
107. Prior issue of the subdivision certificate the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the on-site stormwater detention facilities on site. The terms of the instruments are to be generally in accordance with the Council's "terms of Section 88B instrument for protection of on-site detention facilities" (refer to appendices of Ku-ring-gai Council Water Management DCP 47) and to the satisfaction of Council. The location of the on-site detention facilities for all dwellings is to be denoted on the final plan of subdivision.
108. The applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site retention and re-use facilities. The terms of the instruments are to be generally in accordance with the Council's "terms of Section 88B instrument for protection of retention and re-use facilities" (refer to appendices of Ku-ring-gai Council Water

Item 3

Management DCP 47) and to the satisfaction of Council. The location of the retention and re-use facilities for all dwellings are to be denoted on the final plan of subdivision.

109. An easement for waste collection is to be created under Section 88B of the Conveyancing Act 1919. This is to permit legal access for Council, Council's contractors and their vehicles over the subject property for the purpose of collecting waste from the property. The terms of the easement are to be generally in accordance with Council's draft terms for an easement for waste collection and shall be to the satisfaction of Ku-ring-gai Council.
110. For endorsement of the subdivision certificate the Applicant must submit an original instrument under Section 88B of the Conveyancing Act with the plan of subdivision, plus six (6) copies. This is to create any required easements, rights-of-carriageway, positive covenants, restrictions-on-use or other burdens/benefits as may be required. Ku-ring-gai Council must be named as the authority whose consent is required to release, vary or modify the same.
111. The applicant shall create all burdens including but not limited to drainage easements, easements for services and rights-of-carriageway, as required. A registered surveyor is to certify, prior to release of the linen plan/issue of the subdivision certificate, that all existing interallotment drainage lines, services and/or driveways are fully contained within the proposed burdens and/or that future provision of such are fully covered by the proposed burdens. Alternatively, where the surveyor is of the opinion that no interallotment easements or rights-of-carriageway are required, then certification to this effect must be submitted to the Principal Certifying Authority (PCA).
112. For issue of the subdivision certificate, the Applicant shall submit an original plan of subdivision plus six (6) copies suitable for endorsement by the consent authority. The following details **must** be submitted with the plan of Subdivision and its six copies, where Council is the consent authority:
 - a) The endorsement fee current at the time of lodgment.
 - b) The 88B Instrument plus six (6) copies.
 - c) A copy of the final Occupation Certificate for this DA.
 - d) The Section 73 (Sydney Water) Compliance Certificate for the subdivision.

All parking spaces and all areas of common property, including visitor car parking spaces and on-site retention facilities, which are to be common property, must be included on the final plans of strata subdivision. Where Council is the consent authority, officers will check the consent conditions on the subdivision. Failure to submit the required information will delay endorsement of the linen plan, and may require payment of rechecking fees. **Plans of subdivision and copies must not be folded. Council will not accept bonds in lieu of completing subdivision works. If the certifying authority is not Council, then a copy of all of the above must be provided to Council.**

CONDITIONS TO BE COMPLIED WITH PRIOR TO OCCUPATION

Item 3

113. Prior to the release of any occupation certificate, a compliance certificate must be obtained from an accredited certifier, certifying that the building works for the building to be occupied comply with the plans and specifications approved by this development consent; and any construction certificate associated with this consent for the buildings to be occupied. If the PCA is not the Council, then this compliance certificate must be submitted to the Council at the same time as the occupation certificate is submitted to the Council in accordance with Clause 151(2) of the E P & A Act regulations.

Engineering

114. Prior to issue of the Occupation Certificate, the Principal Certifying Authority (where not Council) must provide Ku-ring-gai Council with a signed declaration that the following works in the road reserve have been completed in full:

- New concrete driveway crossing in accordance with levels and specifications issued by Council.
- Completion of drainage works in road reserve.
- Removal of **all** redundant driveway crossings and kerb laybacks (or sections thereof) and reinstatement of these areas to footpath, turfed verge and upright kerb and gutter. (Reinstatement works to match surrounding adjacent infrastructure with respect to integration of levels and materials).
- Full repair and resealing of any road surface damaged during construction.
- Full repair of any footpath damaged during construction.
- Full replacement of damaged sections of grass verge with a non-friable turf of native variety to match existing.

All works must be completed in accordance with the *General Specification for the Construction of Road and Drainage Works in Ku-ring-gai Council*, dated November 2004. The Occupation Certificate must not be issued until all damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council. Repair works shall be at no cost to Council.

115. Prior to issue of the Occupation Certificate, the following must be provided to Council (attention Development Engineer):
- a) A copy of the approved Construction Certificate stormwater detention/retention design for the site, and
 - b) A copy of any works-as-executed drawings required under this consent
 - c) The Engineer's certification of the as-built system.

This condition is required so Council may maintain its database of as-constructed on-site stormwater detention systems, and applies particularly where the appointed Principal Certifying Authority (PCA) is not Ku-ring-gai Council.

Item 3

116. Prior to issue of the Occupation Certificate, the applicant must submit certification from a suitably qualified and experienced traffic/civil engineer to the Principal Certifying Authority. This certification must be based on a site inspection of the constructed vehicle access and accommodation areas, with dimensions measurements as necessary, and must make specific reference to the following:
- a) That the as-constructed carpark complies with the approved Construction Certificate plans,
 - b) That traffic lights are provided at each end of the one way entry ramp as recommended by Colston Budd Hunt & Kafes in their report dated April 2005.
 - c) That the completed vehicle access and accommodation arrangements comply in full with Australian Standard 2890.1 – 2004 “Off-Street car parking”.
 - d) That finished driveway gradients and transitions will not result in the scraping of the underside of cars.
 - e) That no doors, gates, grilles or other structures have been provided in the access driveways to the basement carpark, which would prevent unrestricted access for internal garbage collection from the basement garbage storage and collection area.
 - f) That the vehicular headroom requirements of:
 - Australian Standard 2890.1 - “Off-street car parking”,
 - 2.44m height clearance for waste collection trucks (refer DCP 40) are met from the public street into and within the applicable areas of the basement carpark.
117. Prior to issue of the Occupation Certificate, a qualified and experienced consulting civil/hydraulic engineer must undertake a site inspection of the completed stormwater drainage and management system. The engineer is to provide written certification (based on the site inspection) for the approval of the Principal Certifying Authority, prior to issue of the Occupation Certificate, which makes **specific reference** to all of the following:
- a) That the stormwater drainage works have been satisfactorily completed in accordance with the approved Construction Certificate drainage plans.
 - b) That the minimum retention and on-site detention storage volume requirements of Ku-ring-gai Council Water Management DCP 47, have been achieved in full.
 - c) That retained water is connected and available for uses including all toilet flushing, cold laundry and garden irrigation.
 - d) That basement and subsoil areas are able to drain via a pump/sump system installed in accordance with AS3500.3 and appendix 7.1.1 of Ku-ring-gai Council Water Management DCP 47.
 - e) That all pits potentially accessible by children are secured.
 - f) That components of the new drainage system have been installed by a licensed plumbing contractor in accordance with the Plumbing and Drainage code AS3500.3 (2003) and the BCA, and
 - g) All enclosed floor areas, including habitable and garage floor levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices.

Item 3

The following certification sheets **must be accurately completed and attached** to the certification:

- Rainwater retention certification sheet contained at appendix 13 of Water Management DCP 47
- On-site detention certification sheet contained at appendix 4 of Water Management DCP 47.

118. Prior to issue of an Occupation Certificate, the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.
119. Prior to issue of the Occupation Certificate a registered surveyor must provide a Works-as-Executed (WAE) survey of the completed stormwater drainage and management systems. The WAE plan(s) must be submitted to the Principal Certifying Authority for approval prior to issue of the Occupation Certificate. The WAE survey must indicate:
- As built (reduced) surface and invert levels for all drainage pits.
 - Gradients of drainage lines, materials and dimensions.
 - As built (reduced) level(s) at the approved point of discharge to the public drainage system.
 - As built location and internal dimensions of all detention and retention structures on the property (in plan view) and horizontal distances to nearest adjacent boundaries and structures on site.
 - The achieved storage volumes of the installed retention and detention storages and derivative calculations.
 - As built locations of all access pits and grates in the detention and retention system(s), including dimensions.
 - The size of the orifice or control fitted to any on-site detention system.
 - Dimensions of the discharge control pit and access grates.
 - The maximum depth of storage possible over the outlet control.
 - Top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system.

The WAE plan(s) must show the as-built details above in comparison to those shown on the drainage plans approved with the Construction Certificate prior to commencement of works. All relevant levels and details indicated must be marked **in red** on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.

120. Prior to issue of the Occupation Certificate, a maintenance regime shall be prepared for the basement/subsoil stormwater pump-out system and submitted to Principal Certifying Authority. The regime shall specify that the system is to be regularly inspected and checked by qualified practitioners.
121. Prior to issue of the Occupation Certificate, a suitably qualified and consulting geotechnical engineer is to provide certification to the Principal Certifying Authority that excavation, inspection, monitoring and construction for the basement levels have been carried out:

Item 3

- a) According the relevant Australian Standards and guidelines, and
 - b) According to the recommendations of the Geotechnical report and subsequent geotechnical inspections undertaken for the development, and
 - c) **In a manner that ensures that the structural amenity of adjoining structures and property is fully maintained.**
122. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring as specified in the Geotechnical Report by Douglas Partners, and the professional geotechnical input over the course of the works, must be compiled in report format and be submitted to the Principal Certifying Authority for approval.
123. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate (and at the completion of the works) the Applicant shall submit to the Principal Certifying Authority (PCA) a follow up dilapidation report on the visible and structural condition of the existing structures originally assessed, which may include:
- a. Lorne Avenue road reserve;
 - b. 23, 25 and 31 Lorne Avenue;
 - c. 8 Wallaroo Close.

The Report must be completed by a practicing consulting structural engineer and be submitted for Council records prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate. If a structure has been demolished in the meantime under a separate approval, then no follow-up survey is required.

Landscaping

124. The landscape works, shall be installed in accordance with the approved plan/s and/ or conditions of consent, be completed prior to release of Occupation Certificate and be maintained in a healthy and vigorous condition at all times.
125. The Principal Certifying Authority shall ensure that the landscape works, have been installed correctly, consistent the approved landscape plan(s), specification and the conditions of consent prior to release of the Occupation Certificate

Special

126. The acoustic report provided for approval with the Construction Certificate and shall include recommendations with regard to the ongoing maintenance of the noise attenuating devices. Certification of compliance with these recommendations contained in the report shall be submitted to the Principal Certifying Authority prior to the release of the final compliance certificate or occupation certificate. The burden of ongoing maintenance of these noise attenuating measures shall remain with the Managing body of the development.

BUILDING CONDITIONS

Item 3

127. To ensure compliance with this determination the building shall be set out by a Registered Surveyor and the Survey Report shall be lodged with the Principal Certifying Authority prior to the external wall construction proceeding above floor level.
128. For the purpose of safety and convenience a balustrade of 1.0 metre minimum height shall be provided to any landing, verandah, balcony or stairway of a height exceeding 1.0 metre above finished ground level. The design may consist of vertical or horizontal bars but shall not have any opening exceeding 125mm. For floors more than 4.0 metres above the ground, any horizontal elements within the balustrade or other barrier between 150mm and 760mm above the floor must not facilitate climbing.

129. For the purpose of safe ingress and egress the stairs are to be constructed within the following dimensions:

Risers:	Maximum 190mm	Minimum 115mm
Going (Treads):	Maximum 355mm	Minimum 240mm

Note: Dimensions must also comply with limitations of two (2) Risers and one (1) going equalling a maximum 700mm or minimum 550mm. The Risers and Goings shall be uniform throughout the length of the stairway.

130. Termite protection which will provide whole of building protection in accordance with Australian Standard 3660 - *"Protection of Buildings from Subterranean Termites"* is to be provided.

Council has a non chemical policy for termite control but will consider proposals involving physical barriers in combination with approved chemical systems. Handspraying is prohibited.

Where a monolithic slab is used as part of a termite barrier system, the slab shall be constructed in accordance with Australian Standard 2870.1 or as designed by a structural engineer but in either case shall be vibrated to achieve maximum compaction.

To ensure compliance with this condition, a Compliance Certificate or documentary evidence from a suitably qualified person is to be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.

131. The following are required details and must be submitted to the Council on completion of the works. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.
- a. Wet area waterproofing details complying with the Building Code of Australia.
 - b. Mechanical ventilation details complying with Australian Standard 1684 Mechanical Ventilation & Air-conditioning.

Item 3

- c. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
- d. Storm-water disposal details complying with Council's Storm-water Management Manual and/or other conditions of this consent.
- e. A Compliance Certificate from a suitably qualified person that the residential flat buildings complies with the relevant deemed to satisfy provisions of the Building Code of Australia.
- f. Waterproofing of walls/floors below ground level to prevent the entry of water into the building.
- g. A Registered Surveyor's Report on completion of footings but before external walls are above floor level verifying compliance with this consent.

C Swanepoel
Executive Assessment Officer

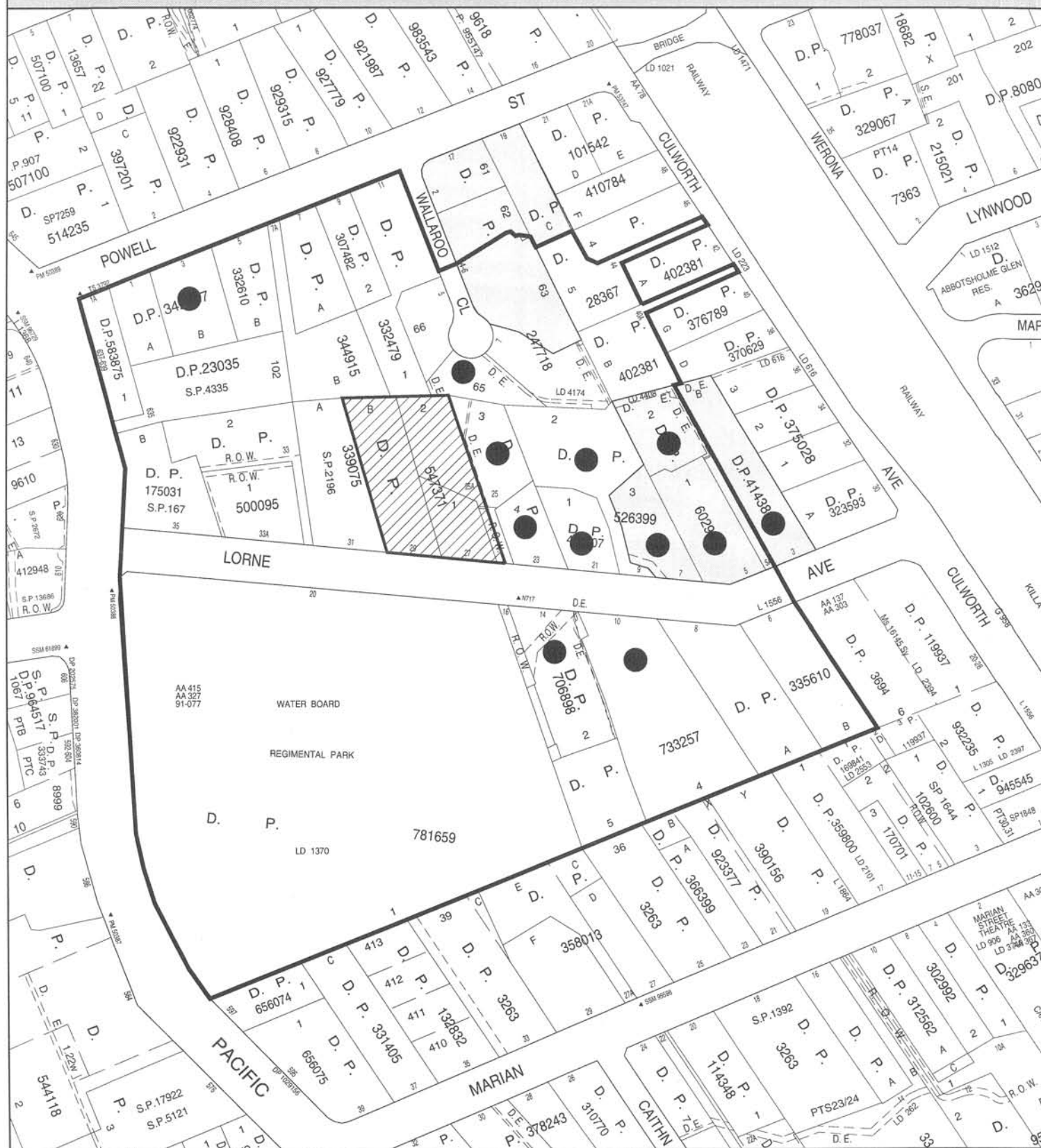
R Kinninmont
Team Leader
Development Assessment - South

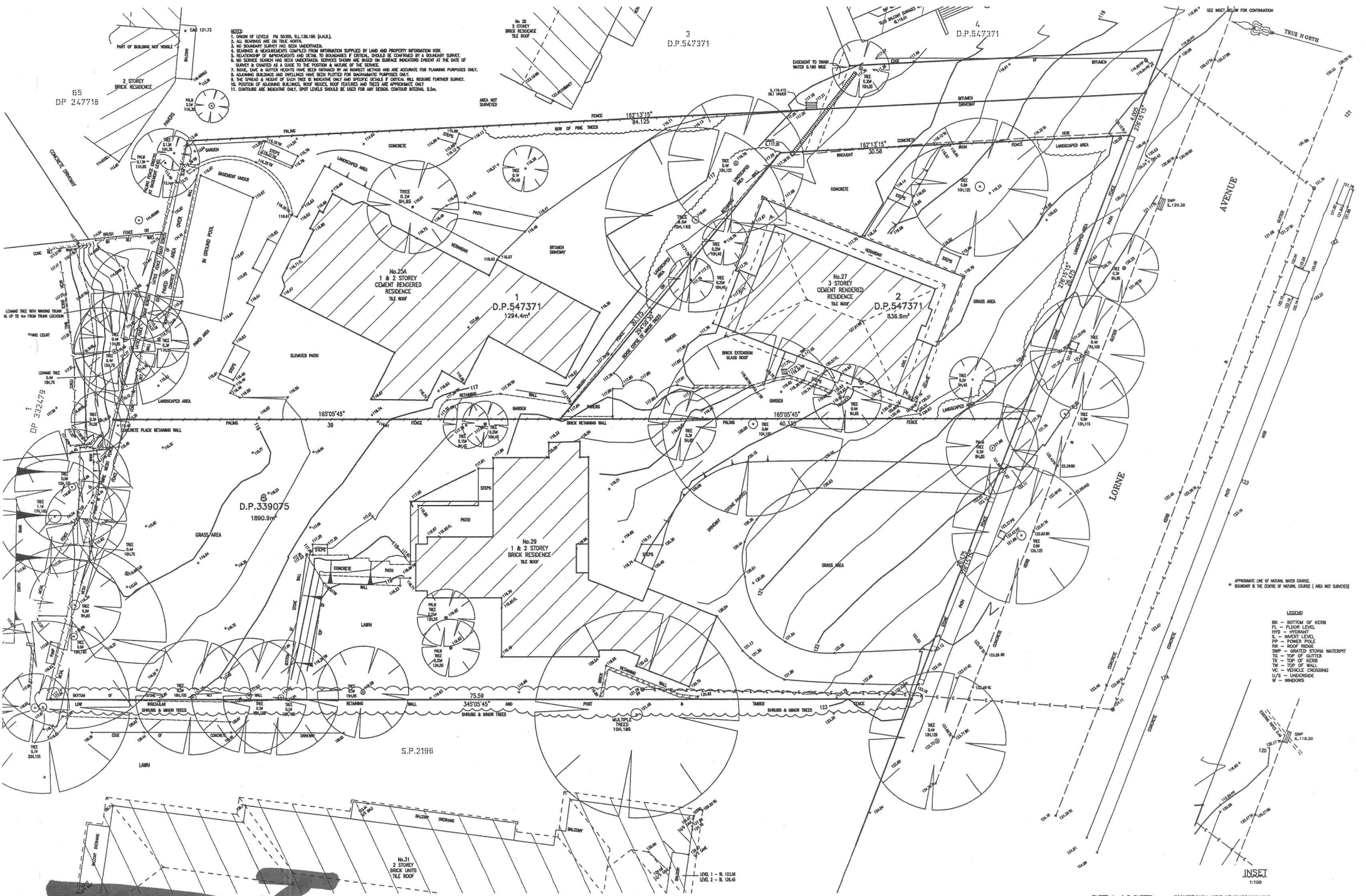
M Prendergast
Manager
Development Assessment Services

M Miocic
Director
Development & Regulation

Attachments:

- Locality sketch - 557979**
- Survey plan - 557981**
- Zoning extract – 557984**
- Site & roof plan - 557986**
- Elevations - 557987**
- Sections - 557988**
- Landscape plans - 557989**
- Shadow diagrams - 557992**
- Confidential floor plans**

DEVELOPMENT APPLICATION No 0425/05



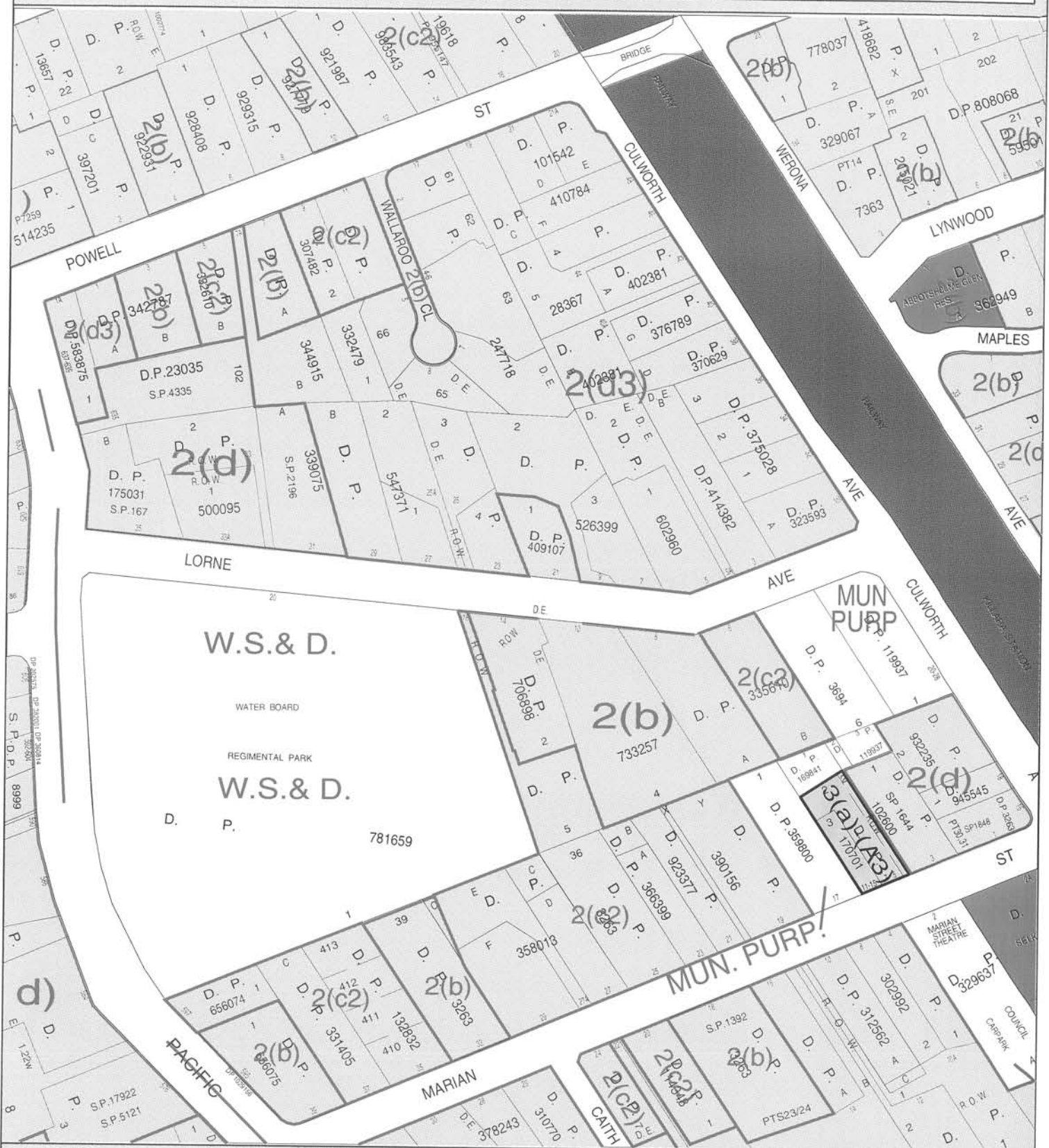
PLAN SHOWING DETAIL AND LEVELS OVER
 LOTS 1 AND 2 IN D.P.547371 AND LOT B IN D.P.339075
 No's. 25A, 27 & 29 LORNE AVENUE
 KILLARA

DATE	BY	REVISION	ISSUE
17.02.05	IS	ADDITIONAL DETAIL AT REAR AND ELEV. No.31	B
21.01.05	KR	ADJOINING BLDGS, TREES, ELEVATIONS ADDED	A

SHEET 1 of 3 SHEETS		DATE 05/11/04	
CONSULTING SURVEYORS DENNY LINKER & CO. SYDNEY & MELBOURNE		ISSUE B	
516 PLYMOUTH STREET SURREY HILLS N.S.W. 2010		SHEET AD	
PH (02) 9212 4615 FAX (02) 9212 5254		DRAWN AD/CZ	
REV. NO. 04/01/04		DWG. NO. 04/01/04	

Zoning Extract

25a, 27 & 29 Lorne Ave KILLARA NSW DA 425/05



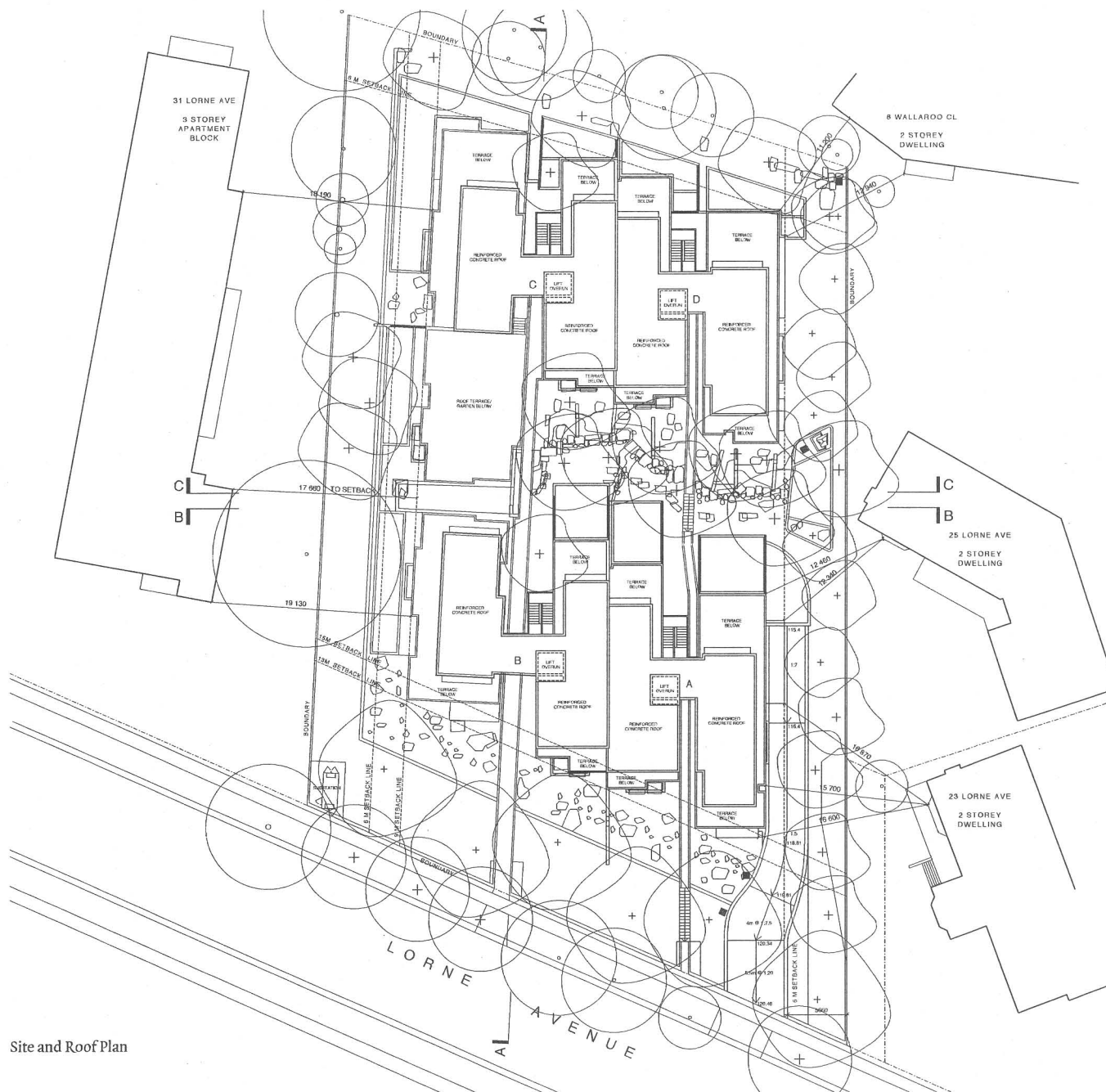
3(a)	BUSINESS 3(a)-(A3)	2(d3)	RESIDENTIAL 2(d3)
---	EXISTING COUNTY ROAD	SCH	SPECIAL USES 5(a) (Schools etc)
■	RECREATION EXISTING 6(a)	■	SPECIAL USES 5(b) (Railway)
2(b)	RESIDENTIAL 2(b)		
2(c2)	RESIDENTIAL 2(c2)		
2(d)	RESIDENTIAL 2(d)		

28-11-2005

Scale = 1:2500

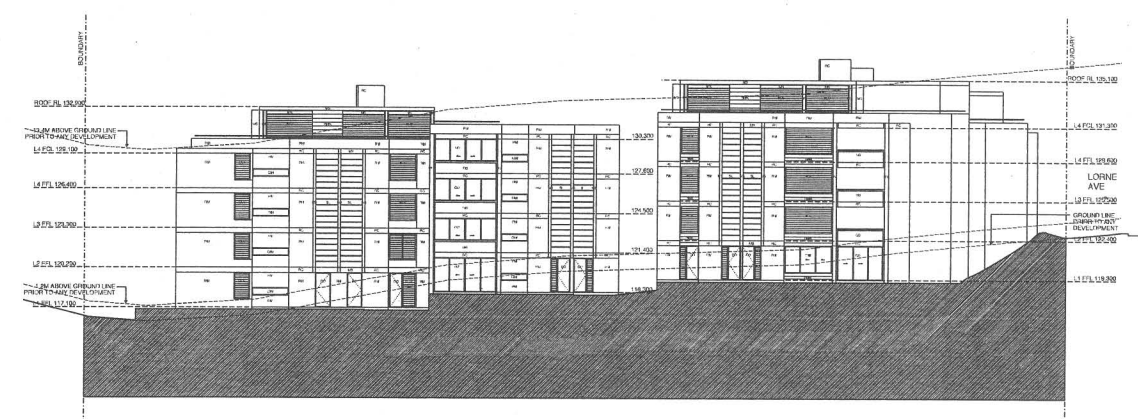
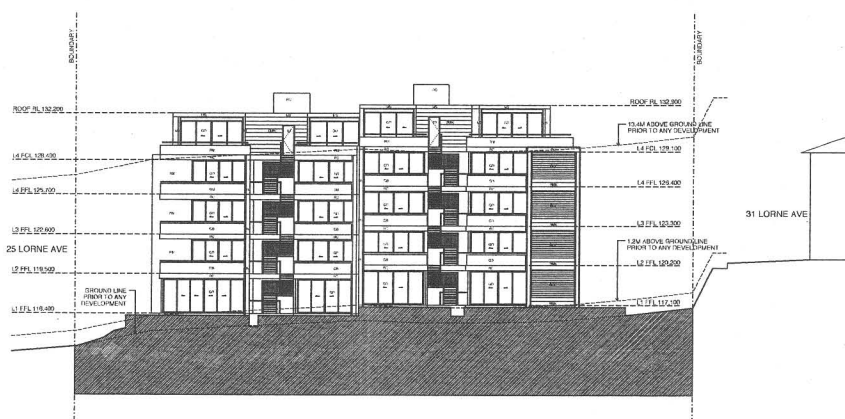
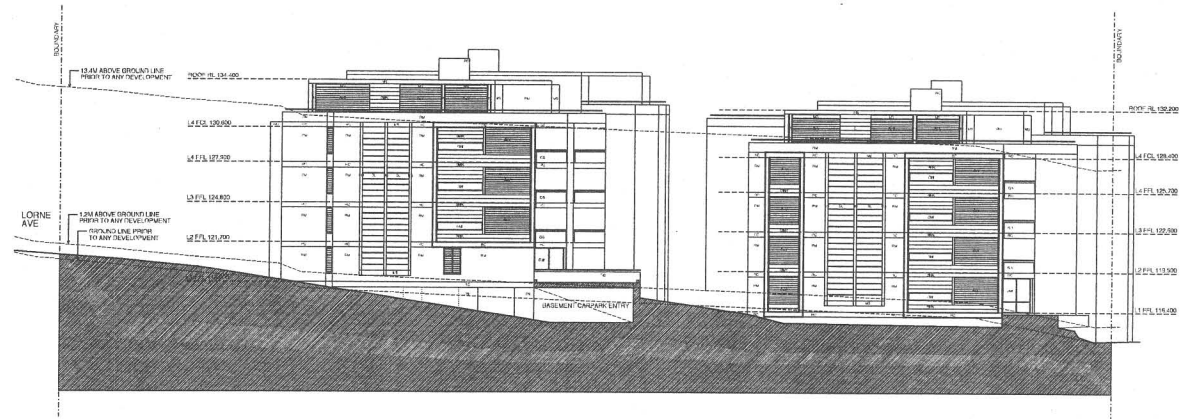


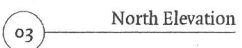
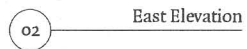
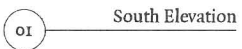
- | | |
|--------------|------------------------------|
| DA-04039-01 | Site & Roof Plan |
| DA-04039-02 | Basement 1 & Basement 2 Plan |
| DA-04039-03 | Level 1 & Level 2 Plan |
| DA-04039-04 | Level 3 and 4 & Level 5 Plan |
| DA-04039-05 | Elevations |
| DA-04039-05a | Ground Lines |
| DA-04039-06 | Sections |



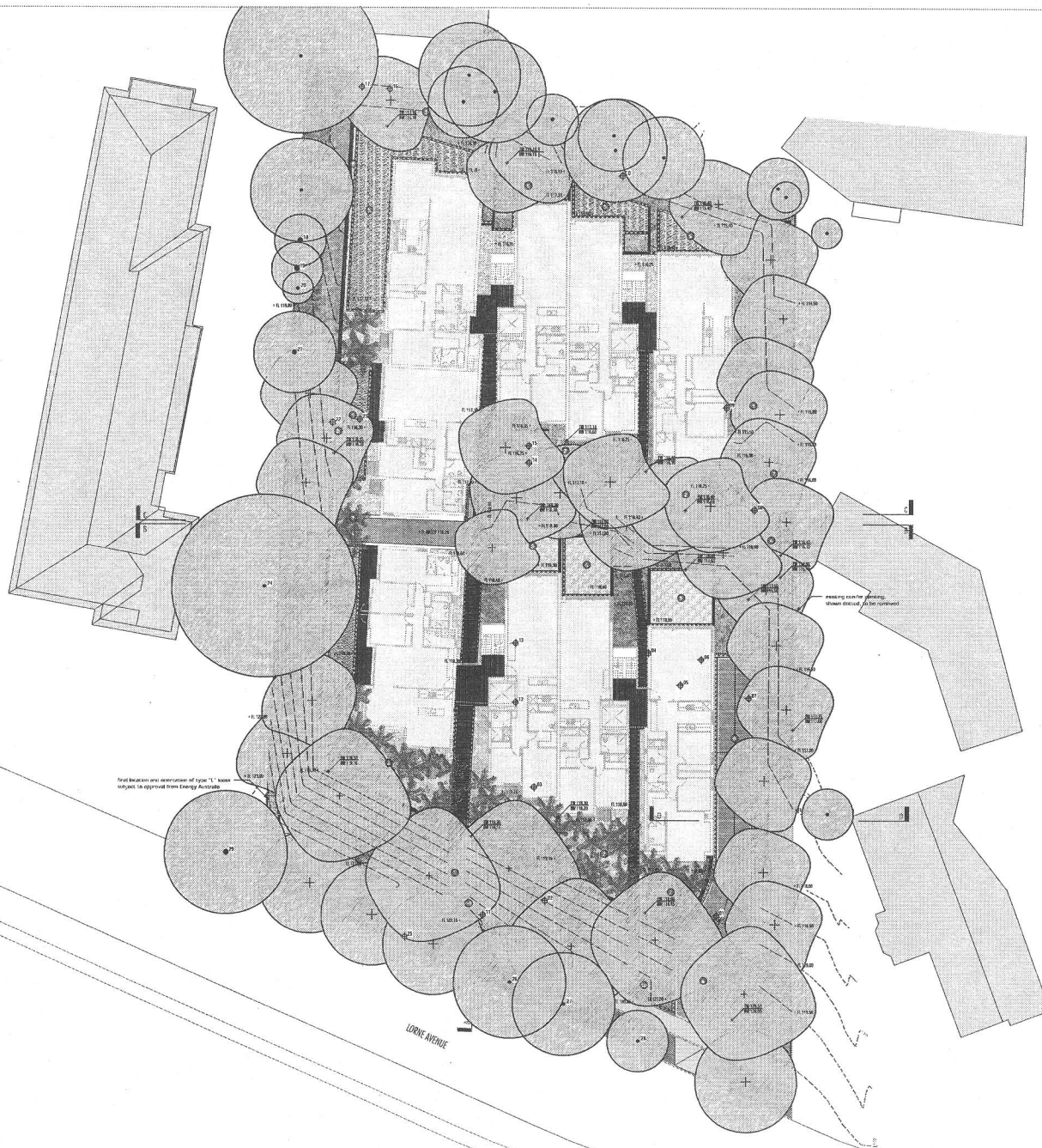
Site and Roof Plan

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LEGEND

- SITE BOUNDARY
- EXISTING GROUND LINES
- PROPOSED GROUND LINES
- PROPOSED FINISHED LEVEL
- PROPOSED TOP AND BOTTOM OF WALL LEVELS
- LANDSCAPE SECTION LINE

DETAILS

- INSET CONCRETE RETAINING WALL/EDGE
- INSET CONCRETE WER WALL
- DRY STACKED SANDSTONE RETAINING WALL
- SANDSTONE FLAGGING
- SANDSTONE RETAINING WALL/EDGE
- RANDOM SANDSTONE STEPPERS
- RANDOM SANDSTONE BOLLARDS
- INSET CONCRETE PAVING
- HARDWOOD TIMBER PAVEMENT WITH METAL FRAME
- HARDWOOD TIMBER DECKING
- INSET CONCRETE BRUSH FINISH
- RIVER PEBBLES
- EXISTING FENCE TO BE RETAINED
- THATCH SCREEN
- WATER FEATURE
- FIRST FLUSH DOWNPIPE ON NATURAL GROUND
- STORMWATER DRAIN

PROGRAM

- 1. THATCH DECK OVER DRY STACKED SANDSTONE WALL
- 2. STORMWATER DETENTION AND INFILTRATION AREA WITH WER WALLS
- 3. WATER INFILTRATION AREA & OVERLAND FLOW PATH
- 4. CIRCUMFERENCE LAWN AREA & INFORMAL SEATING
- 5. PRIVATE OPEN SPACE
- 6. ACCESS RAMP TO CARPARK
- 7. SOURCE POINTS FOR WATER FEATURE
- 8. OPEN CHANNEL DRAIN WITH RIVER PEBBLE INFILL
- 9. REINFORCED GRASSSED DRIVEWAY INTERIOR
- 10. SANDSTONE BUBBLE WALL INCORPORATING LETTER BOARDS AND ADDRESS SIGNS

PLANTING

- 1. EXISTING TREE TO BE REMOVED - REFER TO ARBORIST'S REPORT
- 2. EXISTING TREE TO BE RETAINED - REFER TO ARBORIST'S REPORT
- 3. EXISTING TREE ON ADJACENT SITE (NOT IDENTIFIED BY ARBORIST)
- 4. PROPOSED NATIVE TREE PLANTING
- 5. PROPOSED STREET TREE PLANTING
- 6. NATIVE TREE JERK PLANTING
- 7. SHRUBS / GRASSES
- 8. BAYNE GRASSES
- 9. BAYNE FERNS
- 10. LAWN AREAS
- 11. GROUND COVERS

NOTE: REFER DRAWING OF FOR DETAILED PLANT INFORMATION.

FRASERS LORNE Pty Ltd
25A, 27 AND 29 LORNE AVENUE, KILLARA

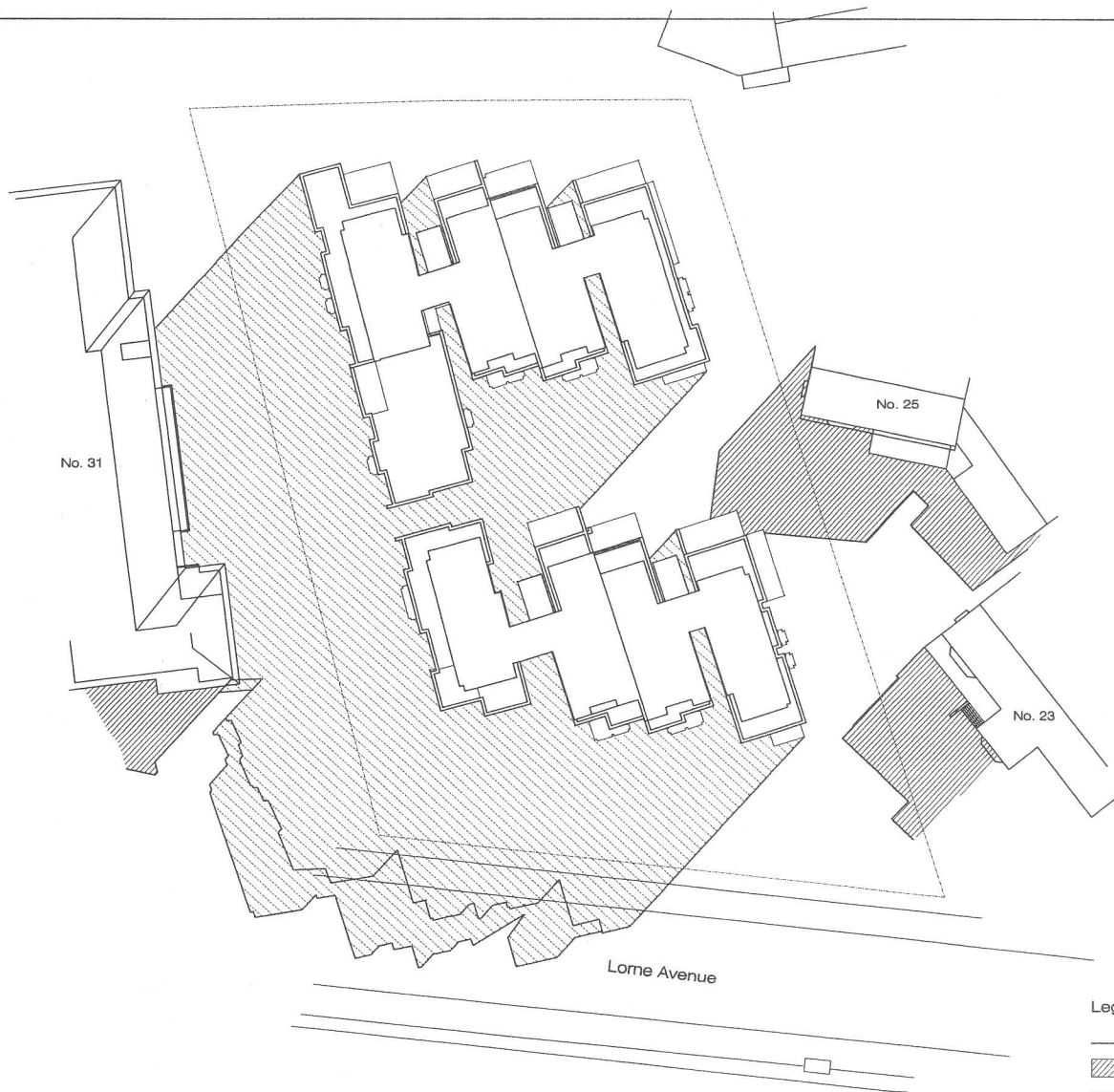
LORNE AVENUE KILLARA



mcgregor+partners
Landscape Architecture & Urban Design
10/11-12/13, 10/11-12/13, 10/11-12/13
10/11-12/13, 10/11-12/13, 10/11-12/13

SEPTEMBER 2005, REVISION: M

LANDSCAPE PLAN | 01



Legend

- Shadow line from existing buildings.
- ▨ Shadow from existing buildings.
- Shadow line from the proposed development.
- ▨ Shadow from the proposed development.
- Shadow line cast without level 5.

NOTES:

1. SHADOWS SHOWN ON THIS DRAWING HAVE BEEN DETERMINED USING A COMPLEX ALGORITHM THAT LOCATES THE SUN RELATIVE TO APPROXIMATE TRUE NORTH USING CORRECTIONS FOR LATITUDE, LONGITUDE, AND SOLAR TIME TO MEAN TIME (THE EQUATION OF TIME).
2. DUE TO NATURAL PHENOMENA, THE PERCEIVED EDGE OF A SHADOW DIVERGES PROPORTIONALLY TO A SHADOW'S LENGTH. IN REALITY THIS MEANS THE LONGER A SHADOW IS, THE EDGE IS RENDERED PROPORTIONALLY MORE FUZZY.
- WHILEST SHADOW LINES SHOWN ON THIS DRAWING ARE INDICATED AS DISTINCT AND FINITE EDGES, THEY DO NOT TAKE INTO CONSIDERATION THIS CHARACTERISTIC AND HENCE THE TRUE POSITION OF THE SHADOW'S EDGE WILL BE SLIGHTLY IMPROVED.
3. ALL SHADOWS ON THIS PLAN HAVE BEEN PREPARED USING ARCHITECTURAL & SURVEY INFORMATION PROVIDED BY ALEXANDER TZANNES ASSOCIATES & DENNY LINKER & CO. PTY LTD RESPECTIVELY.
4. NO INFORMATION ON ANY EXTERNAL STRUCTURE THAT MAY INFLUENCE THE SHADOWS CAST HAS BEEN CONSIDERED.

JM computer modelling
 338 Eastern Valley Way, Castle Cove NSW 2068
 phone (02) 9417 0485 facsimile (02) 9417 0531

CLIENT

Frasers Lorne Pty Limited
 Level 25, 2 Park Street
 Sydney, NSW 2000

PROJECT

Proposed Development at
 No.'s 25a - 29 Lorne Avenue
 Killara

TITLE

Shadow Diagram
 June 21st
 9.00 am E.S.T.



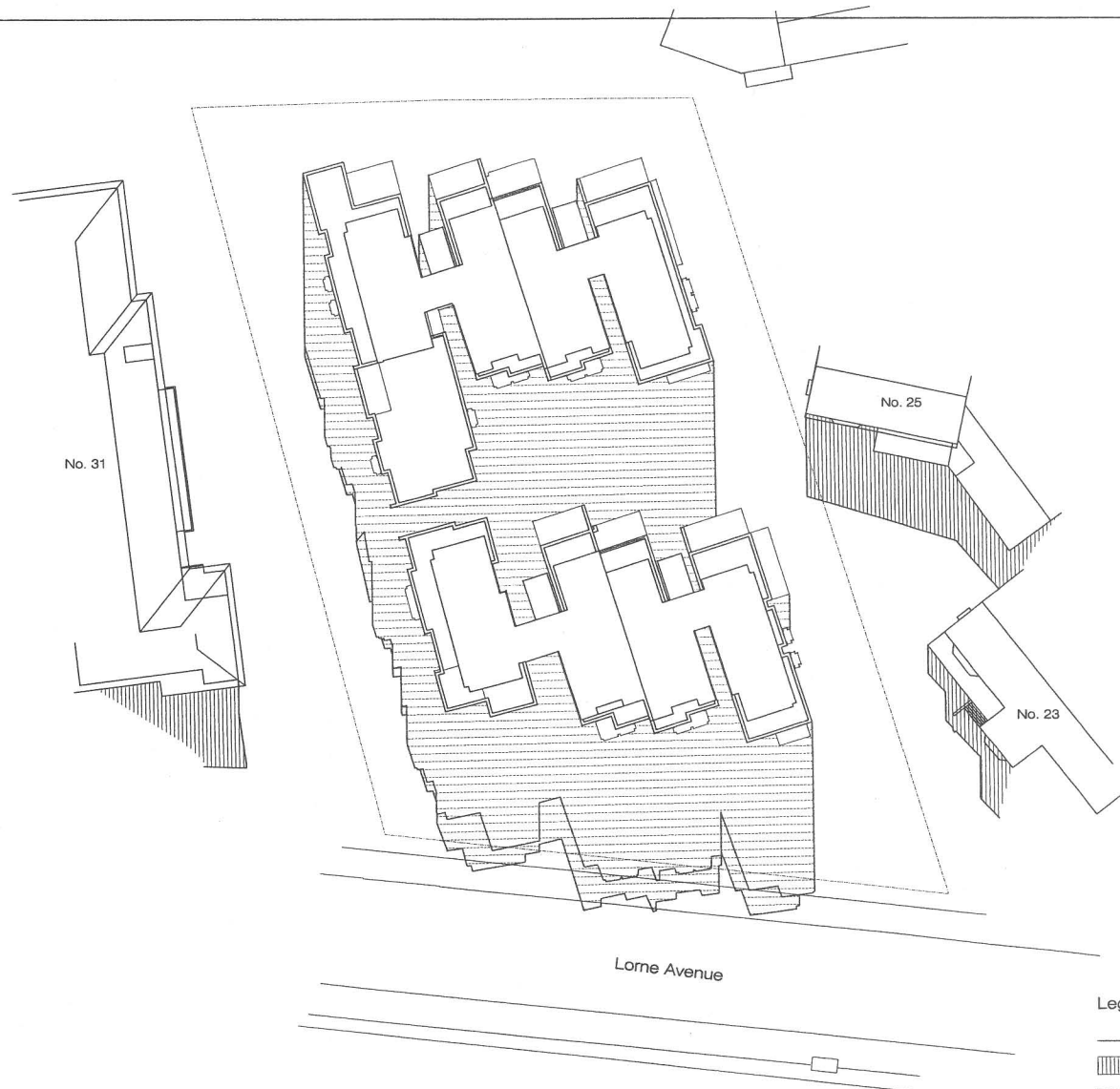
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DATE
 April 2005

JOB NO.
 0502

REV.



Legend

-  Shadow line from existing buildings.
-  Shadow from existing buildings.
-  Shadow line from the proposed development.
-  Shadow from the proposed development.
-  Shadow line cast without level 5.

NOTES:

1. SHADOWS SHOWN ON THIS DRAWING HAVE BEEN DETERMINED USING A COMPLEX ALGORITHM THAT LOCATES THE SUN RELATIVE TO APPROXIMATE TRUE NORTH USING CORRECTIONS FOR LATITUDE, LONGITUDE, AND SOLAR TIME TO MEAN TIME (THE EQUATION OF TIME).
2. DUE TO NATURAL PHENOMENA, THE PERCEIVED EDGE OF A SHADOW DIVERGES PROPORTIONALLY TO A SHADOW'S LENGTH. IN REALITY THIS MEANS THE LONGER A SHADOW IS, THE EDGE IS RENDERED PROPORTIONALLY MORE FUZZY. WHILST SHADOW LINES SHOWN ON THIS DRAWING ARE INDICATED AS DISTINCT AND FINITE EDGES, THEY DO NOT TAKE INTO CONSIDERATION THIS CHARACTERISTIC AND HENCE THE TRUE POSITION OF THE SHADOW'S EDGE WILL BE SLIGHTLY IMPROVED.
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4. NO INFORMATION ON ANY EXTERNAL STRUCTURE THAT MAY INFLUENCE THE SHADOWS CAST HAS BEEN CONSIDERED.

JM computer modelling

339 Eastern Valley Way, Castle Cove NSW 2069
phone (02) 9417 0485 facsimile (02) 9417 0531

CLIENT

Fraser's Lorne Pty Limited
Level 25, 2 Park Street
Sydney, NSW 2000

PROJECT

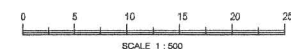
Proposed Development at
No.'s 25a - 29 Lorne Avenue
Killara

TITLE

Shadow Diagram
June 21st
12.00 noon E.S.T.



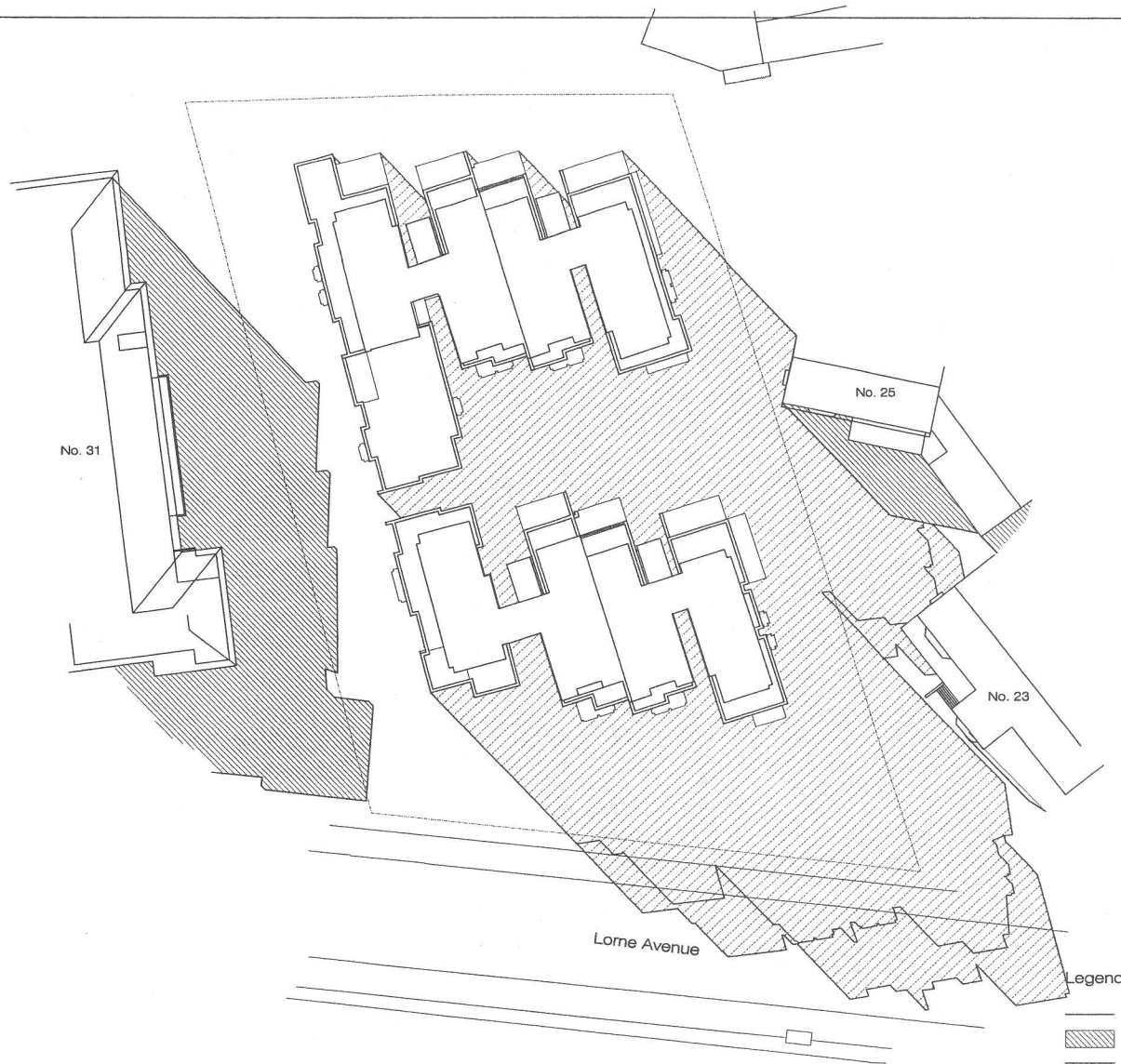
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DATE
April 2005

JOB NO.
0502

REV.



Legend

- Shadow line from existing buildings.
- ▨ Shadow from existing buildings.
- Shadow line from the proposed development.
- ▨ Shadow from the proposed development.
- Shadow line cast without level 5.

NOTES:

1. SHADOWS SHOWN ON THIS DRAWING HAVE BEEN DETERMINED USING A COMPLEX ALGORITHM THAT LOCATES THE SUN RELATIVE TO APPROXIMATE TRUE NORTH USING CORRECTIONS FOR LATITUDE, LONGITUDE, AND SOLAR TIME TO MEAN TIME (THE EQUATION OF TIME).
2. DUE TO NATURAL PHENOMENA, THE PERCEIVED EDGE OF A SHADOW DIVERGES PROPORTIONALLY TO A SHADOW'S LENGTH. IN REALITY THIS MEANS THE LONGER A SHADOW IS, THE EDGE IS RENDERED PROPORTIONALLY MORE FUZZY.
- WHILE SHADOW LINES SHOWN ON THIS DRAWING ARE INDICATED AS DISTINCT AND FINITE EDGES, THEY DO NOT TAKE INTO CONSIDERATION THIS CHARACTERISTIC AND HENCE THE TRUE POSITION OF THE SHADOW'S EDGE WILL BE SLIGHTLY IMPROVED.
3. ALL SHADOWS ON THIS PLAN HAVE BEEN PREPARED USING ARCHITECTURAL & SURVEY INFORMATION PROVIDED BY ALEXANDER TZANNES ASSOCIATES & DENNY LINKER & CO. PTY LTD RESPECTIVELY.
4. NO INFORMATION ON ANY EXTERNAL STRUCTURE THAT MAY INFLUENCE THE SHADOWS CAST HAS BEEN CONSIDERED.

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 339 Eastern Valley Way, Castle Cove NSW 2069
 phone (02) 9417 0485 facsimile (02) 9417 0531

CLIENT

Frasers Lorne Pty Limited
 Level 25, 2 Park Street
 Sydney, NSW 2000

PROJECT

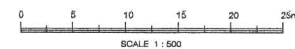
Proposed Development at
 No.'s 25a - 29 Lorne Avenue
 Killara

TITLE

Shadow Diagram
 June 21st
 3.00 pm E.S.T.



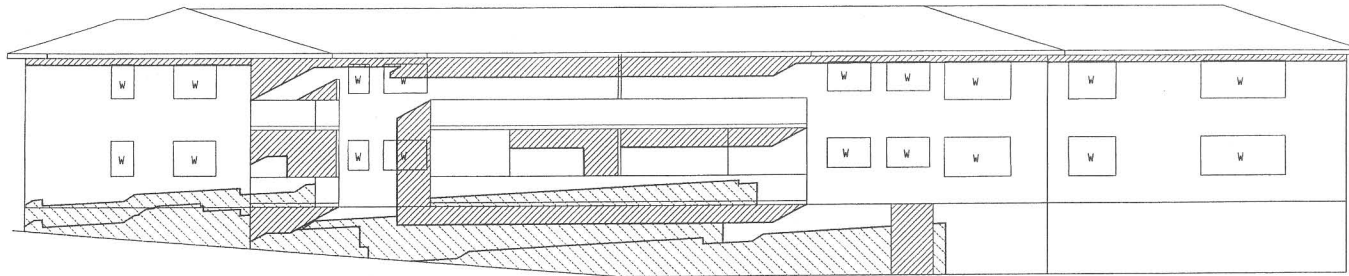
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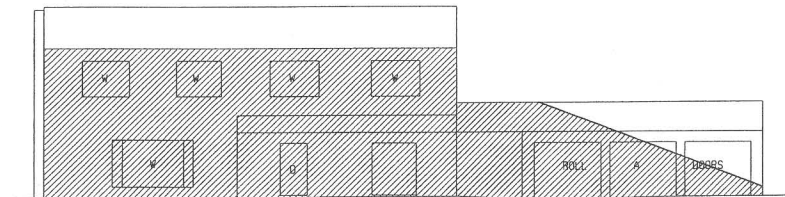
DATE
 April 2005

JOB NO.
 0502

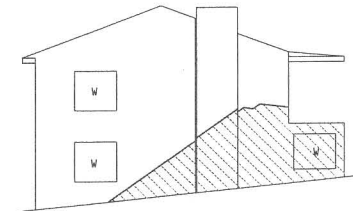
REV.



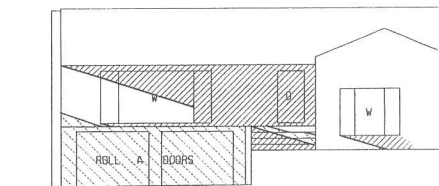
No. 31 Eastern Elevation - June 21st at 9am. E.S.T.



No. 25 South Western Elevation - June 21st at 3pm. E.S.T.



No. 23 North Western Elevation - June 21st at 3pm. E.S.T.
NOTE: WINDOW LOCATIONS AND SIZES ON THIS FACADE ARE ESTIMATES ONLY.



No. 23 South Western Elevation - June 21st at 3pm. E.S.T.

Legend

- Shadow line from existing neighbouring buildings.
- ▨ Shadow from existing neighbouring buildings.
- Shadow line from the proposed development.
- ▨ Shadow from the proposed development.
- Shadow line cast without level 5.

NOTES:

1. SHADOWS SHOWN ON THIS DRAWING HAVE BEEN DETERMINED USING A COMPLEX ALGORITHM THAT LOCATES THE SUN RELATIVE TO APPROXIMATE TRUE NORTH USING CORRECTIONS FOR LATITUDE, LONGITUDE, AND SOLAR TIME TO MEAN TIME (THE EQUATION OF TIME). REALITY THIS MEANS THE LONGER A SHADOW IS, THE EDGE IS RENDERED PROPORTIONALLY MORE FUZZY.
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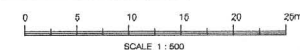
Frasers Lorne Pty Limited
Level 25, 2 Park Street
Sydney, NSW 2000

PROJECT

Proposed Development at
No.'s 25a - 29 Lorne Avenue
Killara

TITLE

Elevation Shadow Diagram



DATE
April 2005

JOB NO.
0502

REV.

1, 3, 5 & 7 BRUCE AVENUE & 6 GREENGATE LANE, KILLARA

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To respond to issues raised at the Council site inspection and seek Council's determination of the development application.

BACKGROUND:

On 8 November 2005, Council at its Ordinary Meeting, resolved to defer consideration of the proposed development at 1-7 Bruce Avenue, 6 Greengate Lane Killara and the adjacent old substation site pending a site inspection. The site inspection was held on 12 November 2005.

COMMENTS:

Information in response to the issues raised during the site inspection is contained within the report.

RECOMMENDATION:

Approval

PURPOSE OF REPORT

To respond to issues raised at the Council site inspection and seek Council's determination of the development application.

BACKGROUND

On 8 November 2005, Council at its Ordinary Meeting, resolved to defer consideration of the proposed development at 1-7 Bruce Avenue, 6 Greengate Lane Killara and the adjacent old substation site pending a site inspection. The site inspection was held on 12 November 2005.

COMMENTS

The following issues were raised at the site inspection:

1. Fencing

Fencing between the subject site and No. 9 Bruce Avenue, Killara is noted as being 1.8 metres high comprising timber material. A condition of development consent is to be included by staff to ensure that this fencing tapers down in height to Bruce Avenue within the front setback for enhanced streetscape appeal.

Condition No. 62 has been modified to read as follows:

To maintain the established streetscape and general appearance, the overall height of the fence to street frontages and in front of the Bruce Avenue building line, is not to exceed one (1) metre in height, except for the corner of Greengate Lane (west) and Greengate Lane (south), where the fence is not to exceed 600mm in height to provide adequate sight lines.

2. Traffic

a) It was noted that a cumulative traffic report was yet to be received, but is forthcoming and the cumulative traffic impact on Greengate Lane should preferably be dealt with at the same time or earlier, as the determination of this proposal.

The preliminary traffic report by Council's Technical Services Section was distributed at the site inspection. This has now been updated and refined and the Greengate Precinct Report will be put to Council at the meeting of 6 December 2005, at the same time as this report. The report confirms that traffic generated from the subject proposal can be accommodated within the environmental constraints of the lane, provided that the works required by **Condition No. 106** are undertaken. Further, the report considers the cumulative impact from future unit development in this precinct. The current two way traffic direction is satisfactory for Greengate Lane access, for both this proposal and that at No. 657-661 Pacific Highway. Any subsequent residential flat development adjacent to Greengate Lane will require access from Bruce Avenue or, if proposing access from Greengate Lane, will require one-way traffic flow.

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- b) It was noted that Point No. 1 of the preliminary traffic report (circulated during the site inspection) prepared by Council's Strategic Traffic Engineer does not include houses with a Greengate Road address that have access from Greengate Lane. Staff to address.**

The inclusion of Greengate Road properties would not be expected to push the traffic flow into a higher bracket, because the inclusion of the traffic generation from these properties is still within the existing environmental capacity of the lane. It should be noted that the applicant's traffic report did not exclude traffic generated by the existing dwellings, which are proposed to be demolished as part of the development. Accordingly, actual traffic generation may be slightly below that estimated in the report.

3. Greengate Lane

- a) The Greengate Lane layback/entry hump in Bruce Avenue is to be considered by Council's traffic engineers as it is evident that vehicles have been scraping their undersides when accessing Greengate Lane from Bruce Avenue.**

This will be part of the design to be submitted for the construction of the Lane, which is required by **Condition No 106a**.

- b) The preferred direction of one-way traffic in Greengate Lane is to be confirmed by Council's Traffic Engineers, particularly having regard to traffic entering Greengate Lane from the Greengate Hotel.**

The Greengate Precinct Report by Council's Traffic Engineers recommends that Greengate Lane become one-way west to east. There is no existing or proposed direct access from the hotel to Greengate Lane.

- c) Further comment is required in relation to Council's engineering comments regarding traffic generation as follows:**

"The recommended conditions allow for the developer to liaise with Council's Traffic Section regarding the desirable width for construction of Greengate Lane and timing of the various stages in the process."

Further comment on Condition 106 and the width of Greengate Lane is required together with any required upgrades, including the need for any pedestrian pathway in addition to kerb and guttering. Where possible, widths should be specified. Requirements are to be addressed upfront in the report rather than left to liaison following determination of this proposal.

Council's Traffic Engineer has stated that, for local roads carrying 30-100 vehicles per hour, AMCORD guidelines recommend the road reserve width should be a minimum of 13 metres and road carriageway width should be 5 to 5.5 metres. With the subject development, the lane is expected to carry less than 30 vehicles per hour. **Condition 106a** has been amended to provide specifically for a 5 metres wide carriageway along Greengate Lane (west), a 5.5 metres wide carriageway on Greengate Lane (south). A one metre wide footpath is to be provided within the

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existing road reserve along the site frontage. Council's Traffic Engineer is satisfied that the width of the lane will be adequate for continued two way traffic taking into account the traffic generated by the proposed development and including the cumulative impact from No. 657-661 Pacific Highway. One way traffic flow is preferred however, and is being sought in the Greengate Precinct Report.

Condition 106 has been amended as follows:

Condition 106a

The Applicant must carry out the following infrastructure works in the Public Road:

- *Construct new concrete footpath for the Bruce Avenue frontage of the development.*
- *Construct half-width road pavement (2.5 metres) for the full Greengate Lane (west) frontage of the development, including new upright kerb and gutter in Greengate Lane (west).*
- *Construct 5.5 metre wide road pavement and 1 metre wide footpath in Greengate Lane (south) for the full frontage of the development, including new upright kerb and gutter.*

The applicant is to liaise with Councils Technical Services section as to the position of the carriageway within the road reserve.

Development Consent under the EP&A Act does NOT give approval to these works on Council property. THE APPLICANT MUST OBTAIN A SEPARATE APPROVAL UNDER SECTION 138 AND 139 OF THE ROADS ACT 1993 for the works in the Public Road, required by this condition. The Construction Certificate must not be issued, and these works must not proceed, until Council has issued a formal written consent under the Roads Act 1993.

To obtain consent under the Roads Act 1993 for the infrastructure works on Council property, full engineering drawings (plans, sections and elevations) and specifications for the infrastructure works are to be prepared by a suitably qualified and experienced consulting civil engineer. These must be submitted and approved by Council prior to issue of the Construction Certificate. Construction of the works must proceed in accordance with any conditions attached to the Council Roads Act 1993 approval.

All works are to be designed in accordance with Council's "Specification for Road and Drainage Works". In addition, the drawings must detail existing services and trees affected by the works, erosion control requirements and traffic management requirements during the course of works. Traffic management is to be certified on the drawings as being in accordance with the documents SAA HB81.1 – 1996 – Field Guide for Traffic Control at Works on Roads – Part 1 and RTA Traffic Control at Work Sites (1998).

NOTE 1: A minimum of three (3) weeks will be required for assessment of Roads Act submissions. Early submission is highly recommended to avoid delays in obtaining a Construction Certificate.

NOTE 2: An engineering assessment fee (set out in Council's adopted fees and charges) is payable

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and Council will withhold any consent and approved plans until full payment of the correct fees.

NOTE 3: Plans and specifications must be marked to the attention of Council's Development Engineers. In addition, a copy of this condition must be provided, together with a covering letter stating the full address of the property and the accompanying DA number.

In relation to the timing of the works, note that **Condition No. 106a** requires the details prior to the Construction Certificate release and **Condition No. 137** requires that the works be completed prior to issue of an occupation certificate.

Additional requirements for a footpath within the site adjacent to Greengate Lane (west) are included in **Condition 106b**.

d) Condition No. 106 refers to a footpath on Bruce Avenue, however, this condition does not refer to provision of a footpath in Greengate Lane. Further comment is to be provided in relation to Greengate Lane in terms of it being of suitable width to support both pedestrian and traffic flow.

Amended **Condition 106a** now provides for a separate, one metre wide, footpath along the site frontage of Greengate Lane (south). An additional condition (**Condition 106b**) is recommended, to provide a one metre wide public footpath on the site adjacent to the Greengate Lane (west) boundary to connect to the footpath in Greengate Lane (south).

e) If recommendations are adopted with respect to the necessary upgrading to the width of Greengate Lane, staff are to advise if Greengate Lane will encroach onto the site and therefore affect the floor space ratio, deep soil and landscaping calculations. Can the required upgrades to Greengate Lane be accommodated within the existing road reserve or should Council be considering the dedication of site area for all Residential 2(d3) properties adjoining Greengate Lane to ensure an appropriate width for accommodating the cumulative impact of multiple residential flat building developments?

Upgrading of Greengate Lane, as required by **Condition 106**, can be accommodated within the existing road reserve. The footpath within the site will not affect the deep soil, setback or floor space calculations. Council is not considering the dedication of road widening for the subject development.

4. Utility services

a) Confirmation is required that all electrical/utility services will be under-grounded for both the subject site and the entire length of Greengate Lane.

Conditions 100 and 101 require undergrounding of all electrical/utility services for the subject site. Provision for the under-grounding of these services for the entire length of Greengate Lane is not related to the proposal, and cannot therefore be provided for as part of any consent for this development. The issue will be dealt with in subsequent applications for further development in the vicinity.

5. Unsafe drainage infrastructure

a) Council's Technical Services Department is requested to address the unsafe drainage infrastructure in Greengate Lane by attending Greengate Lane and repositioning the concrete protection cover over the drainage pit to ensure pedestrians and vehicles are not at risk. It was noted that this issue is unrelated to the proposed development.

The issue was referred to Council's Technical Services section. The concrete pit cover was reinstated into position on 16 November 2005.

ADDITIONAL INFORMATION

It is noted that Builder's Indemnity Insurance is not required for residential flat buildings over 3 storeys in height under Clause 74 of the Home Building Regulation. Accordingly, it is recommended that **Condition No. 98** be deleted.

RECOMMENDATION

Pursuant to Section 80(1) of the Environmental Planning and Assessment Act, 1979

THAT the Council, as the consent authority, is of the opinion that the objection under *State Environmental Planning Policy No. 1 – Development Standards* to 25I(8) (Number of storeys excluding top storey) of the Ku-ring-gai Planning Scheme Ordinance is well founded. The Council is also of the opinion that strict compliance with the development standard is unreasonable and unnecessary in the circumstances of this case as the additional storey will not result in unacceptable impacts on solar access or landscape character and will achieve the objectives of the height standard.

AND

THAT the Council, as the consent authority, being satisfied that the objection under SEPP No. 1 is well founded and also being of the opinion that the granting of consent to DA 514/05 is consistent with the aims of the Policy, grant development consent to DA 514/05 for demolition, construction of residential flat building and strata subdivision on land at 1-7 Bruce Ave, 6 Greengate Lane Killara, for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

GENERAL CONDITIONS

1. The development must be carried out in accordance with plans numbered Job No. 0418 Sheets DA01B, DA02B, dated 30 August 2005, DA03C dated 5 October 2005, DA04D, dated 5 October 2005, DA05C, DA06C, DA07C, DA08C, DA09D, DA10C, DA11C, DA21C dated 26 September 2005, drawn by Fortey & Grant Architecture, and Draft Strata Plan, Sheets 1-5, undated and lodged with Council on 8 & 27 September and 5 October 2005 endorsed with Council's approval stamp, except where amended by the following conditions:

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2. All building works shall comply with the Building Code of Australia.
3. The submission of the approved plans to Sydney Water, before any work is commenced to ensure that the proposed structure meets that Authority's By-Laws. Failure to submit these plans before commencing work will render the owner liable to a penalty and may result in the demolition of work.
4. The swimming pool is to have a maximum depth of 2 metres.
5. Where timber is specified, plantation timbers are to be used in the development.
6. To conserve water, the following shall be installed in the bathrooms and toilets:
 - a. maximum 6/3 litre dual flush cisterns;
 - b. shower heads with reduced water flow devices.
7. Energy efficient hot water systems which have a 4 star rating or greater shall be employed.
8. The approved building shall not be occupied unless the development has been completed in accordance with all conditions of consent and the approved plans and a Occupation Certificate has been issued.
9. For the purpose of health and amenity, the disposal of backwash and/or the emptying of a swimming pool into a reserve, watercourse, easement or stormwater drainage system is prohibited. These waters are to discharge via a permanent drainage line into the Sydney Water's sewer. Permission is to be obtained from the Sydney Water prior to the emptying of any pool to the sewer.
10. To ensure compliance with the relevant standards, an effective and approved safety fence with self closing gate complying with the minimum requirements of Australian Standard 1926-1986 "Fences and Gates for Private Swimming Pools" shall be provided to the Principal Certifying Authority's satisfaction in the location indicated on the approved plans prior to any water being placed in the pool.
11. For stormwater control, provision shall be made for the collection and disposal of all run-off surface waters from paved areas, recontoured areas, pool overflow and higher levels. All collected waters are to be dispersed without causing nuisance to the adjoining properties.
12. For safety purposes, depth markers shall be provided at both ends of the pool.
13. For safety purposes, prior to the pool being filled a weather resistant poster detailing expired air resuscitation (mouth to mouth) methods shall be affixed within plain sight of the pool. A sign/notice with the words "YOUNG CHILDREN SHOULD BE SUPERVISED WHEN USING THIS SWIMMING POOL" shall be erected in clear view and in close proximity to the pool.

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14. All filtration equipment shall be located in the position as shown on plan, unless as varied by this consent. Where the filtration and electrical equipment is located near a boundary, such equipment shall be positioned not closer than 150mm from the boundary fencing, if any, and electrical conduits and fittings or circulation pipes shall not be attached to any part of the fencing. Filtration or other equipment shall not be installed in the area of the side boundary setback of the dwelling or outbuilding unless that side boundary setback is greater than 1500mm. For the purpose of residential amenity, the filtration motor pump unit shall be housed in a sound attenuating enclosure and located where indicated on the approved plans or as varied by this consent.
15. A balustrade shall be provided where the pool concourse stands more than 1.0 metre above the finished ground level.
16. To maintain the existing ground levels all spoil shall be removed from the site. Sites shall not be re-shaped, re-contoured, nor the levels on any part of the site altered without the consent of the Council being obtained beforehand.
17. To ensure structural stability wherever the soil conditions so require, a retaining wall or other approved method of preventing the movement of soil shall be provided and adequate provision shall be made for drainage.
18. The swimming pool is to be made safe during construction by the erection of temporary safety fence to the satisfaction of the Principal Certifying Authority.
19. For the purpose of residential amenity, details of proposed soundproof enclosure design to house all spa pumping units shall be prepared by a practising acoustical engineer and shall be submitted to the Principal Certifying Authority for approval. Noise levels are not to exceed 5dB(A) at the boundaries of the site.
20. For the purpose of ensuring the compliance with the terms of the approval, an approved copy of the plan and this Consent and Construction Certificate shall be kept on site at all times.
21. For the purpose of safety and amenity of the area, no building materials, plant or the like are to be stored on the road or footpath without the written approval being obtained from the Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.
22. HOURS OF WORK: For the purpose of residential amenity, noise generating work carried out in connection with building and construction operation, including deliveries of building materials and equipment, is restricted to the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted. The use of the following items of plant on the site is also restricted to the abovementioned hours: compressors, bulldozers, power operated woodworking machines, excavators and loaders, jackhammers, Ramset guns, concrete mixers and concrete delivery wagons, hoists, winches, welding and riveting plant.

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Whilst work on Saturdays may be performed until 5.30pm, such work or any associated activities shall not involve the use of any noise generating processes or equipment.

23. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.
24. A sign shall be erected in a prominent position on the site which states the name and contact details of the Principal Certifying Authority.
25. All excavations shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.
26. Any excavation of rock involving hydraulic or compressed air rock hammers or other excavation equipment shall comply with the requirements of Council's Code for the Control and Regulation of Noise on Building Sites.
27. No rock breaking or other machinery for the excavation, drilling or removal of rock shall be used on the site without the prior approval of the Principal Certifying Authority. Should rock breaking or associated machinery be required, the following details are to be submitted to the Principal Certifying Authority for consideration:
 - a. The type and size of machinery proposed.
 - b. The routes of all trucks to convey material to and from the site.
 - c. A report by a Geotechnical Engineer detailing the measures recommended in undertaking the work so as to prevent any damage to any adjoining or nearby buildings.
28. All excavations and backfilling associated with the erection or demolition of a building must be executed safely and in accordance with appropriate professional standards.

All excavations associated with the erection or demolition of a building must be properly guarded and protected to prevent them from being dangerous to life or property.
29. If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation to be made:
 - a. must preserve and protect the building from damage, and
 - b. if necessary, must underpin and support the building in an approved manner, and
 - c. must, at least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished.

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The owner of the adjoining allotment of land is not liable for any part of the cost of work carried out for the purposes of this clause, whether carried out on the allotment of land being excavated or on the adjoining allotment of land.

In this clause, allotment of land includes a public road and any other public place.

30. The applicant is advised that the Construction Certificate plans and specifications must comply with the provisions of the Building Code of Australia.
31. Toilet facilities are to be provided, within the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
32. All noise generating equipment associated with any proposed mechanical ventilation system/s shall be located and/or soundproofed so the equipment is not audible within a habitable room in any other residential premises before 7am and after 10pm Monday to Friday and before 8am and after 10pm Saturday, Sunday and Public Holidays. Furthermore, the operation of the unit outside these restricted hours shall emit a noise level of not greater than 5dbA above the background when measure at the nearest adjoining boundary.
33. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.
34. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
35. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
36. Where a new development is not commencing immediately following demolition, the demolition shall be limited to the extent of the footprint of the building/s on the site and no excavation shall be carried out.
37. Demolition work, including removal of material or debris from the site, on any building in a residential area shall only be carried out during the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted.
38. A person taking down or demolishing or causing to be taken down or demolished any building or part thereof shall, upon identifying or suspecting that asbestos is present in the building, immediately notify the Workcover Authority. The Authority is the controlling body for the safe removal, handling and disposal of asbestos. The Authority supervises and monitors contractors engaged in asbestos removal.

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The requirements and standards imposed by the Authority, its consultants or contractors shall be complied with.

39. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.
40. Dust control measures shall be taken on all demolition sites so as to avoid a nuisance to adjoining properties and harm to the environment.
 - a. A person taking down or demolishing or causing to be taken down or demolished any building or portion of any building shall:
 - i. cause the windows or other openings in the external walls to be close boarded or otherwise covered;
 - ii. cause screens of canvas, hessian, boards, mats or other suitable material to be fitted in appropriate locations;
 - iii. cause areas, components and debris to be wetted down; in such a manner as to minimise, as far as practicable, the nuisance arising from the escape of dust during such taking down or demolition.
 - b. Such person shall not chute, throw or let fall or cause to chute, throw or let fall from the floor to floor or into any basement of such building any building materials or any other matter so as to cause dust to escape from the building or cause any such material to fall or cast upon a public way to the annoyance, inconvenience, or danger of persons using such public way.
41. Soil on vacant sites is to be stabilised as soon as possible to prevent erosion and the site shall be kept clear of excess vegetation.
42. A temporary construction exit and sediment trap to reduce the transport of sediment from the site onto public roads shall be provided before demolition commences.
43. Existing stormwater lines on the site are to be blocked and made inoperable after buildings are demolished so as to prevent the conveyance of silt or sediments into the gutter or street drainage system.
44. All combustible material shall be removed from the site on a daily basis. Material shall not be burnt on the site.
45. Materials salvaged from a demolition may be stored on site provided they are non combustible, neatly and safely stockpiled and not likely to become a harbourage for vermin.
46. Trees and vegetation on a site shall not be disturbed except with the approval of the Council.
47. Fire hoses are to be maintained on site during the course of demolition.
48. Adequate precautions shall be taken to ensure the protection of adjoining premises and persons therein from damage and injury during the process of demolition.

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49. Buildings built prior to the 1970's may contain lead based paint. Lead dust is a hazardous substance. You are advised to follow the attached WorkCover guidelines to prevent personal and environmental contamination.
50. The applicant or builder/developer is responsible for the cost of making good any damage that may be caused to any Council property as a result of work associated with the demolition.
51. A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:
 - a. stating that unauthorised entry to the work site is prohibited, and
 - b. showing the name of the person in charge of the work site and a telephone number at which that person may be contacted outside working hours.

Any such sign is to be removed when the work has been completed.

This clause does not apply to:

- a. building work carried out inside an existing building, or
 - b. building work carried out on premises that are to be occupied continuously (both during and outside working hours) while the work is being carried out.
52. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.
53. Sites shall not be re-shaped, re-contoured, excavated nor the levels on any part of the site altered without the Consent of the Council being obtained beforehand.
54. For the purpose of health and amenity, effective measures are to be taken at all times to prevent any nuisance being caused by noise, vibrations smells, fumes, dust, smoke, waste water products and the like.
55. To prevent pollution, all vehicles making a delivery to or from the site are to be covered to prevent loose materials, dust etc falling from the vehicles.
56. To prevent pollution, any areas cleared of vegetation where there is a flowpath greater than 12.0 metres in length shall have a properly constructed silt fence erected to intercept runoff.
57. To prevent pollution, all disturbed areas which are not to be built upon or otherwise developed within 14 days shall be stabilised with mulch, woodchip or other rehabilitation methods to provide permanent protection from soil erosion.
58. Topsoil shall be stripped from areas to be developed and stock-piled within the site. Stock-piled topsoil on the site shall be located outside drainage lines and be protected from run-on water by suitably positioned diversion banks. Where the period of storage will exceed 14 days stock-piles are to be sprayed with an appropriate emulsion solution or seeded to minimise particle movement.
59. The applicant's attention is directed to any obligations or responsibilities under the Dividing Fences Act in respect of adjoining property owner/s which may arise from this application and it is advised that enquiries in this regard may be made at the nearest Local Court.

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60. All areas of common property, including visitor car parking spaces and on-site stormwater detention shall be included on the final plans of subdivision.
61. Your attention is directed to the operation of the Commonwealth Disability Discrimination Act 1992, which may impose greater obligations on providing access to disabled persons other than compliance with the Building Code of Australia. You are advised to seek advice from the Human Rights and Equal Opportunity Commission (phone (02) 9284 9600) in respect of your application.
62. To maintain the established streetscape and general appearance, the overall height of the fence to street frontages is not to exceed 1 metre in height, except for the corner of Greengate Lane (west) and Greengate Lane (south), where the fence is not to exceed 600mm in height to provide adequate sight lines.
63. A Tree Preservation Order exists within the Ku-ring-gai Council area whereby the removal, lopping or destruction of any tree exceeding 5.0 metres in height or 4.0 metres in canopy spread (except where exempt as defined under Council's Tree Preservation Order) without prior written consent of Council is prohibited.
64. Landscape works shall be carried out in accordance with Landscape Drawing No LP.01/B Rev C Sheets 1-4 prepared by Botanica and dated 06/08/05 submitted with the Development Application. The landscape works shall be completed prior to issue of the Occupation Certificate and be maintained in a satisfactory condition at all times, except as amended by the following;
 - The proposed planting of two *Hymenosporium flavum* (Native frangipani) and one *Elaeocarpus reticulatus* (Blueberry Ash) adjacent to the eastern side of Unit G.05 are to be deleted and replaced with two *Syncarpia glomulifera* (Turpentine) spaced a minimum of 6.0m apart and located no closer than 5.0m from the wall of the units.
 - The proposed planting of one *Elaeocarpus reticulatus* (Blueberry Ash) to the north east of Unit G.05 is to be deleted and replaced with a deciduous tree species that can attain a minimum height of 13.0m to be in scale with the development.
 - The proposed understorey planting at the south west corner of the site is to incorporate only species that attain a maximum height of 800mm, to improve sight lines at the corner.
65. REMOVAL of the following tree/s from Council's nature strip shall be undertaken at no cost to Council by an experienced Tree Removal Contractor/Arborist holding Public Liability Insurance amounting to a minimum cover of \$10,000,000.

Tree/Location

Acer negundo (Box Elder)
Bruce Ave nature strip

Jacaranda mimosifolia (Jacaranda) x 3
Bruce Ave nature strip
66. Tree roots between 10mm and 50mm diameter, severed during excavation, shall be cut cleanly by hand and the tree subsequently treated with a root growth hormone and wetting

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agent, by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate.

67. No tree roots of 50mm or greater in diameter located within the specified radius of the trunk/s of the following, tree/s shall be severed or injured in the process of any site works during the construction period.

Tree/Location	Radius From Trunk
#5 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to eastern (side) site boundary	6.0m
#6 <i>Camellia japonica</i> (Japanese Camellia) Adjacent to eastern site boundary in neighbouring property	4.0m
#7 <i>Macadamia tetraphylla</i> (Macadamia) Adjacent to southern/Greengate Lane site boundary	4.0m
#14 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to northern/Bruce Ave site boundary	6.0m
#37 <i>Washingtonia filifera</i> (Cotton Palm) Adjacent to southern/Greengate Lane site boundary	3.0m
#40 <i>Jacaranda mimosifolia</i> (Jacaranda) Adjacent to southern/Greengate lane site boundary	5.0m

68. The trees to be retained shall be inspected, monitored and treated when necessary by a qualified Arborist before, during and after completion of development works to ensure their long term survival. Regular reports from the Arborist to the principal certifying authority shall be required at quarterly/three monthly intervals. Documentary evidence of compliance with this condition shall be submitted to the principal certifying authority with a copy to Council with the Occupation Certificate.

69. All excavation carried out within the specified radius of the trunk/s of the following tree/s shall be hand dug:

Tree/Location	Radius From Trunk
#5 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to eastern (side) site boundary	6.0m
#7 <i>Macadamia tetraphylla</i> (Macadamia) Adjacent to southern/Greengate Lane site boundary	4.0m
#14 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to northern/Bruce Ave site boundary	6.0m
#37 <i>Washingtonia filifera</i> (Cotton Palm) Adjacent to southern/Greengate Lane site boundary	3.0m

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#40 *Jacaranda mimosifolia* (Jacaranda) 5.0m
Adjacent to southern/Greengate lane site boundary

70. The applicant shall ensure that at all times during the construction period no activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order.
71. The following tree species shall be planted, at no cost to Council, in the nature strip as an evenly spaced avenue planting, fronting the property along Bruce Ave. The tree/s used shall be 45 litre container size specimen/s:

Tree Species

Jacaranda mimosifolia (Jacaranda) x 10

72. Following removal of the *Acer negundo* (Box Elder) and *Jacaranda mimosifolia* (Jacaranda) from Council's nature strip, the nature strip shall be rehabilitated to the satisfaction of Council's Director Open Space at no cost to Council.
73. All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.
74. Stormwater runoff from new hard surfaces generating runoff or landscaped areas that are not at natural ground level shall be piped to the street drainage system.
75. A mandatory rainwater retention and re-use system comprising storage tanks and ancillary plumbing must be provided for the development. The total storage volume of the rainwater tank system, and the prescribed re-use of the water on site, must satisfy the requirements specified in chapter 6 of Ku-ring-gai Council Water Management Development Control Plan 47 (DCP47).
76. In addition to the mandatory rainwater retention and re-use system provided, an **on-site stormwater detention** system must be provided for the development to control the rate of runoff leaving the site. The minimum volume of the required on-site detention system must be determined in accordance with chapter 6 of the Ku-ring-gai Council Water Management Development Control Plan 47 (DCP 47) - having regard to the specified volume concession offered in lieu of installing rainwater retention tanks. The design of the on-site detention system must be performed by a qualified civil/hydraulic engineer and must satisfy the design controls set out in appendix 5 of DCP 47.
77. For stormwater control a 200mm wide grated channel/trench drain with a heavy-duty removable galvanized grate is to be provided in front of the garage door/basement parking slab to collect driveway runoff. The channel drain shall be connected to the main drainage system and must have an outlet of minimum diameter 150mm to prevent blockage by silt and debris.
78. To control surface runoff all new exposed impervious areas graded towards adjacent property and/or habitable areas are to be drained via the main drainage system. This may require the installation of suitable inlets pits, cut-off structures (e.g. kerb), and/or barriers that direct such runoff to the formal drainage system. Details for such measures shall be shown on the

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approved Construction Certificate issue drawings, to the satisfaction of the Principal Certifying Authority.

79. During construction, stormwater runoff must be disposed in a controlled manner that is compatible with the erosion and sediment controls on the site. Immediately upon completion of any impervious areas on the site (including roofs, driveways, paving) and where the final drainage system is incomplete, the necessary temporary drainage systems must be installed to manage and control runoff as far as the approved point of stormwater discharge. Such measures shall be to the satisfaction of the Principal Certifying Authority.
80. A maintenance period of six (6) months applies to all work in the public road reserve carried out by the applicant - **after** the works have been completed to the satisfaction of Ku-ring-gai Council. In that maintenance period, the applicant shall be liable for any section of the completed public infrastructure work which fails to perform in the designed manner, or as would reasonably be expected under the operating conditions. The maintenance period shall commence once the Applicant receives a written indication from Council stating that the works involving public infrastructure have been completed satisfactorily.
81. Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the Applicants full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services at the appropriate stage of development (including water, phone, gas and the like). Council accepts no responsibility whatsoever for any matter arising from its approval of this application involving any influence upon utility services provided by another authority.
82. All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials and plant must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "*Traffic Control Devices for Work on Roads*". **If pedestrian circulation is not satisfactorily maintained across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.**
83. The provision of temporary sediment and erosion control facilities and measures must be installed, prior to the commencement of any works on the site to eliminate unnecessary erosion and loss of sediment. These facilities must be maintained in working order during construction works up to completion. All sediment traps must be cleared on a regular basis and after each major storm, and/or as directed by the Principal Certifying Authority and Council officers.
84. Driveways and vehicular access ramps must be designed not to scrape the underside of cars. **In all respects, the proposed vehicle access and accommodation arrangements must be**

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designed and constructed to comply with the minimum requirements of Australian Standard 2890.1 (2004) "Off-Street car parking".

85. The Applicant must obtain a **Section 73 Compliance Certificate** under the *Sydney Water Act 1994*. An application must be made through an authorised Water Servicing Coordinator. The Applicant is to refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-developer" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
86. In order to allow unrestricted access at all times for Ku-ring-gai Council waste collection vehicles into the basement garbage collection area - no doors, grilles, gates or other devices are to be **provided in the access driveways to the basement carpark preventing this service**.
87. A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee the excavation procedure.
88. The geotechnical and hydrogeological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the report by Davies Geotechnical and subsequent reports. Over the course of the works a qualified Geotechnical/ hydrogeological Engineer must complete the following:
- Further geotechnical investigations and testing recommended in the above report(s) and as determined necessary,
 - Groundwater modelling and analysis to assess groundwater levels during and after construction and determine ways to ameliorate effects of development,
 - Review and endorse the design for excavation support,
 - Further monitoring and inspection as recommended in the above report(s) and as determined necessary,
 - Written report(s) including certification(s) of the geotechnical inspection, testing and monitoring programs.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

89. The development is to comply with the recommendations of the Access Report by Mark Relf of Accessibility Solutions dated 16 May 2005 for the nominated adaptable units in relation to kitchens, doors and door hardware. Details are to be provided to the satisfaction of the Principal Certifying Authority prior to release of Construction Certificate.
90. To achieve the minimum energy performance requirements, the following insulation shall be included in the development:
- Insulation with a minimum "R" value of 1.0 in the cavity brick walls;
 - Weather seals to windows and doors;

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- Insulation with a minimum “R” value of 2.0 in the roof/concrete ceiling and foil under the metal deck roof;
- Insulation with a minimum “R” value of 1.0 to the floor including separation from basement car parking.

Details are to be submitted to the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.

91. In order to achieve an acceptable fit with the nearby heritage items and the locality, the colour scheme is to include a greater proportion of warm/earthy colours. A revised colour schedule is to be submitted to Council prior to the release of the Construction Certificate.
92. To protect the privacy of residents to the east, the balustrade of the terrace to the east of Unit 4.02 is to be set back to a distance of 8.5 metres from the eastern boundary. The area to the east of the balustrade is to be non-trafficable. Details are to be submitted for the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.
93. To protect the privacy of residents to the south, the balustrade of the terrace to the south of Unit 4.03 is to be set back to a distance of 8 metres from the southern boundary. The area to the south of the balustrade is to be non-trafficable. Details are to be submitted for the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.
94. Habitable rooms are to have a minimum floor to ceiling height of 2.7 metres. Details are to be submitted for the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.
95. The development is to provide night lighting along all driveways and footpaths throughout the site such that the full length of travel paths is illuminated. Lighting is to be shielded so that neighbouring residences are not adversely affected. Details are to be provided prior to the release of the Construction Certificate.
96. The fencing and landscaping amendments to the south-west corner of the site required as conditions of this consent, are to be submitted to Council’s Strategic Traffic Engineer and approved prior to the release of the Construction Certificate.
97. The Long Service Levy is to be paid to Council in accordance with the provisions of Section 34 of the Building and Construction Industry Payments Act 1986 prior to the issue of the Construction Certificate.

Note: Required if cost of works exceed \$25,000.00.

99. The Infrastructure Restorations Fee calculated in accordance with the Council's adopted schedule of Fees and Charges is to be paid to the Council prior to any earthworks or construction commencing. The applicant or builder/developer will be held responsible for and liable for the cost any damage caused to any Council property or for the removal of any waste bin, building materials, sediment, silt, or any other article as a consequence of doing or not doing anything to which this consent relates. "Council Property" includes footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, litter bins, trees, shrubs, lawns mounds, bushland, and similar structures or features on road reserves or any adjacent

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public place. Council will undertake minor restoration work as a consequence of the work at this site in consideration of the "Infrastructure Restorations Fee" lodged with the Council prior to the release of the Construction Certificate. This undertaking by the Council does not absolve the applicant or Builder/developer of responsibility for ensuring that work or activity at this site does not jeopardise the safety or public using adjacent public areas or of making good or maintaining "Council property" (as defined) during the course of this project.

100. To maintain residential amenity, all electrical services to the site are to be provided underground and must not disturb the root system of any trees. Please contact the energy supply authority's local customer service office to obtain documentary evidence that the authority has been consulted and that their requirements have been met. This information is to be submitted to Council prior to the release of the Construction Certificate.
101. The developer shall submit to Council a letter from the energy supply authority and either Telstra or Optus, confirming that satisfactory arrangements have been made for the provision of underground telephone and power services, prior to the release of the Construction Certificate. Application may be made to Energy Australia Phone No. 13 1525 and either Optus, Network Operations, Facsimile No 9837 9060, Phone No 9837 9010, or Telstra Phone No 12 455.
102. A contribution is to be paid for the provision, extension or augmentation of community facilities, recreation facilities, open space and administration that will, or are likely to be, required as a consequence of development in the area.

TOTAL CONTRIBUTION FOR THIS DEVELOPMENT OF 37 ADDITIONAL DWELLINGS IS CURRENTLY \$761,401.80. The amount of the payment shall be in accordance with the Section 94 charges as at the date of payment. The charges may vary at the time of payment in accordance with Council's Section 94 Contributions Plan to reflect changes in land values, construction costs and the consumer price index.

This contribution shall be paid to Council prior to the release of the Construction Certificate and the amount payable shall be in accordance with the Council's adopted Section 94 Contributions Plan for Residential Development, effective from 30 June 2004, calculated for additional person as follows:

1. Community Facilities	\$1 117.76
2. Park Acquisition and Embellishment Works - Killara	\$6 384.75
3. Sportsgrounds Works	\$1 318.32
4. Aquatic / Leisure Centres	\$27.82
5. Traffic and Transport	\$150.28
6. Section 94 Plan Administration	\$100.04

To obtain the total contribution figure the following table of occupancy rates is to be used:

OCCUPANCY RATES FOR DIFFERENT DWELLING SIZES

Small dwelling (under 75 sqm)	1.27 persons
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Medium dwelling (75 - under 110 sqm)	1.78 persons
Large dwelling (110 – under 150sqm)	2.56 persons
Very Large dwelling (150sqm or more)	3.48 persons
New Lot	3.48 persons
SEPP (Seniors Living) Dwelling	1.3persons

103. A CASH BOND/BANK GUARANTEE of \$10 000.00 shall be lodged with Council as a Landscape Establishment Bond prior to the release of the Construction Certificate to ensure that the landscape works are installed and maintained in accordance with the approved landscape plan or other landscape conditions.

Fifty percent (50%) of this bond will be refunded upon issue of the final Certificate of Compliance, where landscape works as approved have been satisfactorily installed. The balance of the bond will be refunded 3 years after issue of the building certificate, where landscape works has been satisfactorily established and maintained.

It is the responsibility of the applicant to notify Council in relation to the refunding of the bond at the end of the 3 year period. Where a change of ownership occurs during this period it is the responsibility of the applicant to make all arrangements regarding transference of the bond and to notify Council of such.

104. A CASH BOND/BANK GUARANTEE of \$6 000.00 shall be lodged with Council prior to the release of the Construction Certificate to ensure that the following trees are maintained in the same condition as found prior to commencement site development work.

The bond will be returned following issue of the final Certificate of Compliance, provided the trees are undamaged.

In the event that any specified trees are found damaged, dying or dead as a result of any negligence by the applicant or its agent, or as a result of the construction works at any time during the construction period, Council will have the option to demand the whole or part therefore of the bond.

Tree/Location

#5 *Liquidambar styraciflua* (Sweet Gum) \$2 000.00
Adjacent to eastern (side) site boundary

#7 *Macadamia tetraphylla* (Macadamia) \$500.00
Adjacent to southern/Greengate Lane site boundary

#14 *Eucalyptus cinerea* (Argyle Apple) \$2 000.00
Adjacent to northern/Bruce Ave site boundary

#37 *Washingtonia filifera* (Cotton Palm) \$500.00
Adjacent to southern/Greengate Lane site boundary

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#40 *Jacaranda mimosifolia* (Jacaranda) \$1 000.00
Adjacent to southern/Greengate lane site boundary

105. Prior to issue of the Construction Certificate the Applicant must consolidate the existing Torrens lots which will form the development site. Evidence of lot consolidation, in the form of a plan registered with Land and Property Information, must be submitted for approval of the Principal Certifying Authority prior to issue of the Construction Certificate. This condition is imposed to ensure continuous structures will not be placed across separate titles.

106a. The Applicant must carry out the following infrastructure works in the Public Road:

- Construct new concrete footpath for the Bruce Avenue frontage of the development.
- Construct half width road pavement (2.5 metres) for the full frontage of the development including new upright kerb and gutter in Greengate Lane (west).
- Construct 5.5 metres width road pavement and 1 metre width footpath in Greengate Lane (south) for the full frontage of the development, including new upright kerb and gutter.

The applicant is to liaise with Councils Technical Services section as to the position of the carriageway within the road reserve.

Development Consent under the EP&A Act does NOT give approval to these works on Council property. **THE APPLICANT MUST OBTAIN A SEPARATE APPROVAL UNDER SECTION 138 AND 139 OF THE ROADS ACT 1993** for the works in the Public Road, required by this condition. The Construction Certificate must not be issued, and these works must not proceed, until Council has issued a formal written consent under the Roads Act 1993.

To obtain consent under the Roads Act 1993 for the infrastructure works on Council property, full engineering drawings (plans, sections and elevations) and specifications for the infrastructure works are to be prepared by a suitably qualified and experienced consulting civil engineer. These must be submitted and approved by Council prior to issue of the Construction Certificate. Construction of the works must proceed in accordance with any conditions attached to the Council Roads Act 1993 approval.

All works are to be designed in accordance with Council's "Specification for Road and Drainage Works". In addition, the drawings must detail existing services and trees affected by the works, erosion control requirements and traffic management requirements during the course of works. Traffic management is to be certified on the drawings as being in accordance with the documents SAA HB81.1 – 1996 – Field Guide for Traffic Control at Works on Roads – Part 1 and RTA Traffic Control at Work Sites (1998).

NOTE 1: A minimum of three (3) weeks will be required for assessment of Roads Act submissions. Early submission is highly recommended to avoid delays in obtaining a Construction Certificate.

NOTE 2: An engineering assessment fee (set out in Council's adopted fees and charges) is payable and Council will withhold any consent and approved plans until full payment of the correct fees.

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NOTE 3: Plans and specifications must be marked to the attention of Council's Development Engineers. In addition, a copy of this condition must be provided, together with a covering letter stating the full address of the property and the accompanying DA number.

106b. The Applicant must construct a 1.0 metre wide footpath on the western side of the site, adjoining the Greengate Lane (west) site boundary and within the site. Details are to be submitted to Council in conjunction with the works required to the adjacent carriageway, and approved by the Principal Certifying Authority prior to the release of the Construction Certificate.

The applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain a 1.0 metre wide pedestrian footpath along the Greengate Lane (west) frontage of the site. The terms of the instruments are to prevent the placement of any structures, walls, fences or other items which may impede public pedestrian access along that footpath and to require the Owners' Corporation to keep the footpath in a safe condition.

107. Prior to issue of the Construction Certificate the Applicant must submit, for approval by the Principal Certifying Authority, certified parking layout plan(s) to scale showing all aspects of the vehicle access and accommodation arrangements clearly dimensioned. A qualified civil/traffic engineer must review the proposed vehicle access and accommodation layout and provide written certification on the plans that:

- a) All parking space dimensions, driveway and aisle widths, driveway grades, transitions, circulation ramps, blind aisle situations and other trafficked areas comply in full with Australian Standard 2890.1 – 2004 "Off-street car parking".
- b) A clear height clearance of 2.5 metres (required under DCP40 for waste collection trucks) is provided over the designated garbage collection truck manoeuvring areas within the basement.
- c) No doors or gates are provided in the access driveways to the basement carpark which would prevent unrestricted access for internal garbage collection at any time from the basement garbage storage and collection area.

The vehicle access and accommodation arrangements are to be constructed in accordance with the certified plans.

108. Prior to issue of the Construction Certificate and prior to commencement of any works that may be subject to erosion, the applicant must submit, for approval by the Principal Certifying Authority, a Soil and Erosion Control Plan prepared in accordance with the Landcom document "*Managing Urban Stormwater – Soils and Construction, Volume 1*" (2004). A qualified and experienced civil/environmental engineer shall prepare this plan in accordance with the above guidelines and section 8.2.1 of Councils Water Management Development Control Plan 47.

109. Prior to issue of the Construction Certificate the applicant must submit, for approval by the Principal Certifying Authority, scale construction plans and specifications in relation to the stormwater management and disposal system for the development. The plan(s) must include the following detail:

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- Exact location and reduced level of discharge point to the public drainage system.
- Full layout of the property drainage system components, including but not limited to (as required) gutters, downpipes, spreaders, pits, swales, kerbs, cut-off and intercepting drainage structures, subsoil drainage, flushing facilities and all ancillary stormwater plumbing - all designed for a 235mm/hour rainfall intensity for a duration of five (5) minutes (1:50 year storm recurrence).
- Location(s), dimensions and specifications for the required rainwater storage and reuse tanks and systems. Where proprietary products are to be used, manufacturer specifications or equivalent shall be provided.
- Specifications for reticulated pumping facilities (including pump type and manufacturer specifications) and ancillary plumbing to fully utilise rainwater in accordance with the Ku-ring-gai Council Development Control Plan 47 and/or BASIX commitments.
- Details of the required **on-site detention** tanks required under Ku-ring-gai Council Water Management DCP 47 including dimensions, materials, locations, orifice and discharge control pit details as required (refer chapter 6 and appendices 2, 3 and 5 of DCP 47 for volume, PSD and design requirements).
- The required basement stormwater pump-out system to cater for driveway runoff and subsoil drainage (refer appendix 7.1.1 of Development Control Plan 47 for design).

The above construction drawings and specifications are to be prepared by a qualified and experienced civil/hydraulic engineer in accordance with Councils Water Management Development Control Plan 47, Australian Standards 3500.2 and 3500.3 - *Plumbing and Drainage Code* and the BCA. The plans may be generally based on Drawings 56979-1 to -4 by Kneebone & Beretta submitted for Development Application approval, which are to be advanced as necessary for construction issue purposes.

110. Prior to issue of the Construction Certificate the Applicant must contact Energy Australia regarding power supply for the subject development. A written response detailing the full requirements of Energy Australia (including any need for underground cabling, substations or similar within or in the vicinity the development) shall be submitted to the Principal Certifying Authority for approval prior to issue of the Construction Certificate. Any structures or other requirements of Energy Australia shall be reflected on the plans issued with the Construction Certificate, to the satisfaction of the Principal Certifying Authority and Energy Australia. The requirements of Energy Australia must be met in full prior to issue of the Occupation Certificate.
111. Prior to issue of the Construction Certificate the applicant must make contact with all relevant utility providers whose services will be impacted upon by the approved development. A written copy of the requirements of each provider, as determined necessary by the Principal Certifying Authority, must be obtained. All utility services or appropriate conduits for the same, including electricity, gas, telephone, water and sewerage must be provided by the developer in accordance with the specifications of those supply authorities.

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

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112. A report on the existing dwellings is to be submitted and approved to the heritage officer's satisfaction prior to commencement of the work and prior to issue of a Construction Certificate.

The report is to be prepared by a heritage consultant included in the NSW Heritage Office list of recognized consultants or other suitably qualified consultants who have knowledge and experience in preparing archival recording documents.

The report is to be a bound A4 report and must include copies of drawings submitted with the application including site surveys and specialist reports such as heritage assessments, dilapidation report, and builders or engineers reports. Three copies of the report are to be submitted, one copy with negatives. Any archival documents such as family records, old photographs should also be included.

All photographs to be to be mounted, labelled and cross-referenced to the relevant site plan and floor plans and showing position of camera. A photographic recording sheet to be included. Photographs of the following:

- Each elevation
- All interior rooms (1,3 and 5 Bruce Ave only)
- All structures on site such as sheds, outhouses and significant landscape features
- Several photographs of house from public streets or laneways including several views showing relationship of the group of houses to neighbouring buildings.

Minimum requirements:

- Title page
- Statement of reasons the recording was made
- Location Plan showing relationship of site to nearby area
- Site plan to scale (1:200 – 1:500) showing all structures and site elements
- Floor Plan (1:100)
- Black & White archival quality photographs, contact prints with negatives and selected prints (one copy of negatives other copies with contact sheets and selected prints)
- Colour slides (one set)

Digital images and CDs may be submitted as supplementary information.

113. Prior to commencing any construction or subdivision work, the following provisions of the Environmental Planning & Assessment Act, 1979 (the 'Act') are to be complied with:
- a. A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.
 - b. A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act.
 - c. Council is to be notified in writing, at least two (2) days prior to the intention of commencing buildings works, in accordance with Section 81A(2)(c) of the Act.

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- d. Should the development be certified by a Principal Certifying Authority other than Council, a fee for each Part 4A Certificate is to be paid to Council on lodgement of those Certificates with Council.
114. Prior to the commencement of any work, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder who intends to carry out the approved works.
115. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s is fenced off at the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

Tree/Location	Radius in Metres
#5 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to eastern (side) site boundary	6.0m
#14 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to northern/Bruce Ave site boundary	6.0m

116. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s excluding that area of Greengate Lane shall be fenced off for the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site:

Tree/Location	Radius From Trunk
#7 <i>Macadamia tetraphylla</i> (Macadamia) Adjacent to southern/Greengate Lane site boundary	4.0m
#37 <i>Washingtonia filifera</i> (Cotton Palm) Adjacent to southern/Greengate Lane site boundary	3.0m
#40 <i>Jacaranda mimosifolia</i> (Jacaranda) Adjacent to southern/Greengate lane site boundary	5.0m

117. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
118. Tree protection signage is to be attached to each tree Protection Zone and displayed in a prominent position and the sign repeated at 10m intervals or closer where the fence changes direction. Each sign to advise as minimum details, the following:
1. Tree Protection Zone
 2. this fence has been installed to prevent damage to the trees and their growing environment both above and below ground, and access is restricted.

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3. If encroachment or incursion into this Tree Protection Zone is deemed to be essential the consulting Arborist should be informed prior to the undertaking of such works
 4. Name, address, and telephone number of the developer.
119. The area of the Tree Protection Zone is to be mulched to a depth of 100mm with organic material being 75% leaf litter and 25% wood, and this being composted material preferably from the same genus and species of tree as to that where the mulch is to be applied, ie species specific mulch. The depth of mulch and type as indicated, to be maintained for the duration of the project.
120. No services either temporary or permanent are to be located within the Tree protection Zone. If services are to be located within the Tree Protection Zone, special details will need to be provided by a qualified consulting Arborist for the protection of the tree regarding the location of the service/s.
121. In the event of prolonged dry periods, or where a tree has been transplanted, or where excavation nearby, especially up slope, leads to drying out of soil profiles closest to the tree/s, the tree/s is to be deep root watered thoroughly at least twice a week. The need for such watering is determined readily by observing the dryness of the soil surface within the dripline of the tree by scraping back some mulch. Mulch to be reinstated afterwards. In the event of disrupted ground or surface water flows to the tree due to excavation, filling or construction, an irrigation system may be required to be installed, consideration must be given to volume, frequency, and drainage of water delivered, and this should be in consultation with a qualified consulting Arborist.
122. If a tree is growing down slope from an excavation, a silt fence located along the contours of the site in the area immediately above the Tree Protection Zone fencing may be need to be installed and regularly maintained to prevent burial and asphyxiation of the roots of the tree. To allow for the maintenance of both fences, the silt fence must be constructed separately to the tree protection fence and the two fences must be constructed independently of each other and stand alone. To reduce competition the Tree Protection Zone is to be kept free of weeds for the duration of the development works.
123. Upon completion of the installation of the required tree protection measures you are required to contact the principal certifying authority to arrange an inspection of the site. Following the carrying out of a satisfactory inspection and subject to the payment of all relevant monies and compliance with any other conditions of approval, work may commence.
124. Prior to the commencement of **any excavation works** on site the Applicant must submit, for approval by the Principal Certifying Authority (with a copy forwarded to Council) a full dilapidation report on the visible and structural condition of the residence at 9 Bruce Avenue. The report must be completed by a consulting structural/geotechnical engineer. Upon submitting a copy of the dilapidation report to Council (or certification that no report is required), a written acknowledgment from Council development engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site. If the residence has been demolished under a separate approval, no dilapidation report is required.

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125. Prior to the commencement of **any** works on site the applicant must submit, for review by Council Engineers, a *Construction and Traffic Management Plan*. The following matters must be specifically addressed in the Plan:

1. A plan view of the entire site and frontage roadways indicating:

- Dedicated construction site entrances and exits, controlled by a certified traffic controller, to safely manage pedestrians and construction related vehicles in the frontage roadways,
- Turning areas within the site for construction and spoil removal vehicles, allowing a forward egress for all construction vehicles on the site,
- The locations of proposed Work Zones in the frontage roadways,
- Location of any proposed crane standing areas
- A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries
- Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected.
- The provision of an on-site parking area for employees, tradesperson and construction vehicles as far as possible

2. Traffic Control Plan(s) for the site

- All traffic control devices installed in the road reserve must be in accordance with the RTA publication “Traffic Control Worksite Manual” and be designed by a person licensed to do so (minimum RTA ‘red card’ qualification). The main stages of the development requiring specific construction management measures are to be identified and specific traffic control measures identified for each.
- Traffic controllers are to be stationed at the intersection(s) of Bruce Avenue and Greengate Lane and at the bend when construction vehicles are approaching the site from Greengate Lane.
- Consideration should be given to using an existing driveway off Bruce avenue for some site access.
- Approval is to be obtained from Ku-ring-gai Council for any temporary road closures or crane use from public property.

3. A detailed description and route map of the proposed route for vehicles involved in spoil removal, material delivery and machine floatage must be provided.

- Light traffic roads and those subject to a load or height limit must be avoided at all times.
- A copy of this route is to be made available to all contractors, and shall be clearly depicted at a location within the site.

In addition, the plan must address:

- Evidence of RTA concurrence where construction access is provided directly or within 20m of an Arterial Rd.

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- A schedule of site inductions to be held on regular occasions and as determined necessary to ensure all new employees are aware of the construction management obligations. These must specify that construction-related vehicles to comply with the approved requirements.
- Minimising construction related traffic movements during school peak periods.
- For those construction personnel that drive to the site, the Applicant shall attempt to provide on-site parking so that their personnel's vehicles do not impact on the current parking demand in the area.
- Employee parking is to be provided in the basement as soon as practicable.

The *Construction and Traffic Management Plan* shall be prepared by a suitably qualified and experienced traffic consultant and be certified by this person as being in accordance with the requirements of the abovementioned documents and the requirements of this condition. The construction management measures contained in the approved plan shall be implemented in accordance with the plan prior to the commencement of, and during, works on-site including excavation. As the plan has a direct impact on the local road network, the plan shall be submitted to and reviewed by Council, attention Development Engineer. A written acknowledgment from Council engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site. A fee is payable for the assessment of the plan by Ku-ring-gai Council.

126. If a Works Zone is proposed, the Applicant must make a written application to the Ku-ring-gai Local Traffic Committee to install the 'Work Zone'. The application must be made at least 15 days prior to the commencement of any works on site approved under this consent. Works Zones are provided specifically for the set down and pick up of materials and not for the parking of private vehicles associated with the site. Works Zones will generally not be approved where there is sufficient space on-site for the setting down and picking up of goods being taken to or from a construction site. If the Works Zone is approved by the Committee, the Applicant must obtain a written copy of the related resolution from the Ku-ring-gai Local Traffic Committee and submit a copy of this to the Principal Certifying Authority for approval prior to commencement of any works on the site. Where approval of the 'Work Zone' is resolved by the Committee, the necessary 'Work Zone' signage shall be installed (at the cost of the Applicant) and the adopted fee paid prior to commencement of any works on the site. Further, at the expiration of the Works Zone approval, the Applicant is required to remove the Works Zone signs and reinstate any previous signs, all at the Applicant's cost.
127. Prior to the commencement of any works on site the applicant shall submit to Ku-ring-gai Council a full dilapidation report on the visible and structural condition (**including a photographic record**) of the following public infrastructure:
 - a) Full road pavement width, including kerb and gutter, of Bruce Avenue over the site frontage.
 - b) All driveway crossings and laybacks opposite the subject site, including rear accesses and fences to Greengate Road properties.

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The report must be completed by a consulting structural/civil engineer. Particular attention must be paid to accurately recording (both via photo and in written format) *existing* damaged areas on the aforementioned infrastructure so that:

- Council is fully informed when assessing any damage to public infrastructure caused as a result of the development, and
- Council is able to refund infrastructure damage bonds, in full or parts thereof, with accuracy.

The developer may be held liable to any recent damage to public infrastructure in the vicinity of the site, where such damage is not accurately recorded under the requirements of this condition prior to the commencement of works. In this respect, the infrastructure damage bond lodged by the subject developer may be used by Council to repair damage regardless. A written acknowledgment from Council engineers must be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site.

128. If the use of temporary rock anchors extending into the road reserve is proposed, then approval must be obtained from Council in accordance with Section 138 of the Roads Act 1993. The Applicant is to submit details of all the work that is to be considered, and the works are not to commence until approval has been granted. The designs are to include details of the following:

- (1) How the temporary rock anchors will be left in a way that they will not harm or interfere with any future excavation in the public road
- (2) That the locations of the rock anchors are registered with Dial Before You Dig
- (3) That approval of all utility authorities likely to use the public road has been obtained. All temporary rock anchors are located outside the allocations for the various utilities as adopted by the Streets Opening Conference.
- (4) That any remaining de-stressed rock anchors are sufficiently isolated from the structure that they cannot damage the structure if pulled during future excavations or work in the public road.
- (5) That signs will be placed and maintained on the building stating that de-stressed rock anchors remain in the public road and include a contact number for the building manager. The signs are to be at least 600mm x 450mm with lettering on the signs is to be no less than 75mm high. The signs are to be at not more than 60m spacing. At least one sign must be visible from all locations on the footpath outside the property. The wording on the signs is to be submitted to Council's Director Technical Services for approval before any signs are installed.

Permanent rock anchors are not to be used where any part of the anchor extends outside the development site into public areas or road reserves.

- All works in the public road are to be carried out in accordance with the Conditions of Construction issued with any approval of works granted under Section 138 of the Roads Act 1993.

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CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A SUBDIVISION
CERTIFICATE

129. An easement for waste collection is to be created. This is to permit legal access for Council, Council's contractors and their vehicles over the subject property for the purpose of collecting waste from the property. The terms of the easement are to indemnify Council and Council's contractors against damages to private land or property whilst in the course of carrying out waste collection services. The terms of the easement are to be generally in accordance with Council's draft terms for an easement for waste collection.
130. Prior to release of the linen plan/issue of the subdivision certificate, the Section 73 Sydney Water compliance certificate **which refers to the subdivision application** must be obtained and submitted to the Council.
131. For endorsement of the linen plan/issue of the subdivision certificate, the Applicant shall submit an original plan of subdivision plus six (6) copies, suitable for endorsement by the consent authority. The following details **must** be submitted with the plan of Subdivision and its (5) copies, where Council is the consent authority:
 - a. The endorsement fee current at the time of lodgment.
 - b. The 88B Instruments plus six (6) copies,
 - c. A copy of the Occupation Certificate,
 - d. The Consulting Engineer's certification of the on-site stormwater detention facility. This must be on the standard Council on-site detention certification sheet, available from Council's customer services.
 - e. A copy of all works-as-executed plans required under the consent,
 - f. All Surveyor's and/or Consulting Engineer's certification(s) required under this consent,
 - g. The Section 73 (Sydney Water) Compliance Certificate.

Council officers will check the consent conditions on the subdivision. Failure to submit the required information will delay endorsement of the linen plan, and may require payment of rechecking fees.

Note 1: Plans of subdivision and copies must not be folded.

Note 2: Council will not accept bonds in lieu of completing subdivision works.

Note 3: If the certifying authority is not Council, then a copy of all of the above must be provided to Council

132. For endorsement of the linen plan / subdivision certificate issue, the Applicant shall submit an original instrument under Section 88B of the Conveyancing Act with the plan of subdivision, plus six (6) copies. This is to create any required easements, rights-of-carriageway, positive covenants, restrictions-on-use or other burdens/benefits as may be required. Ku-ring-gai Council must be named as the authority whose consent is required to release, vary or modify the same.
133. Prior to release of the linen plan/issue of the subdivision certificate, the applicant shall create all burdens including but not limited to drainage easements, easements for services and rights-

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of-carriageway, as required. A registered surveyor is to certify, prior to release of the linen plan/issue of the subdivision certificate, that all existing interallotment drainage lines, services and/or driveways are fully contained within the proposed burdens and/or that future provision of such are fully covered by the proposed burdens. Alternatively, where the surveyor is of the opinion that no interallotment easements or rights-of-carriageway are required, then certification to this effect must be submitted to the Principal Certifying Authority (PCA).

CONDITIONS TO BE COMPLIED WITH PRIOR TO OCCUPATION

134. Prior to the release of any occupation certificate, a compliance certificate must be obtained from an accredited certifier, certifying that the building works for the building to be occupied comply with the plans and specifications approved by this development consent; and any construction certificate associated with this consent for the buildings to be occupied. If the PCA is not the Council, then this compliance certificate must be submitted to the Council at the same time as the occupation certificate is submitted to the Council in accordance with Clause 151(2) of the E P & A Act regulations.
135. The landscape works shall be completed prior to release of the Certificate of Occupation and maintained in a satisfactory condition at all times.
136. On completion of the LANDSCAPE WORKS, a Landscape Architect or qualified Landscape Designer shall submit a report certifying correct installation, faithful to the landscape plan to the Principal Certifying Authority with a copy to Council, prior to issue of the Occupation Certificate.
137. Prior to issue of the Occupation Certificate, the Principal Certifying Authority (where not Council) must provide Ku-ring-gai Council with a signed declaration that the following works in the road reserve have been completed in full:
 - New concrete footpath along the Bruce Avenue frontage of the site.
 - New road pavement and kerb and gutter in accordance with the plans approved by Council under the Roads Act.
 - Removal of **all** redundant driveway crossings and kerb laybacks (or sections thereof) and reinstatement of these areas to footpath, turfed verge and upright kerb and gutter. (Reinstatement works to match surrounding adjacent infrastructure with respect to integration of levels and materials).
 - Full repair and resealing of any road surface damaged during construction.
 - Full replacement of damaged sections of grass verge with a non-friable turf of native variety to match existing.

All works must be completed in accordance with the *General Specification for the Construction of Road and Drainage Works in Ku-ring-gai Council*, dated November 2004. The Occupation Certificate must not be issued until all damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council. Repair works shall be at no cost to Council.

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138. Prior to issue of the Occupation Certificate the applicant must create a Positive Covenant and Restriction on the Use of Land under Section 88E of the Conveyancing Act 1919, burdening the owner with the requirement to maintain the on-site stormwater detention facilities on the lot. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instrument for protection of on-site detention facilities" (refer to appendices of Ku-ring-gai Council Water Management DCP 47) and to the satisfaction of Council. For existing Titles, the Positive Covenant and the Restriction on the use of Land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the On-Site Detention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms. Registered title documents showing the covenants and restrictions must be submitted and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.
139. Prior to issue of the Occupation Certificate the applicant must create a Positive Covenant and Restriction on the Use of Land under Section 88E of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site stormwater retention and re-use facilities on the property. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instruments for protection of retention and re-use facilities" (refer to appendices of Ku-ring-gai Council Water Management DCP 47) and to the satisfaction of Council. For existing Titles, the Positive Covenant and the Restriction on the use of Land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the reuse and retention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms. Registered title documents showing the covenants and restrictions must be submitted and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.
140. Prior to issue of the Occupation Certificate the following must be provided to Council (attention Development Engineer):
- a) A copy of the approved Construction Certificate stormwater detention/retention design for the site, and
 - b) A copy of any works-as-executed drawings required under this consent
 - c) The Engineer's certification of the as-built system.
- This condition is required so Council may maintain its database of as-constructed on-site stormwater detention systems, and applies particularly where the appointed Principal Certifying Authority (PCA) is not Ku-ring-gai Council.
141. Prior to issue of an Occupation Certificate the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.
142. Prior to issue of an Occupation Certificate the applicant must submit certification from a suitably qualified and experienced traffic/civil engineer to the Principal Certifying Authority. This certification must be based on a site inspection of the constructed vehicle access and accommodation areas, with dimensions measurements as necessary, and must make specific reference to the following:

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- a) That the as-constructed carpark complies with the approved Construction Certificate plans,
 - b) That the completed vehicle access and accommodation arrangements comply in full with Australian Standard 2890.1 – 2004 “Off-Street car parking” in terms of minimum parking space dimensions provided,
 - c) That finished driveway gradients and transitions will not result in the scraping of the underside of cars.
 - d) That no doors, gates, grilles or other structures have been provided in the access driveways to the basement carpark, which would prevent unrestricted access for internal garbage collection from the basement garbage storage and collection area.
 - e) That the vehicular headroom requirements of:
 - Australian Standard 2890.1 - “Off-street car parking”,
 - 2.44m height clearance for waste collection trucks (refer DCP 40) are met from the public street into and within the applicable areas of the basement carpark.
143. Prior to issue of the Occupation Certificate a qualified and experienced consulting civil/hydraulic engineer must undertake a site inspection of the completed stormwater drainage and management system. The engineer is to provide written certification based on the site inspection to the Principal Certifying Authority, prior to issue of the Occupation Certificate, which makes specific reference to all of the following:
- a) That the stormwater drainage works have been satisfactorily completed in accordance with the approved Construction Certificate drainage plans.
 - b) That the minimum retention and on-site detention storage volume requirements of BASIX and Ku-ring-gai Council Water Management DCP 47 respectively, have been achieved in full.
 - c) That retained water is connected and available for uses including toilet flushing, laundry and garden irrigation.
 - d) That basement and subsoil areas are able to drain via a pump/sump system installed in accordance with AS3500.3 and appendix 7.1.1 of Ku-ring-gai Council Water Management DCP 47.
 - e) That all grates potentially accessible by children are secured.
 - f) That components of the new drainage system have been installed by a licensed plumbing contractor in accordance with the Plumbing and Drainage code AS3500.3 2003 and the BCA, and
 - g) All enclosed floor areas, including habitable and garage floor levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices.

The following certification sheets **must be accurately completed and attached** to the certification:

- Rainwater retention certification sheet contained at appendix 13 of Water Management DCP 47
- On-site detention certification sheet contained at appendix 4 of Water Management DCP 47.

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144. Prior to issue of the Occupation Certificate a registered surveyor must provide a Works-as-Executed (WAE) survey of the completed stormwater drainage and management systems. The WAE plan(s) must be submitted to the Principal Certifying Authority for approval prior to issue of the Occupation Certificate. The WAE survey must indicate:

- As built (reduced) surface and invert levels for all drainage pits.
- Gradients of drainage lines, materials and dimensions.
- As built (reduced) level(s) at the approved point of discharge to the public drainage system.
- As built location and internal dimensions of all detention and retention structures on the property (in plan view) and horizontal distances to nearest adjacent boundaries and structures on site.
- The achieved storage volumes of the installed retention and detention storages and derivative calculations.
- As built locations of all access pits and grates in the detention and retention system(s), including dimensions.
- The size of the orifice or control fitted to any on-site detention system.
- Dimensions of the discharge control pit and access grates.
- The maximum depth of storage possible over the outlet control.
- Top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system.

The WAE plan(s) must show the as-built details above in comparison to those shown on the drainage plans approved with the Construction Certificate prior to commencement of works. All relevant levels and details indicated must be marked **in red** on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.

145. Prior to issue of the Occupation Certificate a maintenance regime shall be prepared for the basement stormwater pump-out system and submitted to Principal Certifying Authority. The regime shall specify that the system is to be regularly inspected and checked by qualified practitioners.

146. Prior to issue of the Occupation Certificate a suitably qualified and consulting geotechnical engineer is to provide certification to the Principal Certifying Authority that excavation and construction of the basement level, including temporary and permanent shoring and retention measures, have been carried out:

- a) According the relevant Australian Standards and guidelines, and
- b) According to any approved Geotechnical report undertaken for the development, and
- c) In a manner that ensures that the structural amenity of adjoining structures and property is fully maintained.

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147. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring with certifications as specified in the Report on Geotechnical Investigation by Davies Geotechnical and the professional geotechnical input over the course of the works, must be compiled in report format and submitted to the Principal Certifying Authority for approval.
148. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate (and at the completion of the works) the Applicant shall submit to the Principal Certifying Authority (PCA) a follow up dilapidation report on the visible and structural condition of the residence at 9 Bruce Avenue.

The Report must be completed by a practicing consulting structural engineer and be submitted for Council records prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate. If the residence has been demolished under a separate approval, no follow-up report is required.

BUILDING CONDITIONS

149. The following are required details and must be submitted to the Principal Certifying Authority *prior to issue of the Construction Certificate*. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.
 - a. Details prepared by a practicing structural engineer for all or any reinforced concrete, structural steel or timber framing.
 - b. Wind bracing details complying with AS 1684-1992 National Timber Framing Code, AS 1170.2-1989 Wind Load Code or AS 4055-1992 Wind Loads for Housing Code.
 - c. Retaining walls and associated drainage.
 - d. Wet area waterproofing details complying with the Building Code of Australia.
 - e. Mechanical ventilation details complying with Australian Standard 1668-1993 Mechanical Ventilation & Airconditioning.
 - f. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
 - g. Stormwater disposal details complying with Council's Stormwater Management Manual and/or other conditions of this consent.
150. The following are required details and must be submitted to the Council on completion of the works. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.
 - a. Wet area waterproofing details complying with the Building Code of Australia.
 - b. Mechanical ventilation details complying with Australian Standard 1684 Mechanical Ventilation & Airconditioning.
 - c. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
 - d. Waterproofing of walls/floors below ground level to prevent the entry of water into the building.

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- e. A Registered Surveyor's Report on completion of footings but before external walls are above floor level verifying compliance with this consent.
- f. A Registered Surveyor's Reports confirming approved floor levels for all floors.

T Southwell
Development Assessment Officer

R Kinninmont
Team Leader
Assessment Team – South

M Prendergast
Manager
Development Assessment Services

M Miocic
Director
Development & Regulation

Attachments:
Original DA report - 558012
Location map - 548754
Zoning extract - 548755
Architectural plans - 548933, 548934
Landscape plans - 548760

Item 2

DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:

1 TO 7 BRUCE AVENUE & 6
GREENGATE LANE, KILLARA -
DEMOLITION OF 4 SINGLE
DWELLINGS AND 1 DUAL
OCCUPANCY AND CONSTRUCTION
OF A 5 STOREY RESIDENTIAL FLAT
BUILDING CONTAINING 42 UNITS,
ASSOCIATED BASEMENT CAR
PARKING AND STRATA
SUBDIVISION

WARD:

Gordon

DEVELOPMENT APPLICATION N^o:

514/05

SUBJECT LAND:

1 to 7 Bruce Avenue & 6 Greengate
Lane, Killara

APPLICANT:

Colonial State Properties P/L

OWNER:

Energy Australia, Anthony and Joy
Kennedy, Laurice Hinder, Simon and
Michela Brady, Naomi Upton, Kit Yeung
James Grant, Fortey and Grant
Architecture

DESIGNER:

Residential dwellings

PRESENT USE:

2(d3)

ZONING:

No

HERITAGE:

PERMISSIBLE UNDER:

Ku-ring-gai Planning Scheme Ordinance
KPSO, DCP 55 - Multi-Unit Housing,
DCP 31 - Access, DCP 40 - Waste
Management, DCP 43 - Car Parking,
DCP 47 - Water Management

COUNCIL'S POLICIES APPLICABLE:

No (KPSO)

COMPLIANCE WITH CODES/POLICIES:

SEPP 1, SEPP 55, SEPP 65

GOVERNMENT POLICIES APPLICABLE:

COMPLIANCE WITH GOVERNMENT POLICIES:

Yes

DATE LODGED:

27 May 2005

40 DAY PERIOD EXPIRED:

6 July 2005

PROPOSAL:

Demolition of 4 single dwellings and 1
dual occupancy and construction of a 5
storey residential flat building containing
42 units, associated basement car parking
and strata subdivision

RECOMMENDATION:

Approval

Item 2

DEVELOPMENT APPLICATION N^o 514/05
PREMISES: 1 - 7 BRUCE AVENUE & 6 GREENGATE
LANE, KILLARA
PROPOSAL: DEMOLITION OF 4 SINGLE DWELLINGS
AND 1 DUAL OCCUPANCY AND
CONSTRUCTION OF A 5 STOREY
RESIDENTIAL FLAT BUILDING
CONTAINING 42 UNITS, ASSOCIATED
BASEMENT CAR PARKING AND STRATA
SUBDIVISION
APPLICANT: COLONIAL STATE PROPERTIES P/L
OWNER: ENERGY AUSTRALIA, ANTHONY AND JOY
KENNEDY, LAURICE HINDER, SIMON AND
MICHELA BRADY, NAOMI UPTON, KIT
YEUNG
DESIGNER JAMES GRANT, FORTEY AND GRANT
ARCHITECTURE

PURPOSE FOR REPORT

To determine development application No.514/05 which seeks consent for the demolition of 4 single dwellings and 1 dual occupancy and the construction of a 5 storey residential flat building containing 42 units and associated basement car parking.

EXECUTIVE SUMMARY

Issues:

- Height.
- Traffic and access.
- Heritage setting of Greengate Hotel.
- Local context.
- Privacy.
- Internal amenity.
- Setback to courtyards.

Submissions:

23 Submissions (original scheme)
8 submissions (amended plans)

**Land & Environment Court
Appeal:**

No appeal lodged

Recommendation:

Approval

HISTORY

Item 2

Site history:

The site is used for residential purposes. There is no history of the site relevant to the subject development application.

Development application history:

DA 514/05

16 March 2005	Pre-lodgement consultation held between Council officers and applicant. This design incorporated 2 buildings on the site. Particular concern was raised in relation to the adequacy of the building separation and front setbacks, overshadowing of communal open space, poor design on building entries and the method of addressing the corner location.
27 May 2005	Application lodged
15 June 2005	Request to applicant for further information on landscaping and heritage.
21 June 2005	Further landscaping information received, including amended plans to address deep soil issues.
23 June 2005	Request to applicant for further information on landscaping, height, subdivision, and owners' consent.
1 July 2005	Amended plans and owners' consents received.
13 July 2005	SEPP No. 1 objection (height) and information on materials received.
26 July 2005	Remaining owner's consent received.
4 August 2005	Survey overlay and comment on setbacks in relation to heritage received.
8 August 2005	Correspondence regarding solar access issues sent to applicant.
8 August 2005	Correspondence received in response to submissions.
11 August 2005	Preliminary comments from urban design consultant sent to applicant- heritage and solar access issues- amended plans requested.
18 August 2005	Information received re solar access, building relocation, height, materials.
22 August 2005	Correspondence received from applicant regarding possible relocation of building to the east.

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- 8 September 2005 Amended plans received, relocating building to the east, solar access, SEPP No. 1 objection.
- 15 September 2005 Re-notification of plans due to relocation of building.
- 27 September 2005 Amendment to height, and SEPP No. 1 objection received.
- 28 September 2005 Concept for fire services room amendments regarding ceiling heights received.
- 5 October 2005 Strata subdivision plan and amendments in regard to fire services room received.

THE SITE AND SURROUNDING AREA

Zoning:	2(d3)												
Visual Character Study Category:	1920-1945												
Lot & DP Number:	<table> <tr> <td>1 Bruce Avenue</td><td>Lot 1, DP168563</td></tr> <tr> <td>3 Bruce Avenue</td><td>Lot 1, DP168562</td></tr> <tr> <td>5 Bruce Avenue</td><td>Lot 1, DP168561</td></tr> <tr> <td>7 Bruce Avenue</td><td>Lot 42, DP786430</td></tr> <tr> <td>6 Greengate Lane</td><td>Lot 41, DP786430</td></tr> <tr> <td>Greengate Lane</td><td>Lot 3, DP772155</td></tr> </table>	1 Bruce Avenue	Lot 1, DP168563	3 Bruce Avenue	Lot 1, DP168562	5 Bruce Avenue	Lot 1, DP168561	7 Bruce Avenue	Lot 42, DP786430	6 Greengate Lane	Lot 41, DP786430	Greengate Lane	Lot 3, DP772155
1 Bruce Avenue	Lot 1, DP168563												
3 Bruce Avenue	Lot 1, DP168562												
5 Bruce Avenue	Lot 1, DP168561												
7 Bruce Avenue	Lot 42, DP786430												
6 Greengate Lane	Lot 41, DP786430												
Greengate Lane	Lot 3, DP772155												
Heritage Affected:	The site is located diagonally opposite two heritage listed properties at No.655A Pacific Highway – The Greengate Hotel and 663 Pacific Highway. The site itself is not listed nor is it located within a conservation area.												
Bush Fire Prone Land:	No												
Endangered Species:	No												
Urban Bushland:	No												
Contaminated Land:	No												

The subject site comprises of six allotments totalling 3960 m². The site is bounded on three sides by public roads, Bruce Avenue to the north, and Greengate Lane to the south and west. The fourth (eastern) boundary adjoins a single residential allotment which is zoned 2(d3). The site is rectangular in shape and has a frontage of 61.4 metres to Bruce Avenue and a depth of approximately 63 metres. The site is approximately 60 metres from the Pacific Highway and approximately 820 metres from Killara Railway Station.

Both Bruce Avenue and Greengate Lane are two-way sealed roads, however, Greengate Lane is generally 4 metres wide without any formalised kerbs.

The site has a fall of approximately 7 metres from its north-western to its south-eastern corners. Stormwater drains to Greengate Lane. Lawns and shrubs and approximately 41 trees are scattered across the site. These are mostly exotic species.

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The site currently contains the following:

Property	Structures	Description
1 Bruce Ave	Single storey dwelling, detached single garage	Federation style dwelling
3 Bruce Ave	Single storey dwelling	Federation style dwelling
5 Bruce Ave	Single storey dwelling	Federation style dwelling
7 Bruce Ave	Detached dual occupancy with separate single garage	Approved 1993
6 Greengate Lane	Two storey dwelling with attached garage	Approximately 15-20 years old
- Greengate Lane	Concrete slab	Former electricity substation

The heritage impact statement by Mr Robert Staas describes the dwellings at 1-5 Bruce Avenue as *“good representative examples of late Federation style bungalows typical of the early 20th Century development of this part of Killara following its subdivision.”*

These three dwellings are listed as contributory items in the National Trust Urban Conservation Area, but have no statutory heritage listing (see photos in **Appendix 1**).

Surrounding development:

The site is located in an area characterised by residential development, with the exception of the Greengate Hotel, which is on land zoned 3A-A2 (Business – Retail Services).

The rear of the heritage listed Greengate Hotel faces the subject site on the southern corner across Greengate Lane. The hotel has terraces on two levels which overlook the development site (see **Appendix 1**).

To the south of the subject site, at 2 Greengate Road Killara, is a three storey residential flat building on land zoned 2(d) (see **Appendix 1**).

Also opposite the subject site, to the south of Greengate Lane, are the rear yards of properties zoned 2(c2), which each contain single dwelling houses, set back 18.6 - 22 metres from the boundary with Greengate Lane. The rear yards are characterised by landscaping with lawns and a number of mature trees and a timber fence to 1.8 metres in height (see **Appendix 1**).

Nos. 657-661 Pacific Highway, currently a vacant lot, is located to the west of the subject site. An application (DA677/05) for a residential flat building with car parking for the hotel has been lodged with Council under the 2(d3) zoning. A set of 3 storey townhouses are proposed to face Greengate Lane as part of this development.

On the northern side of Bruce Avenue, are single residential dwellings to 2 storeys, on land zoned 2(d3) (see **Appendix 1**). This area is likely to be re-developed for residential flat buildings to 5 storeys in height.

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To the west, on the corner of Bruce Avenue and the Pacific Highway, is a single heritage listed, two storey, dwelling on land zoned 2(b) (see **Appendix 1**).

No. 9 Bruce Avenue, located to the east of the subject site, currently contains a residential dwelling with a swimming pool in the rear yard (see **Appendix 1**). This site is zoned 2(d3) and is included in a current application (DA983/05) for a 5 storey residential flat building.

THE PROPOSAL

The proposal involves the demolition of the existing structures, amalgamation of the 6 lots, construction of a residential flat building containing 42 units, associated car parking and strata subdivision.

The proposal is five storeys in height, with three levels of basement car parking. The building is L-shaped and steps down 1.5 metres from its north-western section to its north-eastern and southern portions.

The building will be set back between 13.2 - 15 metres from Bruce Avenue, 6 metres from Greengate Lane (west), 6.6 metres and 29.5 metres from Greengate Lane (south), and 9 metres from the eastern boundary. The maximum perimeter ceiling height (as defined by LEP 194) is 13.02 metres, with the ridge height an additional 3.3 metres.

The main components of the proposal are as follows:

- A total of 42 units comprising 32 x 3 bedroom units, 6 x 2 bedroom units and 4 x 1 bedroom units with balconies or ground level open space. The units vary in size from 62.7 m² to 190.4 m²;
- A total of 91 car parking spaces, comprising 79 resident spaces and 12 visitor spaces. The basement also includes a car wash bay, bicycle parking, waste area and stormwater retention tanks;
- 2 lifts are provided from the basement levels through to the top floor;
- The common area that includes a swimming pool, spa, bathroom, paved area and barbeque;
- A steel picket fence to the street boundaries and a 1.8m high timber fence to the boundary with No. 9 Bruce Avenue.

Pedestrian entry is available on three sides. The main pedestrian entry is from Bruce Avenue. Pedestrian access is also gained via Greengate Lane to the west and to the south. Vehicular access is via a 6 metres wide driveway off the southern section of Greengate Lane.

Five (5) trees are proposed to be retained, including a significant *Eucalyptus cinerea* (Argyle Apple) on Bruce Avenue, and extensive landscaping is proposed with an additional 24 large trees.

Amended plans dated 21 June 2005

- Relocation of pool
- Other minor landscaping changes to increase the deep soil area.

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Amended plans dated 1 July 2005

- Redesign of front pathway, private terraces and other minor landscaping changes to increase the deep soil area to 50% of the site.

Amended plans dated 30 August 2005

- Relocation of the building to 2.4 metres to the west, resulting in setbacks of 8.4 metres to Greengate Lane and 6 metres from the eastern boundary.
- Reduction in height of some of the retaining walls to private open space areas.
- Amended shadow diagrams.
- Removal of fin walls to balconies.
- The maximum perimeter ceiling height (as defined by LEP 194) of 13.48 metres.

Amended plans dated 26 September 2005

- Reduction of maximum perimeter ceiling height to 13.18 metres by reducing slab sizes.

Amended plans dated 5 October 2005

- Change in access to fire services room to comply with BCA

CONSULTATION - COMMUNITY

In accordance with Council's Notification Policy, owners of surrounding properties were given notice of the application. In response, 23 submissions were received:

Original scheme dated 27 May 2005

1. David Ascroft, 24 Greengate Lane, Killara
2. JM Lanser, 2/2 Greengate Rd, Killara
3. Stewart & Patricia Cooper, PO Box 694, Gordon
4. Mr Tanuwidjojo, 20 Greengate Rd, Killara
5. Peter & Loretta Woodhead, 8 Greengate Rd, Killara
6. Chris Kollias, 67 Gueudecourt Ave, Earlwood
7. Ken Knox, 10 Greengate Rd, Killara
8. Roger & Barb Illingworth, 12 Greengate Rd, Killara
9. TJ & JE Hart, 14 Greengate Rd, Killara
10. E J O'Donnell, 16 Greengate Rd, Killara
11. M R O'Donnell, 16 Greengate Rd, Killara
12. Janet O'Donnell, 16 Greengate Rd, Killara
13. Jung Hun Lee, 18 Greengate Rd, Killara
14. William Fazl & Josephine Beumont, 25 Greengate Rd, Killara
15. Tom & Michelle Howard & O'Dea, 26 Greengate Rd, Killara
16. Edith Chang, 29 Greengate Rd, Killara

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17. B & P Burdett Nettleton, 27 Greengate Rd, Killara
18. Mark Wong, 31 Greengate Rd, Killara
19. Edwina Fawcett, 22 Greengate Rd, Killara
20. Brian & Rhonda Mills, 23 Greengate Rd, Killara
21. Daphne Beumont, 25 Bruce Ave, Killara
22. Graham & Sandra Chipps, 702 Pacific Highway, Killara
23. Christopher Hallam & Associates P/L, PO Box 1021, Glebe Point & Minutes of Greengate Residents Meeting.

The submissions raised the following issues:

Access via Greengate Lane- the development should be accessed via Bruce Avenue

The site slopes away from Bruce Avenue. Entry from Bruce Avenue, leading down to a basement carpark, would result in practical design difficulties due to grade changes. Entry from the lower side to access the basement car parking is a more practical solution. Further, SEPP 65 and the Residential Flat Design Code encourage the use of laneways and secondary streets for vehicular access to allow for active main street frontages, to enable separation of pedestrian and vehicle access and to avoid compromising street and landscape character. The design of the proposal in this regard, meets these requirements.

Vehicular safety Greengate Lane - state of road, width not adequate or compliant with AS 2890.1.2004

The applicant has submitted a Traffic Assessment Report which relies on traffic counts to establish a representation of pre-developed traffic volumes on normal working days. The report has been reviewed by Council's Engineering Assessment Acting Team Leader, Kathy Hawken, in relation to traffic generation, vehicle access and parking.

Ms Hawken concludes that Greengate Lane is capable of supporting the traffic generated by the development. Council's internal traffic study has considered alternatives for traffic flow in the locality, including road widening in Bruce Avenue (parallel to the railway line), and implementation of one-way flow in Greengate Lane. It is understood that the process of implementing this is underway and such measures would cater for the cumulative impacts from other multi-unit development that is anticipated under the zoning of adjoining sites.

Overflow parking from Greengate Hotel prevents safe vehicular access, including large vehicles such as waste collection vehicles. Parking restrictions on Greengate Lane are needed, however, this in turn would lead to insufficient on-street parking in locality

Waste is currently collected from Greengate Lane, however, there have been problems with access for waste collection vehicles when vehicles are parked close to the subject site. The proposed development will use small waste vehicles which will not encounter the same problems. Residents have been requested not to park in this area, however, Council will monitor the situation to assess whether parking restrictions are required. Visitors to the site are expected to use visitor parking

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spaces or Bruce Avenue. Additional parking for the hotel is proposed provided on 657-661 Pacific Highway.

Insufficient visitor parking, resulting in further congestion in local streets

The proposal provides generous parking through 5 additional resident spaces and one additional visitor space. The quantum of car parking proposed is compliant with Council's Development Control Plan No. 43 – Car Parking and DCP No. 55.

Pedestrian/cyclist safety Greengate Lane, Bruce Avenue

Neither Greengate Lane nor Bruce Avenue have existing footpaths. Greengate Lane has no curb and gutter. A condition of consent is recommended, requiring the applicant to provide a footpath for the Bruce Avenue frontage, and construct half width road pavement in Greengate Lane (west) and road pavement in Greengate Lane (south) for the full frontage of the development, including new upright kerb and gutter (**Condition No. 106**). Council's Strategic Traffic Engineer has carried out an internal traffic study, and one way traffic is being considered for Greengate Lane which will allow for improved safety for pedestrians and cyclists, either as a shared road or with a separate footpath.

Safety from restricted sight lines

Vehicles will have adequate on site manoeuvring for forward entry and exit to and from the site. Drivers will have adequate sight lines in both directions of the lane when entering and exiting the site. One way traffic would improve safety at the corners of concern. In addition, a condition is recommended that the treatment of the 90 degrees corner of Greengate Lane (south) and Greengate Lane (west) be redesigned to improve sight lines (**Condition No. 62**).

Impact from additional traffic noise and from waste collection

The site has been designed to permit multi-unit development and the minor additional traffic noise expected is consistent with that expected in an urban area for this form of development. The waste collection area is in the basement, well removed from other developments. Waste vehicles already access Greengate Lane to collect waste, so any additional impact will be minimal.

Congestion and safety from cumulative traffic impact of developments on Greengate Rd bridge leading to Werona Ave and use of the narrow section of Bruce Avenue

The intent of rezoning for multi-unit development is to establish medium density living in proximity to transport nodes, educational and health facilities and local business centres. The rezoning of this site under LEP 194 to permit medium density development confers a development potential pursuant to the development standards and controls set out in LEP 194 and DCP 55. The proposal is consistent with the objectives of SEPP 65, the Residential Flat Design Code, LEP 194 and DCP 55 and will not result in a cumulative impact beyond that which is provided for under the zoning and associated controls that apply to the site.

Precedent set for future access via Greengate Lane

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Council's engineer has assessed the potential cumulative impact of access via Greengate Lane to future multi unit developments and considers this to be satisfactory.

Increased flooding to 24 Greengate Lane

The existing developments do not include stormwater detention systems, resulting in uncontrolled runoff to either overland or through pipes to Greengate Lane. The proposal includes the retention and detention of stormwater on the site, which will control the amount of stormwater leaving the site and will substantially reduce the volume and intensity of water that now discharges from the property during heavy rain.

Compatibility with heritage and landscaped environment of Ku-ring-gai –design, materials, height

The application was referred to Council's Urban Design Consultant, Mr Russell Olsson. Mr Olsson finds that the development Proposal satisfactorily addresses the SEPP 65 design principles and he considers the design to be of an acceptable standard. The fin walls to the balconies have been removed in the amended plans, to provide a more conventional appearance.

Visual impact of bulk and scale, especially in relation to small setback to south

The development is permissible and generally complies with the requirements of the KPSO. The building setback to the south complies with the controls in DCP 55 and provides a very generous southern setback for over half of the development width. It is further noted that Council's Urban Design Consultant, Mr Russell Olsson, has reviewed the proposal and raises no concerns in relation to the scale or bulk of the development.

Overshadowing of private open space of Greengate Rd dwellings

There will be some overshadowing of the private open space areas of the 2(c2) sites on the opposite side of Greengate Lane, namely to 2,4,6,8 and 10 Greengate Road. The majority of the private open spaces of 4 and 6 Greengate Road will receive at least 4 hours of sunlight between 9am and 3pm midwinter and 2, 8 and 10 Greengate Road will receive a minimum of 5 hours of sunlight. The proposal therefore complies with the requirements of DCP 55.

Loss of privacy to 4 Greengate Road

See comments under Amended Plans.

Amended plans dated 30 August 2005

The amended plans were also notified. Submissions from the following were received:

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1. Cowley Hearne Lawyers (for P Woodhead)
2. Stewart & Patricia Cooper, PO Box 694, Gordon
3. Peter & Loretta Woodhead, 8 Greengate Rd, Killara
4. E J O'Donnell, 16 Greengate Rd, Killara
5. M R O'Donnell, 16 Greengate Rd, Killara
6. Janet O'Donnell, 16 Greengate Rd, Killara
7. Greengate Rd Residents Committee
8. T/G Howard & M S O'Dea, 26 Greengate Rd, Killara

There were no objections to the proposed amendments. The submissions in response to the amended plans mainly raised the same issues as previously in regard to access and traffic issues, to context, bulk and scale and solar access issues. These concerns are discussed above. However, the following new issues were also raised:

Non-compliance with objectives of DCP 55 in regard to solar access, ventilation, replenishment of tree canopy, setbacks, deep soil, heritage significance of Greengate Hotel, internal amenity for residents, encouragement of walking and bicycle, context, privacy.

See comments in regard to SEPP 65, KPSO and DCP 55.

Privacy to 9 Bruce Avenue, 2, 4, and 6 Greengate Road, and the proposed townhouses at 657-661 Pacific Highway.

With development to the density and scale allowed by LEP 194, a degree of privacy loss is inevitable. At low densities, there is a reasonable expectation that a dwelling will retain high levels of privacy but at higher densities privacy impacts are harder to protect and retaining privacy to the same level as low density development is more difficult.

Nevertheless, there is a minimum separation of 13 metres from the southern portion of the subject building to the boundaries of the sites to the south of Greengate Lane. The private open space of each of these sites is quite deep (a minimum of 16 metres) and the separation requirements of DCP 55 in regard to privacy are satisfied. However, the opportunity exists to further reduce the overlooking of these sites by setting back the balustrade of the southern terrace off unit 4.03 and a condition is recommended in this regard (**Condition No. 93**). Combined with the two trees to be retained in the south-eastern corner of the site and a number of tall trees with understorey plantings to be provided to the south of the proposal, the impact on privacy is acceptable.

The amended plans have increased the setback from the proposed townhouses on 657-661 Pacific Highway to approximately 19 metres. The setback includes a mix of large trees and smaller landscaping. Privacy to the townhouses is satisfactory.

The setback of 6 metres to 9 Bruce Avenue complies with the requirements of DCP 55 and provides for landscaping to minimise the impact on privacy from the lower floors. A multi-unit development is also proposed for 9 Bruce Avenue and the combined setback achieves a separation of 12 metres between the buildings. A condition is recommended to set back the balustrade on the terrace on the

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top floor to minimise overlooking of the existing private open space and the proposed multi-unit development (**Condition No. 92**).

Inadequate information in regard to overshadowing from proposed units to the east

A proposal for multi-unit housing to the east has been lodged with Council and is still under assessment. The shadow impacts of that development will be considered in Council's assessment of the application.

The proposed design, materials and colours conflict, not only with the current streetscape, but also with the proposed adjoining multi-unit developments

The proposals to the east and west of the subject site include more conventional facades, earthy colours and pitched roof forms, while the subject proposal includes square shapes, blue/grey shades and an essentially flat roof form. The roof forms facing Greengate Lane are not dissimilar from the proposed roof forms of the adjoining residential flat proposals where they face Greengate Lane. The difference in design/style is most obvious on Bruce Avenue.

However, the design illustration used in the objection for comparison with the other multi-unit developments, is the original proposal with the projecting fins. The amended plans have replaced the fins with metal and glass balustrades, resulting in a more conventional façade, more consistent with the existing and future streetscape. The proposal includes adequate setbacks and deep soil area which will allow for the establishment of landscaping to soften the built form. A condition of consent is also recommended in regard to colours (**Condition No. 91**). In this context, the proposal is considered to respond satisfactorily to the future character of the locality.

Request for traffic noise impact assessment in relation to 26 Greengate Road

No separate assessment is required. The additional traffic noise is anticipated in the zoning and is compatible with the urban environment.

Construction traffic impacts

A traffic management plan will be required for the construction period via a recommended condition of consent (**Condition No. 125**).

Alternative proposals for access and local roads/referral to RTA

Residents' suggestions for traffic lights at the Pacific Highway/ Bruce Avenue intersection, connection of Bruce Avenue through to Cecil Street and blocking of Greengate Lane at the east/west corner have been raised with Council's Technical Services department. Internal discussions on traffic management in the area are currently being undertaken. The proposal does not require referral to the RTA.

CONSULTATION - WITHIN COUNCIL

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Urban Design Consultant

Council's Urban Design Consultant, Russell Olssen, has commented on the proposal as follows:

“ Design Review

*The following comments were preliminary recommendations made on 9 August 2005.
These comments relate to:*

- *the building's relationship to the Greengate Hotel*
- *the site layout*
- *landscape design*
- *solar access*

The building is currently 6m from the western boundary and approximately 9m from the eastern boundary. The building is visually prominent when viewed from the rear balcony of the Greengate Hotel. This prominence should be reduced by setting the building back, to be 8.5 to 9m from the western boundary facing Greengate Lane. The whole building should be moved to be 6m from the eastern boundary.

The ground level front yards facing Greengate Lane should be no larger than currently proposed, and the additional 2.5m to 3m should be communal space which is planted with large trees. Currently Crepe Myrtles are proposed along this boundary, which have the advantage of being deciduous to allow winter sunlight access. It is recommended that, if possible, larger deciduous trees are planted along the lane. This will provide a better landscape setting for this frontage when viewed from the Greengate Hotel balcony.

It is also recommended that Apartment 9 on each floor is replanned so that the living room balcony is on the north-western corner of the apartment (without creating privacy problems across the opening to Apartment 1). This re-planning will improve sunlight access to this balcony and living area on each floor.

Design amendments were made and the amended drawings show:

- *the building has been re-positioned so that the setback from the eastern*
- *boundary is 6m and the setback from Greengate Lane is 8.4m*
- *the additional 2.4m of open space has been devoted to communal open space*
- *adjacent to Greengate Lane*
- *the apartments on the western side of the building (Apartment 9 etc) have been*
- *re-planned as recommended.*

It is noted that the balcony sunscreens have been re-designed. The new design is acceptable. The proposed materials and colours are also acceptable.

All the recommended changes have been satisfactorily made. Based on SEPP 65

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Design Criteria, the DA should be approved in its current form.”

Despite the above comments, the choice of colours emphasizes the aspects of the development that are less sympathetic to the existing and proposed streetscape.

Heritage

Council’s Heritage Officer, Paul Dignam, has commented on the proposal as follows:

“Demolition of existing houses

The site comprises three lots facing Bruce Avenue and one house facing Greengate Lane. The three houses facing Bruce Avenue, Nos 1,3 & 5 are early bungalows c1920 similar and most likely built by one builder as a speculative development, similar to many other areas of Kuring-gai. The 1928 Water Board plan shows three identical houses named “Pembroke”, “Penrhyn” and “Penarth”. As a group they have some heritage significance as a cohesive ‘bungalow group’ but individually they are not significant. The three houses are graded as contributory to the National Trust UCA No 12 – Greengate precinct, but otherwise have not been identified as having any heritage significance.

The house facing the lane, No 6 Greengate lane is a recent house (1994) and of no heritage significance.

I have no objections to demolition of the subject houses but recommend that archival recording is undertaken for all 4 houses. The level of recording is to reflect the properties heritage significance.

Within the vicinity of a heritage item

The development site is adjacent to the Greengate Hotel and near a Federation period house at 663 Pacific Highway on the corner of Bruce Avenue.

The Greengate Hotel is a substantial hotel sited on the corner of the Pacific Highway and Greengate Avenue and has considerable heritage significance (possible State) and landmark value. The subject site is separated from the hotel by a narrow lane. The rear of the hotel can be seen from the lane and from the Pacific Highway. The view from the highway is only possible as the site adjoining the Greengate Hotel is currently vacant. The site has been rezoned for multi-unit development and a development application has been lodged.

Given the guidelines in DCP 55, physical separation of the proposed development from the Greengate Hotel is considered satisfactory. The primary heritage issue is the potential loss of views from the northern terrace area and potential shadowing of the first floor terrace area as the terrace largely depends on solar access and views for its continued success.

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An inspection of the terrace area was undertaken on 12/8/05. The existing district views are to a distant ridge at the north-east and some limited views to the north-west. It is noted that the views would be different in summer and winter due to the proximity of large oak trees.

There would be some loss of views to the north-east, however the views would not be entirely lost because the lane defines a clear view corridor. The amended design has relocated the western elevation further from the lane which would result in less visual impact on the Greengate Hotel and less reduction in the views enjoyed from the ground and first floor terraces of the hotel.

The architectural design and detail of the proposed building is contemporary and is not considered to have adverse heritage impact on the Greengate Hotel as it will clearly be seen as new development.

The heritage item at 663 Pacific Highway is physically separated from the site and has its main presentation to the corner of Pacific Highway and Bruce Avenue. It is considered that impacts from the subject development on its heritage significance are minimal due to its separation and prominent location on the street corner. It would not affect its immediate setting or curtilage.

UCA

The site is located within the National Trust UCA No 12 – Greengate. The majority of houses in Bruce Avenue are non-contributory. Nos 1, 3, & 5 Bruce Avenue are considered to be contributory to the UCA but their contribution largely depends on their grouping as three relatively intact, modest bungalows. They are not considered to have any significance as individual properties.

It is acknowledged that given the rezoning in Bruce Avenue, future residential flat development will result in a substantial change to the UCA. The Greengate Hotel and Greengate Avenue will largely remain as the focus to the UCA.

I have no objections to demolition of the subject houses provided archival recording is undertaken for all houses on the subject site. The level of recording should relate to the relative significance of the properties (attached condition).

The amended scheme has resulted in greater separation from Greengate Lane which would improve views from the ground and first floor terrace.

Development of this site would not cause unacceptable impacts to the Greengate Hotel, the heritage item at 663 Pacific Highway or the National Trust UCA No 12 – Greengate and is supported.

It is noted that the Greengate Hotel and Greengate Avenue will remain as the focus to the National Trust UCA.”

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Condition No. 15 is recommended to address the recording of the existing dwellings.

Landscaping

Council's Landscape and Tree Assessment Officer, Geoff Bird, raised concerns in respect of deep soil landscaping on the original and amended plans dated 21 June 2005. This issue has been addressed in the later plans. Mr Bird has commented on the amended proposal (dated 30 August 2005) as follows:

"The site

It is proposed to demolish the existing dwellings and associated structures and construct a five storey, multi unit residential flat building with three levels of basement car parking on the amalgamated site area of 3 960sqm with vehicular access from Greengate Lane. The site is characterised by an established landscape setting with mature trees and shrubs within formal garden beds and lawn areas. The site frontage is dominated by numerous trees and shrubs of which the most visually significant is tree #14 Eucalyptus cinerea (Argyle Apple). The rear of the site is characterised by a variety of established trees primarily along the southern site boundary, including some exempt/weed species.

Impacts on trees/Trees to be removed/Tree replenishment

The consulting Arborist (Treescan – David Ford) has identified a total of forty one (41) trees as being located on or associated with the site, not including the existing street trees in front of the development site. Of the identified trees, it is proposed to retain five, which includes the most significant on site. Trees nominated for removal are either located within the proposed building footprint, are exempt under Council's TPO or are in poor health, form and condition. Landscape Services raises no objections to the nominated tree removal, subject to adequate tree replenishment being undertaken on site.

The landscape plan proposes an additional twenty four (24) trees capable of attaining a minimum height of 13.0m as part of the development works in addition to the retention of the existing three, resulting in a total of twenty seven trees being accommodated on site to maintain and replenish the tree canopy. As proposed the additional trees will consist of a mix of both native endemic and exotic tree species planted around the site. This exceeds Council's minimum requirement as per DCP55 guidelines and reflects the existing landscape character of the immediate area. No objection is raised to the proposed tree planting for the site.

Deep soil areas

Previous deep soil landscape area concerns have been addressed. Landscape Services is in agreement with the areas included as deep soil.

Setbacks

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Landscape services raises no objection to the proposed setbacks as there is adequate space and deep soil area for the establishment of tall trees and soft landscape works to maintain and enhance the landscape amenity of the site and immediate area.

Landscape plan

Subject to some minor changes primarily for the location of some tree planting, which can be conditioned, the submitted landscape plan can be supported.

Drainage plan

Overall no objections are raised to the proposed drainage works for the site as consideration has been given to existing trees and landscape treatments to minimise adverse impacts. However, the location of the proposed 'diverted sewer' and the created stormwater easement limits the available area adjacent to the Greengate Lane corner for the establishment of tall trees and screen planting. This has particular relevance to the heritage listed Greengate Hotel, and visual impacts. To minimise this impact, it is preferred that the sewer and easement be located as close as possible to the building footprint beneath proposed grassed areas/small shrub planting to maximise deep soil landscape area adjacent to the site boundary for the establishment of 'tall' canopy trees as required by LEP194."

Subject to conditions Landscape Services can support the application (**refer Condition Nos 63-73, 103 -104, 115-123, 130-131**).

Engineering

Council's Engineering Assessment Officer, Kathy Hawken, has commented on the proposal as follows:

"Summary

The application is supported with conditions.

Subdivision

Strata subdivision is proposed under this application, so subdivision conditions will be recommended.

So that the building is not constructed across lot boundaries, the Applicant will be required to consolidate all the Torrens lots prior to issue of the Construction Certificate.

Stormwater management

The stormwater management plans submitted include on site detention, retention and re-use in accordance with the requirements of Council's Water Management DCP47 :

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- On site **retention** of stormwater for domestic re-use within the buildings for toilet, cold laundry and landscape irrigation (total volume of 223m³).
- On-site **detention** of 49 m³
- Discharging of site runoff to an existing street drainage pit in Greengate Lane.

Under the May 2005 amendment to DCP 47, these volumes could be adjusted to 61.5m³ of detention storage and 42m³ of retention storage. The re-use of retained roofwater for toilet flushing, clothes washing and irrigation is required under DCP 47 for this development since it was lodged prior to 1 October, when BASIX came into force for multi-unit developments.

Traffic generation

Vehicular access to this development is proposed to be from Greengate Lane. At present the lane is sealed, approximately 4 metres wide, with no kerb and gutter on either side. The road reserve varies in width from 6 metres to 8.2 metres. Access to the rear of Greengate Road properties is also gained from the lane.

Although the traffic report predicted that the traffic generated by the development would not cause Greengate Lane to experience traffic volumes above the RTA's environmental capacity of 100 vehicles per hour for accessways, this report did not take into account the other development sites nearby, 657 Pacific Highway and 9-23 Bruce Avenue. Residents commissioned their own traffic report which found that the lane would exceed the environmental capacity following development of all sites.

Council's Strategic Traffic Engineer has carried out an internal traffic study. The study considered alternatives for traffic flow in the area. AMCORD guidelines indicate that for a local road carrying 30 to 100 vehicles per hour, a minimum road reserve of 13 metres and carriageway width of 5 to 5.5 metres is required. Therefore for two way flow to be maintained in Greengate Lane, the road reserve would have to be widened to 13 metres.

An alternative would be one way conditions, with minor widening/ formalisation of the carriageway, similar to Tryon Lane. It is understood that the process of implementing the latter is underway. The recommended conditions allow for the developer to liaise with Council's Traffic Section regarding the desirable width for construction of Greengate Lane and timing of the various stages in the process.

Vehicle access and accommodation arrangements

The proposed development comprises 42 units, of which 32 are to be 3 bedroom. Therefore under LEP 194, 74 resident and 11 visitor parking spaces are required. The plans submitted show 79 resident spaces and 13 visitor spaces and therefore comply.

The dimensions of the spaces and of the aisles and ramps comply with AS2890.1:2004, as do the driveway gradients.

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Waste collection is to be internal, on the upper basement level, and there is sufficient space for the small waste collection vehicle to enter and leave the site in a forward direction.

Construction management

Based on the scale of works and expected construction vehicle movements, a detailed construction traffic management plan must be submitted for review by Council Engineers prior to the commencement of any works on site. During the construction period it is anticipated that traffic and pedestrian control will be particularly important at each entry to Greengate Lane from Bruce Avenue, and at the bend. Consideration may be given to using an existing Bruce Avenue driveway for site access for some of the construction stage. A works zone could be established along the Bruce Avenue frontage. The procedure for this is included in the recommended engineering conditions.

Impacts on Council infrastructure

The developer will be required to construct new road pavement and new kerb and gutter along the Greengate Lane frontage of the site, and new footpath along the Bruce Avenue frontage. Detailed design drawings for these works will be assessed by Council's Technical Services section for approval under the Roads Act. No final certificate would be issued until the works are completed to the satisfaction of Council.

EnergyAustralia has advised that a substation will not be required for this development.

Geotechnical investigation

The applicant has submitted a Report on Preliminary Geotechnical Investigation (Davies Geotechnical report ref: R/05-037.C, dated 11 May 2005.)

Three boreholes were drilled and two encountered residual clay over shale. The other was drilled through a weathered volcanic material, inferred to be a dyke. The extent of the dyke was not able to be determined from one borehole, however the geotechnical report states "Its presence does not affect the geotechnical feasibility of the project but the extent of the inferred dyke will impact on detailed design and construction management." A condition is recommended that the geotechnical engineer endorse the design for excavation support prior to commencement of bulk excavation works at the site.

Excavation of the clays and weathered shale and dyke material is not expected to be difficult, however stronger shale was encountered above the final basement level, which may require more effort to remove. Vibration monitoring and dilapidation surveys of neighbouring buildings and infrastructure will be required. These are included in the recommended conditions.

Support of the excavated faces will depend on the materials encountered and the space available for batters within the site, and temporary rock anchors may be required, possibly extending into the road reserve and/or the neighbouring property. Approval from the

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appropriate owner will be required, and conditions are recommended for obtaining Council's approval for such anchors. Regular inspections of the excavated faces by the geotechnical engineer are recommended.

The report contains an assessment of groundwater conditions, and a preliminary finding that "a significant or adverse impact on adjoining land, due either to the construction or long-term development, through the changes to groundwater "levels" on the subject site that might occur, is not likely." However the engineer recommends further modelling and analysis to confirm this. The completion of this work, prior to commencement of excavation works on site, is included in the recommended engineering conditions."

Condition Nos 74 -88, 105-111, 124 -128, 132-143 as recommended, are included in this report. Further discussion with Council's Engineer have also been held in regard to sight lines and additional conditions are recommended in this regard (**Condition Nos 62 and 96**).

CONSULTATION - OUTSIDE COUNCIL

Energy Australia

The applicant has provided a letter from Energy Australia which includes the following comments:

*"I refer to the Company's correspondence of 11 April 2005 regarding the provision of electricity supply to the residential development at the above address consisting of 42 mixed size units. I confirm that it will **not** be necessary to install a substation on the premises. Fortunately a development is occurring on the Pacific Highway Corner of Bruce Avenue where a substation is to be established. It will be necessary to install a cable from this proposed substation to a position to suit the above development and provide the required electrical supply. A period of approximately 8-12 weeks from agreement and acceptance of the works contract is usually required to program and complete the works. It should be noted that depending on the timing of both projects this cable could be supplied from the existing substation in Bruce Avenue."*

STATUTORY PROVISIONS

State Environmental Planning Policy No. 65 – Design quality of residential flat development

Context:

The proposed development is located within an area recently rezoned Residential 2(d3) for multi unit housing and will initiate the transition from existing development that comprises one to three storey development to the future context of the area characterised by five storey development.

The proposal responds to the context through a well modulated structure which uses a variety of materials and, through the large setbacks which provide adequate space for the planting of tall trees consistent with the landscaped character that currently exists, it provides for future amenity to

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residents of the site and the surrounding area. The large western setback also ensures that the setting of the heritage sites in the vicinity is respected.

Scale:

The proposal complies with the majority of building envelope requirements of LEP 194 that apply to the site, including perimeter ceiling height, deep soil landscaping and site coverage. The perceived scale of the development site is reduced by the staggered setbacks, the incorporation of extensive landscaping areas, the stepping down of the building modules and the deep modulation at the entries from the Bruce Avenue and Greengate Lane (west). The slope of the land from Bruce Avenue reduces the apparent height of the structure, while the large common open space area at the rear aids in the transition with the 2(c2) zones across Greengate Lane.

Built form:

The building is appropriately articulated and modulated to reduce its apparent visual bulk, with deep articulation at the entries which bring landscaped elements deep into the overall footprint and the L-shape, resulting in 3 building modules which step down the site. The bulk is further broken up by the recessive 5th storey, recessed and projecting balconies, wall articulation, broken roof forms, sun shades, detail on railings and the use of a variety of materials namely; concrete blocks, brick, cement render, steel and timber.

Density:

The floor space ratio of 1.27:1 is below the DCP 55 maximum of 1.3 :1 and the number of units reflects the desired future character of the area.

Resource, energy and water efficiency:

Over 65% of units are cross-ventilated, over 70% receive more than 3 hours of solar access between 9 am and 3 pm to living areas or balconies at the winter solstice. Over 90% achieve a 4.5 star NatHERS rating, with all units achieving a minimum of 3.5 stars.

Over 50% of the site is allocated to deep soil landscaping, and adequate water retention and re-use systems are proposed. It is proposed to use plantation timbers.

Landscape:

The deep soil areas are suitably located and proposed landscape works are consistent with the character of the locality, will soften the built form, minimise privacy impacts, help to minimise any impacts on nearby heritage settings and help to provide aesthetic amenity for residents. The design of the deep soil area allows the establishment of canopy trees in excess of the requirements of DCP 55.

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Amenity:

The development provides for a mix of one to three bedroom units. The dwelling layout, design and orientation ensure adequate levels of acoustic and visual privacy, private open space areas and access to natural light. The design of the common areas provides for quality areas of recreational space within the site.

An accessibility report has been provided which demonstrates that the proposal provides a high degree of adaptability and flexibility in terms of access for people with disabilities. All units are “visitable”, 10% of units are designated as “adaptable”, while a further 12 units also demonstrate a reasonable degree of adaptability in terms of room sizes and general layout. The pool and barbecue areas are also accessible and there is ample space around the pool to allow for the future provision of a pool hoist.

Safety and security:

The proposal is well designed in relation to external safety and security, allowing passive surveillance of common open space areas. The internal corridors have a number of corners, however, they are of adequate width and are satisfactory.

The proposal provides for good pedestrian access within the site for users of varying mobility. A condition is recommended to require construction of a footpath for the Bruce Avenue frontage of the development (**Condition No. 106**). Vehicular access is via Greengate Lane. Council’s Development Engineer has stated that, while the environmental capacity of the lane and of the nearby road network is adequate for the proposed development in isolation, the environmental capacity would be exceeded following the re-development of all sites in the locality that have been rezoned to 2(d3). Council’s Strategic Traffic Engineer has recommended that one-way thoroughfare for Greengate Lane and a portion of Bruce Avenue be sought to improve safety in this area. This would allow for either shared vehicle/pedestrian use of the lane or for a separate footpath. This would enhance pedestrian access to existing footpaths leading to Killara station. It is recommended that Council request the Traffic Committee to further refine the one-way proposal and seek RTA support for this change.

Social dimensions:

There is a good mix of unit sizes, to cater for a social mix within the development. The proposal provides on-site recreation facilities adding to the range of lifestyle activities available in the area.

Aesthetics:

The external appearance and composition of building elements, textures and materials satisfactorily reflects the use, internal design and structure of the development. The replacement of some of the cooler colours with earthy colours will ensure that the development is more sympathetic to the existing and desired future character of the locality. A condition is recommended in this regard (**Condition No. 91**).

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State Environmental Planning Policy No. 55 – Remediation of Land

The provisions of SEPP 55 require Council to consider the potential for a site to be contaminated. The subject site has a history of residential use and as such, it is unlikely to contain any contamination and further investigation is not warranted in this case.

Ku-ring-gai Planning Scheme Ordinance (KPSO)

COMPLIANCE TABLE		
Development standard	Proposed	Complies
Site area (min): 1200m ²	3960 m ²	YES
Deep landscaping (min): 50%	50%	YES
Street frontage (min): 23m	60.96m Bruce Ave 60.96m to southern section Greengate Lane 64.3m to western section Greengate Lane	YES
Number of storeys (max): 5	5	YES
Site coverage (max): 35%	34.7%	YES
Top floor area (max): 60% of level below	59.6%	YES
Storeys and ceiling height (max): 4 and 13.4m	5 (Block B) & 13.18m	NO (SEPP 1)
Car parking spaces (min):		
• 11 (visitors)	12	YES
• 74 (residents)	79	YES
• 85 (total)	91	YES
Manageable housing (min): 10%	10% (5 units)	YES
Lift access: required if greater than three storeys		YES
Strata subdivision	Permissible with consent	YES

Storeys and ceiling height (cl.25I(8)):

The proposal meets the standard for perimeter ceiling height, varying between 10 and 13.18 metres. However, the basement area exceeds 1.2 metres above natural ground level and therefore, under Clause 25I(9), technically results in 5 storeys at the perimeter. The non-compliance affects a small area of 9.3 square metres on the south-eastern corner near the eastern boundary, in the area above the stormwater retention tank. This area is occupied on the third floor by a portion of the covered balcony and less than 2.5 square metres of living area of Unit 3.06. The non-compliance is 6 metres from the eastern boundary, over 30 metres from the southern boundary with Greengate Lane, and over 28 metres from the front boundary (Bruce Avenue).

A SEPP 1 objection seeking a variation to a development standard of the Ku-ring-gai Planning Scheme Ordinance (KPSO) has been prepared and lodged with the application. SEPP 1 provides flexibility to Council's development standards and it enables Council to vary such a standard where strict compliance with that standard would be unnecessary,

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unreasonable or tend to hinder the objectives of the Environmental Planning & Assessment Act, 1979.

Where an applicant wishes to vary a development standard, the application must be accompanied by a well founded, written objection which demonstrates that compliance with the particular standard:

- a. is consistent with the objectives of the relevant development standard;
- b. strict compliance would hinder obtainment of the objectives of SEPP1 or the objectives specified in Section 5(a)(i) and (ii) of the Environmental Planning and Assessment Act and
- c. is unreasonable or unnecessary in the circumstances of the case.

The SEPP 1 objection submitted by the applicant describes the underlying objectives of the standard for the number of storeys in Clause 25I(8) as follows:

“The underlying object or purpose of these provisions is considered to ensure that the building design is of a high quality and that there is a level of control provided in respect of building heights. In this regard it is considered that the provisions will ensure that buildings have consistent height and that buildings are designed having regard to the characteristic and topography of a site and will ensure that a building does not dominate its surroundings. The controls also ensure that there is an appropriate cartilage around the perimeter of a building that is capable of sustaining vegetation of a scale which is capable of softening the proposed development.”

In regard to the objectives for the characteristics and topography of the site, issues of overshadowing and dominance in the streetscape and from neighbouring dwellings as a result of the additional storey are relevant. The following summary of the objection provides justification for the non-compliance:

The proposal meets the objects of section 5(a)(i) and (ii) of the Environmental Planning and Assessment Act *“as it would unreasonably restrict the development of the site in circumstances where the proposed variation is considered minor and does not result in any detrimental impacts”*. The circumstances are addressed in the following section.

Compliance with the standard is unreasonable or unnecessary in the circumstances of the case:

- The non-compliance is minor, in that the area of basement that results in an additional floor is exceeds the standard to a maximum of 350mm, for a small triangular section of 9 m², which equates to 0.6% of the basement area;
- The breach occurs where a rainwater tank is proposed. A substantial benefit will be derived from water saved in the retention tank;
- The non-compliance is at the rear of the building;
- The section of the building has adequate separation with a 6 metre setback from the building to the boundary;

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- This setback is dedicated to landscaping and supports a variety of screening and tree species, which will largely screen this section of the building from view;
- The building otherwise complies with the height control of 13.4 metres at the perimeter ceiling height, as the building steps down the site by 1.5 metres from the highest portion of the building;
- No overshadowing results from the additional floor.

While it is not agreed that the relevant setback is entirely dedicated to landscaping, as the location of the private open space area for unit G.06 limits the size of tree planting in this location, a condition of consent (**Condition No. 64**) is recommended to enhance the landscaping generally in this setback. This condition will reduce the impact of the additional height. It is agreed that the non-compliance is minor and will not result in any adverse impacts, especially given that the perimeter ceiling height control is not breached.

The SEPP 1 Objection has demonstrated that the underlying objective of the standard has been satisfied and that compliance with standard in regard to the number of storeys would tend to hinder the attainment of the objects specified in Section 5(a)(i) and (iii) of the Act. The SEPP 1 objection has shown that, in the circumstances, compliance with the development standard is unreasonable and unnecessary. The SEPP 1 Objection has adequately addresses the requisite aspects of the Policy, is well founded and in this instance the development standard should be allowed to be varied.

Zone interface (cl.25L):

It is noted that the site is adjacent only to 2(d3) sites and roadways. However, Greengate Lane is very narrow and it is therefore appropriate to consider the setback to the boundaries of the properties to the south of Greengate Lane, which are zoned 2(c2) and 2(d) and to the Greengate Hotel, zoned 3(a)-(A2). The development is more than 9 metres from these boundaries and therefore complies.

Heritage /conservation areas (cl.61D – 61I):

A heritage impact statement has been provided. Council's heritage advisor, Paul Dignam, has assessed the proposal in light of the statement and considers the demolition of the contributory items is acceptable given the rezoning of the land. The amended plans have increased the setback to the western boundary to 8.4 metres to maintain some of the view corridor from the Greengate Hotel. Given the setbacks, proposed landscaping and modern design of the development, Council's Heritage Advisor is satisfied that the proposal will not result in significant impacts on the heritage settings or significance of the Greengate Hotel or No. 663 Pacific Highway Killara.

Residential zone objectives and impact on heritage:

The development satisfies the objectives for residential zones as prescribed in clause 25D.

POLICY PROVISIONS

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Development Control Plan No. 55 – Railway/Pacific Highway Corridor & St Ives Centre

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 3 Local context:		
Development adjacent to a heritage item:	Site within vicinity of, but not adjacent to heritage items	
• 10m setback (1 st & 2 nd storeys)	>30m	YES
• 15m setback (3 rd & 4 th storeys)	>30m	YES
Part 4.1 Landscape design:		
Deep soil landscaping (min)		
• 150m ² per 1000m ² of site area = 594m ²	>630m ² to south and east	YES
No. of tall trees required (min): 14 trees	30 trees	YES
Part 4.2 Density:		
Building footprint (max):		
• 35% of total site area	34.7%	YES
Floor space ratio (max):		
• 1.3:1	1.27:1	YES
Part 4.3 Setbacks:		
Street boundary setback (min):		
• 13-15 metres to Bruce Ave	13m to terraces and basement, 14.8-15m to primary building line Balconies at 13.5m to 13.8m	YES
• (<40% of the zone occupied by building footprint)	40%	YES
• 6 metres to Greengate Lane	To south: 6.5m – 29.7m to primary building line To west: 6m	YES
Side boundary setback (min):		
• 6m	9m -33m	YES
Setback of ground floor courtyards to street boundary (min):		
• 11m Bruce Ave	10.1m to 12.4m	NO

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% of total area of front setback occupied by private courtyards (max): <ul style="list-style-type: none"> 15% 	19.6%	NO
Part 4.4 Built form and articulation:		
Façade articulation: <ul style="list-style-type: none"> Wall plane depth >600mm 	>600mm	YES
<ul style="list-style-type: none"> Wall plane area <81m² 	>81m ² (83m ²) (east elevation)	NO
Built form: <ul style="list-style-type: none"> Building width < 36m 	46m (Bruce Ave)	NO
<ul style="list-style-type: none"> Balcony projection < 1.2m 	43.6m to Greengate Lne (west) 1.4m to Bruce Ave (Units .02 and .03 on 3 levels)	NO
Part 4.5 Residential amenity		
Solar access: <ul style="list-style-type: none"> >70% of units receive 3+ hours direct sunlight in winter solstice 	71%	YES
<ul style="list-style-type: none"> >50% of the principle common open space of the development receives 3+ hours direct sunlight in the winter solstice 	>50%	YES
<ul style="list-style-type: none"> <15% of the total units are single aspect with a western orientation 	12%	YES
<ul style="list-style-type: none"> Retains 3 hours sunlight to adjoining 2(c1) or 2(c2) habitable rooms and outdoor areas 		YES
Visual privacy: Separation b/w windows and balconies of a building and any neighbouring building on site or adjoining site:		

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Storeys 1 to 4		
• 12m b/w habitable rooms	7.5m (Gr Floor), 6.9 (Floors 1-3) to windows of no 9 Bruce Ave to the east	NO
• 9m b/w habitable and non-habitable rooms	Buildings minimum 24 m from dwellings to the south and 19m to proposed townhouses to the east. >9m	YES
• 6m b/w non-habitable rooms	>6m	YES
5th Storey		
• 18m b/w habitable rooms	6.9m from balcony to window of 9 Bruce Ave (existing dwelling) 13.2m from balcony to balcony of proposed multi-unit development at 9 Bruce Ave	NO
• 13m b/w habitable and non-habitable rooms	6.9m from balcony to window of 9 Bruce Ave (existing dwelling)	NO
• 9m b/w non-habitable rooms	>9m	YES
Internal amenity:		
• Habitable rooms have a minimum floor to ceiling height of 2.7m	2.6m (scaled)	NO
• Non-habitable rooms have a minimum floor to ceiling height of 2.4m	2.6m (scaled)	YES
• 1-2 bedroom units have a minimum plan dimension of 3m in all bedroom	Min 3m	YES
• 3+ bedroom units have a minimum plan dimension of 3m in at least two bedrooms	Min 3m	YES
• Single corridors:		
- serve a maximum of 8 units	9-10 units connected by corridors on 4 levels	NO
- >1.5m wide	>1.5m	
- >1.8m wide at lift lobbies	>1.8m	YES
		YES
Outdoor living:		

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<ul style="list-style-type: none"> Ground floor apartments have a terrace or private courtyard greater than 25m² in area Balcony sizes: <ul style="list-style-type: none"> - 10m² – 1 bedroom unit - 12m² – 2 bedroom unit - 15m² – 3 bedroom unit NB. At least one space >10m² Primary outdoor space has a minimum dimension of 2.4m 	<p>>25m²</p> <p>11.9m² >12m² >15m²</p> <p>1.8m-2.1m to units 1.10 and 2.10. All other units 2.4 +</p>	<p>YES</p> <p>YES YES YES</p> <p>NO</p>
Part 4.7 Social dimensions:		
Visitable units (min): <ul style="list-style-type: none"> 70% 	100%	YES
Housing mix: <ul style="list-style-type: none"> Mix of sizes and types 	Mix of 1, 2 and 3 bedroom units	YES
Part 4.8 Resource, energy and water efficiency:		
Energy efficiency: <ul style="list-style-type: none"> >65% of units are to have natural cross ventilation single aspect units are to have a maximum depth of 10m 25% of kitchens are to have an external wall for natural ventilation and light >90% of units are to have a 4.5 star NatHERS rating with 10% achieving a 3.5 star rating 	<p>>65%</p> <p>>10m (4 single aspect units to max 10.5m deep)</p> <p>>25%</p> <p>4.5 star rating = 93% 3.5 star rating = 7%</p>	<p>YES</p> <p>NO</p> <p>YES</p> <p>YES YES</p>
Part 5 Parking and vehicular access:		
Car parking spaces (min): <ul style="list-style-type: none"> 11 (visitors) 74 (residents) 85 (total) 	<p>12</p> <p>79</p> <p>91</p>	<p>YES</p> <p>YES</p> <p>YES</p>

Part 4.3 Setbacks:

The front setback complies with the setback requirements for a large lot but not with the courtyard footprint requirements. The topography of the site results in the courtyards in the Bruce Avenue setback being located below the level of the street, resulting in minimal visual impact on the

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streetscape. Further, the setback is provided with extensive landscaping, including a number of large trees. In the circumstances, the non-compliance is acceptable.

Part 4.4 Built form and articulation:

The proposal is contextually responsive to the landscaped characteristics of the locality. While the front façade, at 46 metres to Bruce Avenue and 43.6 metres to Greengate Lane (west), exceeds the building length provision of the DCP, an articulation of 8.8 metres deep and 2.9 metres wide at the main entry breaks up the building into 2 modules to Bruce Avenue. The apparent separation of the buildings is supported by the stepping down of the modules and by the extensive use of glass above the entry to delineate the 2 modules.

To Greengate Lane, there is a secondary entry and a change in height, that also assists in breaking up the building into 2 modules. The impact of the length of the façade to this boundary is further reduced by the setback of 8.4 metres and landscaping to the street.

The development is articulated in its design to respond to internal environments with the use of sun shading devices, recessed and projecting balconies and the varied third floor balcony roof elements. The minor non-compliance with the maximum balcony projection depth is behind the 13 metres setback zone and ensures useable private open spaces are provided for the smaller units.

Picket fencing to an unspecified height is shown on the landscape plans. Picket fencing is acceptable within the streetscape, however, an additional condition is recommended to limit the height to 1 metre, except at the blind corner on Greengate Lane where height will be limited to 300mm (**Condition No. 62**).

Part 4.5 Residential amenity:

While there are no adjoining single residential sites, there are a number of 2(c2) sites located across Greengate Lane to the south which should be considered in relation to the maintenance of solar access. These sites retain a minimum of 3 hours of sunlight to main living areas and to substantial portions of their rear yards.

The two storey units receive virtually no direct sunlight as a result of the configuration of the site. A number of units receive between 1 hour and 2 hours of sunlight. However, as a result of amendments to the plans, including the removal of the fins, over 70% of the units receive more than 3 hours of sunlight as required by the DCP.

Corridors on 4 levels connect 9-10 units, however, access is provided by choice of 2 lifts and 2 sets of stairs from 3 ground floor entry points. The corridors are lit by skylights and large areas of windows to maximise daylight access to these areas.

The variation from the 12 metre provision between habitable rooms is to the existing single storey dwelling at No 9 Bruce Avenue, which is situated only 900mm from the common boundary. The windows are generally small, and living areas are towards the rear rather than the side boundary. No

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objection has been received from the owners of the likely affected site. The site is zoned 2(d3) and an application has been lodged for residential flat development on the site. The side boundary setback of 6 metres required under the DCP and as proposed in both applications will ensure the 12 metre provision is met. The 6 metres setback allows for landscaping to minimise the impact on visual privacy. A condition of consent will require improved landscaping in this setback (**Condition No. 64**).

The top floor family room of the proposal is well set back from the terrace and the viewing angle from the window towards the neighbouring site will not allow overlooking of the existing dwelling or private open space. The proposed residential flat building at 9 Bruce Avenue also has a top storey setback and the separation distance between windows is compliant.

The top floor terrace is only 6.9 metres from the existing dwelling at 9 Bruce Avenue and has the potential to allow overlooking of the existing private open space area at the rear of No. 9 Bruce Avenue. The terrace is 13.2 metres from the top terrace of the proposed multi unit development at No. 9 Bruce Avenue. This terrace would be approximately 3 metres lower than the top floor of the subject site. To minimise the impact on privacy of both the existing and future residents of 9 Bruce Avenue, a condition is recommended to set the balustrade back one and a half metres from the main building line to the east (**Condition No. 92**).

While the separation distances to the sites zoned 2(c2) to the south of Greengate Lane comply with the requirements of the DCP, the terrace to the south off unit 4.03 will allow overlooking of 2 and 4 Greengate Lane. To minimise the impact on privacy to these sites, a condition is recommended to reduce the trafficable depth of this terrace by approximately 1.5 metres (**Condition No. 93**).

The ceiling heights are shown as 2.6 metres high. The applicant has provided details to demonstrate that this is a scaling error, and 2.7 metre ceiling heights can be provided. A condition is recommended imposed in this regard (**Condition No. 94**).

The useable depth of the balconies from the living area of the two storey units varies between 1.8 and 2.1 metres. This complies with the requirements of the Residential Flat Code in that a portion to 2 metres is provided to allow for a table and chairs. In addition, both units have a second private open space area. Unit 2.10 has a balcony off the main bedroom and the ground floor unit has a large terrace with a paved area to 2.4 metres wide.

The units on the south-east corner of the development have solid walls towards the Greengate Hotel and the terraces to units numbered .08 are protected by the walls of a bedroom, reducing the overlooking and noise impacts from the hotel. The south-western corner is proposed to be planted with very large trees and understorey vegetation to further minimise any visual privacy impact. The main common open space area is somewhat protected by the L-shape of the structure from overlooking and noise impacts from the hotel.

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Part 4.6 Safety and security:

The proposal provides entries from all street frontages, and opportunities for passive surveillance from windows and terraces to all common open space areas and to the street. A condition is recommended in regard to lighting (**Condition No. 95**).

Part 4.8 Resource, energy and water efficiency:

The units numbered .09 to the west, have private open space areas with a partial secondary aspect, however, they are essentially single aspect dwellings. The overall depth does not comply with the provisions of the DCP, however, the depth of the units in the living areas is only 7 metres and complies.

The units either comply with or exceed the requirements for energy efficiency. Minimum insulation requirements will be conditioned (**Condition No. 90**). Plantation timbers are proposed to be used in the development and conditions are recommended in this regard (**Condition No. 5**). A waste management plan has been supplied in accordance with DCP 40.

Stormwater will be collected and used for irrigation and car washing in accordance with DCP 47.

Part 5 Parking and vehicular access:

Parking and vehicular access is provided via Greengate Lane, reducing the dominance of car parking structures from the street. Access is provided for waste vehicles. Vehicular and bicycle parking layout and provision meets the requirements of the DCP. Pedestrian access is clearly defined and separated from vehicular access.

Part 6 Isolated sites:

The proposal does not create any isolated sites.

Residential Flat Design Code

Matters for assessment under the Residential Flat Design Code have been taken into account in the assessment of this application against SEPP 65 and DCP 55.

Development Control Plan 31 – Access

Matters for assessment under DCP 31 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 40 – Construction and Demolition Waste Management

Matters for assessment under DCP 40 have been taken into account in the assessment of this application against DCP 55.

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Development Control Plan No. 43 – Car Parking

Matters for assessment under DCP 43 have been taken into account in the assessment of this application against DCP 55.

Development Control Plan 47 – Water Management

Matters for assessment under DCP 47 have been taken into account in the assessment of this application against DCP 55.

Building Code of Australia

A report verifying that the proposal can meet the requirements of the Building Code of Australia has been provided.

Section 94 Plan

The development attracts a Section 94 contribution of \$761,401.80, which is required to be paid by **Condition No. 102**.

This figure is calculated on the following basis, utilizing the Ku-ring-gai Section 94 Contributions Plan 2004-2009 Residential Development as of 30 June 2004:

4 small, 4 medium, 32 large, 2 very large dwellings - 5 existing dwellings = \$761,401.80

Likely Impacts

All likely impacts have been addressed elsewhere in this report.

Suitability of The Site

There are no site or locality constraints which would preclude the proposed development.

Any Submissions

All submissions received have been considered in the assessment of this application.

Council is advised that **Conditions 62, 91-3 and 106** are recommended to address the concerns of the objectors.

Public Interest

The approval of the application is considered to be in the public interest.

Any other Relevant Matters Considerations Not Already Addressed

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There are no other matters for assessment.

CONCLUSION

Having regard to the provisions of section 79C of the Environmental Planning and Assessment Act 1979, the proposed development is considered to be satisfactory. Therefore, it is recommended that the application be approved.

RECOMMENDATION

Pursuant to Section 80(1) of the Environmental Planning and Assessment Act, 1979

THAT the Council, as the consent authority, is of the opinion that the objection under *State Environmental Planning Policy No. 1 – Development Standards* to 25I(8) (Number of storeys excluding top storey) of the Ku-ring-gai Planning Scheme Ordinance is well founded. The Council is also of the opinion that strict compliance with the development standard is unreasonable and unnecessary in the circumstances of this case as the additional storey will not result in unacceptable impacts on solar access or landscape character and will achieve the objectives of the height standard.

AND

THAT the Council, as the consent authority, being satisfied that the objection under SEPP No. 1 is well founded and also being of the opinion that the granting of consent to DA 514/05 is consistent with the aims of the Policy, grant development consent to DA 514/05 for demolition, construction of residential flat building and strata subdivision on land at 1-7 Bruce Ave, 6 Greengate Lane Killara, for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

GENERAL CONDITIONS

1. The development must be carried out in accordance with plans numbered Job No. 0418 Sheets DA01B, DA02B, dated 30 August 2005, DA03C dated 5 October 2005, DA04D, dated 5 October 2005, DA05C, DA06C, DA07C, DA08C, DA09D, DA10C, DA11C, DA21C dated 26 September 2005, drawn by Fortey & Grant Architecture, and Draft Strata Plan, Sheets 1-5. undated and lodged with Council on 8 & 27 September and 5 October 2005 endorsed with Council's approval stamp, except where amended by the following conditions:
2. All building works shall comply with the Building Code of Australia.
3. The submission of the approved plans to Sydney Water, before any work is commenced to ensure that the proposed structure meets that Authority's By-Laws. Failure to submit these plans before commencing work will render the owner liable to a penalty and may result in the demolition of work.
4. The swimming pool is to have a maximum depth of 2 metres.

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5. Where timber is specified, plantation timbers are to be used in the development.
6. To conserve water, the following shall be installed in the bathrooms and toilets:
 - a. maximum 6/3 litre dual flush cisterns;
 - b. shower heads with reduced water flow devices.
7. Energy efficient hot water systems which have a 4 star rating or greater shall be employed.
8. The approved building shall not be occupied unless the development has been completed in accordance with all conditions of consent and the approved plans and a Occupation Certificate has been issued.
9. For the purpose of health and amenity, the disposal of backwash and/or the emptying of a swimming pool into a reserve, watercourse, easement or stormwater drainage system is prohibited. These waters are to discharge via a permanent drainage line into the Sydney Water's sewer. Permission is to be obtained from the Sydney Water prior to the emptying of any pool to the sewer.
10. To ensure compliance with the relevant standards, an effective and approved safety fence with self closing gate complying with the minimum requirements of Australian Standard 1926-1986 "Fences and Gates for Private Swimming Pools" shall be provided to the Principal Certifying Authority's satisfaction in the location indicated on the approved plans prior to any water being placed in the pool.
11. For stormwater control, provision shall be made for the collection and disposal of all run-off surface waters from paved areas, recontoured areas, pool overflow and higher levels. All collected waters are to be dispersed without causing nuisance to the adjoining properties.
12. For safety purposes, depth markers shall be provided at both ends of the pool.
13. For safety purposes, prior to the pool being filled a weather resistant poster detailing expired air resuscitation (mouth to mouth) methods shall be affixed within plain sight of the pool. A sign/notice with the words "YOUNG CHILDREN SHOULD BE SUPERVISED WHEN USING THIS SWIMMING POOL" shall be erected in clear view and in close proximity to the pool.
14. All filtration equipment shall be located in the position as shown on plan, unless as varied by this consent. Where the filtration and electrical equipment is located near a boundary, such equipment shall be positioned not closer than 150mm from the boundary fencing, if any, and electrical conduits and fittings or circulation pipes shall not be attached to any part of the fencing. Filtration or other equipment shall not be installed in the area of the side boundary setback of the dwelling or outbuilding unless that side boundary setback is greater than 1500mm. For the purpose of residential amenity, the filtration motor pump unit shall be housed in a sound attenuating enclosure and located where indicated on the approved plans or as varied by this consent.

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15. A balustrade shall be provided where the pool concourse stands more than 1.0 metre above the finished ground level.
16. To maintain the existing ground levels all spoil shall be removed from the site. Sites shall not be re-shaped, re-contoured, nor the levels on any part of the site altered without the consent of the Council being obtained beforehand.
17. To ensure structural stability wherever the soil conditions so require, a retaining wall or other approved method of preventing the movement of soil shall be provided and adequate provision shall be made for drainage.
18. The swimming pool is to be made safe during construction by the erection of temporary safety fence to the satisfaction of the Principal Certifying Authority.
19. For the purpose of residential amenity, details of proposed soundproof enclosure design to house all spa pumping units shall be prepared by a practising acoustical engineer and shall be submitted to the Principal Certifying Authority for approval. Noise levels are not to exceed 5dB(A) at the boundaries of the site.
20. For the purpose of ensuring the compliance with the terms of the approval, an approved copy of the plan and this Consent and Construction Certificate shall be kept on site at all times.
21. For the purpose of safety and amenity of the area, no building materials, plant or the like are to be stored on the road or footpath without the written approval being obtained from the Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.
22. **HOURS OF WORK:** For the purpose of residential amenity, noise generating work carried out in connection with building and construction operation, including deliveries of building materials and equipment, is restricted to the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted. The use of the following items of plant on the site is also restricted to the abovementioned hours: compressors, bulldozers, power operated woodworking machines, excavators and loaders, jackhammers, Ramset guns, concrete mixers and concrete delivery wagons, hoists, winches, welding and riveting plant.

Whilst work on Saturdays may be performed until 5.30pm, such work or any associated activities shall not involve the use of any noise generating processes or equipment.
23. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.

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24. A sign shall be erected in a prominent position on the site which states the name and contact details of the Principal Certifying Authority.
25. All excavations shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.
26. Any excavation of rock involving hydraulic or compressed air rock hammers or other excavation equipment shall comply with the requirements of Council's Code for the Control and Regulation of Noise on Building Sites.
27. No rock breaking or other machinery for the excavation, drilling or removal of rock shall be used on the site without the prior approval of the Principal Certifying Authority. Should rock breaking or associated machinery be required, the following details are to be submitted to the Principal Certifying Authority for consideration:
 - a. The type and size of machinery proposed.
 - b. The routes of all trucks to convey material to and from the site.
 - c. A report by a Geotechnical Engineer detailing the measures recommended in undertaking the work so as to prevent any damage to any adjoining or nearby buildings.

28. All excavations and backfilling associated with the erection or demolition of a building must be executed safely and in accordance with appropriate professional standards.

All excavations associated with the erection or demolition of a building must be properly guarded and protected to prevent them from being dangerous to life or property.

29. If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation to be made:
 - a. must preserve and protect the building from damage, and
 - b. if necessary, must underpin and support the building in an approved manner, and
 - c. must, at least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished.

The owner of the adjoining allotment of land is not liable for any part of the cost of work carried out for the purposes of this clause, whether carried out on the allotment of land being excavated or on the adjoining allotment of land.

In this clause, allotment of land includes a public road and any other public place.

30. The applicant is advised that the Construction Certificate plans and specifications must comply with the provisions of the Building Code of Australia.

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31. Toilet facilities are to be provided, within the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
32. All noise generating equipment associated with any proposed mechanical ventilation system/s shall be located and/or soundproofed so the equipment is not audible within a habitable room in any other residential premises before 7am and after 10pm Monday to Friday and before 8am and after 10pm Saturday, Sunday and Public Holidays. Furthermore, the operation of the unit outside these restricted hours shall emit a noise level of not greater than 5dbA above the background when measure at the nearest adjoining boundary.
33. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.
34. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
35. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
36. Where a new development is not commencing immediately following demolition, the demolition shall be limited to the extent of the footprint of the building/s on the site and no excavation shall be carried out.
37. Demolition work, including removal of material or debris from the site, on any building in a residential area shall only be carried out during the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted.
38. A person taking down or demolishing or causing to be taken down or demolished any building or part thereof shall, upon identifying or suspecting that asbestos is present in the building, immediately notify the Workcover Authority. The Authority is the controlling body for the safe removal, handling and disposal of asbestos. The Authority supervises and monitors contractors engaged in asbestos removal.

The requirements and standards imposed by the Authority, its consultants or contractors shall be complied with.
39. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.

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40. Dust control measures shall be taken on all demolition sites so as to avoid a nuisance to adjoining properties and harm to the environment.
 - a. A person taking down or demolishing or causing to be taken down or demolished any building or portion of any building shall:
 - i. cause the windows or other openings in the external walls to be close boarded or otherwise covered;
 - ii. cause screens of canvas, hessian, boards, mats or other suitable material to be fitted in appropriate locations;
 - iii. cause areas, components and debris to be wetted down; in such a manner as to minimise, as far as practicable, the nuisance arising from the escape of dust during such taking down or demolition.
 - b. Such person shall not chute, throw or let fall or cause to chute, throw or let fall from the floor to floor or into any basement of such building any building materials or any other matter so as to cause dust to escape from the building or cause any such material to fall or cast upon a public way to the annoyance, inconvenience, or danger of persons using such public way.
41. Soil on vacant sites is to be stabilised as soon as possible to prevent erosion and the site shall be kept clear of excess vegetation.
42. A temporary construction exit and sediment trap to reduce the transport of sediment from the site onto public roads shall be provided before demolition commences.
43. Existing stormwater lines on the site are to be blocked and made inoperable after buildings are demolished so as to prevent the conveyance of silt or sediments into the gutter or street drainage system.
44. All combustible material shall be removed from the site on a daily basis. Material shall not be burnt on the site.
45. Materials salvaged from a demolition may be stored on site provided they are non combustible, neatly and safety stockpiled and not likely to become a harbourage for vermin.
46. Trees and vegetation on a site shall not be disturbed except with the approval of the Council.
47. Fire hoses are to be maintained on site during the course of demolition.
48. Adequate precautions shall be taken to ensure the protection of adjoining premises and persons therein from damage and injury during the process of demolition.
49. Buildings built prior to the 1970's may contain lead based paint. Lead dust is a hazardous substance. You are advised to follow the attached WorkCover guidelines to prevent personal and environmental contamination.
50. The applicant or builder/developer is responsible for the cost of making good any damage that may be caused to any Council property as a result of work associated with the demolition.

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51. A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:

- a. stating that unauthorised entry to the work site is prohibited, and
- b. showing the name of the person in charge of the work site and a telephone number at which that person may be contacted outside working hours.

Any such sign is to be removed when the work has been completed.

This clause does not apply to:

- a. building work carried out inside an existing building, or
- b. building work carried out on premises that are to be occupied continuously (both during and outside working hours) while the work is being carried out.

52. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.
53. Sites shall not be re-shaped, re-contoured, excavated nor the levels on any part of the site altered without the Consent of the Council being obtained beforehand.
54. For the purpose of health and amenity, effective measures are to be taken at all times to prevent any nuisance being caused by noise, vibrations smells, fumes, dust, smoke, waste water products and the like.
55. To prevent pollution, all vehicles making a delivery to or from the site are to be covered to prevent loose materials, dust etc falling from the vehicles.
56. To prevent pollution, any areas cleared of vegetation where there is a flowpath greater than 12.0 metres in length shall have a properly constructed silt fence erected to intercept runoff.
57. To prevent pollution, all disturbed areas which are not to be built upon or otherwise developed within 14 days shall be stabilised with mulch, woodchip or other rehabilitation methods to provide permanent protection from soil erosion.
58. Topsoil shall be stripped from areas to be developed and stock-piled within the site. Stock-piled topsoil on the site shall be located outside drainage lines and be protected from run-on water by suitably positioned diversion banks. Where the period of storage will exceed 14 days stock-piles are to be sprayed with an appropriate emulsion solution or seeded to minimise particle movement.
59. The applicant's attention is directed to any obligations or responsibilities under the Dividing Fences Act in respect of adjoining property owner/s which may arise from this application and it is advised that enquiries in this regard may be made at the nearest Local Court.
60. All areas of common property, including visitor car parking spaces and on-site stormwater detention shall be included on the final plans of subdivision.
61. Your attention is directed to the operation of the Commonwealth Disability Discrimination Act 1992, which may impose greater obligations on providing access to disabled persons other than compliance with the Building Code of Australia. You are advised to seek advice

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from the Human Rights and Equal Opportunity Commission (phone (02) 9284 9600) in respect of your application.

62. To maintain the established streetscape and general appearance, the overall height of the fence to street frontages is not to exceed 1 metre in height, except for the corner of Greengate Lane (west) and Greengate Lane (south), where the fence is not to exceed 600mm in height to provide adequate sight lines.
63. A Tree Preservation Order exists within the Ku-ring-gai Council area whereby the removal, lopping or destruction of any tree exceeding 5.0 metres in height or 4.0 metres in canopy spread (except where exempt as defined under Council's Tree Preservation Order) without prior written consent of Council is prohibited.
64. Landscape works shall be carried out in accordance with Landscape Drawing No LP.01/B Rev C Sheets 1-4 prepared by Botanica and dated 06/08/05 submitted with the Development Application. The landscape works shall be completed prior to issue of the Occupation Certificate and be maintained in a satisfactory condition at all times, except as amended by the following;
 - The proposed planting of two *Hymenosporum flavum* (Native frangipani) and one *Elaeocarpus reticulatus* (Blueberry Ash) adjacent to the eastern side of Unit G.05 are to be deleted and replaced with two *Syncarpia glomulifera* (Turpentine) spaced a minimum of 6.0m apart and located no closer than 5.0m from the wall of the units.
 - The proposed planting of one *Elaeocarpus reticulatus* (Blueberry Ash) to the north east of Unit G.05 is to be deleted and replaced with a deciduous tree species that can attain a minimum height of 13.0m to be in scale with the development.
 - The proposed understorey planting at the south west corner of the site is to incorporate only species that attain a maximum height of 800mm, to improve sight lines at the corner.
65. REMOVAL of the following tree/s from Council's nature strip shall be undertaken at no cost to Council by an experienced Tree Removal Contractor/Arborist holding Public Liability Insurance amounting to a minimum cover of \$10,000,000.

Tree/Location

Acer negundo (Box Elder)
Bruce Ave nature strip

Jacaranda mimosifolia (Jacaranda) x 3
Bruce Ave nature strip
66. Tree roots between 10mm and 50mm diameter, severed during excavation, shall be cut cleanly by hand and the tree subsequently treated with a root growth hormone and wetting agent, by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate.

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67. No tree roots of 50mm or greater in diameter located within the specified radius of the trunk/s of the following, tree/s shall be severed or injured in the process of any site works during the construction period.

Tree/Location	Radius From Trunk
#5 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to eastern (side) site boundary	6.0m
#6 <i>Camellia japonica</i> (Japanese Camellia) Adjacent to eastern site boundary in neighbouring property	4.0m
#7 <i>Macadamia tetraphylla</i> (Macadamia) Adjacent to southern/Greengate Lane site boundary	4.0m
#14 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to northern/Bruce Ave site boundary	6.0m
#37 <i>Washingtonia filifera</i> (Cotton Palm) Adjacent to southern/Greengate Lane site boundary	3.0m
#40 <i>Jacaranda mimosifolia</i> (Jacaranda) Adjacent to southern/Greengate lane site boundary	5.0m

68. The trees to be retained shall be inspected, monitored and treated when necessary by a qualified Arborist before, during and after completion of development works to ensure their long term survival. Regular reports from the Arborist to the principal certifying authority shall be required at quarterly/three monthly intervals. Documentary evidence of compliance with this condition shall be submitted to the principal certifying authority with a copy to Council with the Occupation Certificate.

69. All excavation carried out within the specified radius of the trunk/s of the following tree/s shall be hand dug:

Tree/Location	Radius From Trunk
#5 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to eastern (side) site boundary	6.0m
#7 <i>Macadamia tetraphylla</i> (Macadamia) Adjacent to southern/Greengate Lane site boundary	4.0m
#14 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to northern/Bruce Ave site boundary	6.0m
#37 <i>Washingtonia filifera</i> (Cotton Palm) Adjacent to southern/Greengate Lane site boundary	3.0m

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#40 *Jacaranda mimosifolia* (Jacaranda) 5.0m
Adjacent to southern/Greengate lane site boundary

70. The applicant shall ensure that at all times during the construction period no activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order.
71. The following tree species shall be planted, at no cost to Council, in the nature strip as an evenly spaced avenue planting, fronting the property along Bruce Ave. The tree/s used shall be 45 litre container size specimen/s:

Tree Species

Jacaranda mimosifolia (Jacaranda) x 10
72. Following removal of the *Acer negundo* (Box Elder) and *Jacaranda mimosifolia* (Jacaranda) from Council's nature strip, the nature strip shall be rehabilitated to the satisfaction of Council's Director Open Space at no cost to Council.
73. All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.
74. Stormwater runoff from new hard surfaces generating runoff or landscaped areas that are not at natural ground level shall be piped to the street drainage system.
75. A mandatory rainwater retention and re-use system comprising storage tanks and ancillary plumbing must be provided for the development. The total storage volume of the rainwater tank system, and the prescribed re-use of the water on site, must satisfy the requirements specified in chapter 6 of Ku-ring-gai Council Water Management Development Control Plan 47 (DCP47).
76. In addition to the mandatory rainwater retention and re-use system provided, an **on-site stormwater detention** system must be provided for the development to control the rate of runoff leaving the site. The minimum volume of the required on-site detention system must be determined in accordance with chapter 6 of the Ku-ring-gai Council Water Management Development Control Plan 47 (DCP 47) - having regard to the specified volume concession offered in lieu of installing rainwater retention tanks. The design of the on-site detention system must be performed by a qualified civil/hydraulic engineer and must satisfy the design controls set out in appendix 5 of DCP 47.
77. For stormwater control a 200mm wide grated channel/trench drain with a heavy-duty removable galvanized grate is to be provided in front of the garage door/basement parking slab to collect driveway runoff. The channel drain shall be connected to the main drainage system and must have an outlet of minimum diameter 150mm to prevent blockage by silt and debris.
78. To control surface runoff all new exposed impervious areas graded towards adjacent property and/or habitable areas are to be drained via the main drainage system. This may require the installation of suitable inlets pits, cut-off structures (e.g. kerb), and/or barriers that direct such

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runoff to the formal drainage system. Details for such measures shall be shown on the approved Construction Certificate issue drawings, to the satisfaction of the Principal Certifying Authority.

79. During construction, stormwater runoff must be disposed in a controlled manner that is compatible with the erosion and sediment controls on the site. Immediately upon completion of any impervious areas on the site (including roofs, driveways, paving) and where the final drainage system is incomplete, the necessary temporary drainage systems must be installed to manage and control runoff as far as the approved point of stormwater discharge. Such measures shall be to the satisfaction of the Principal Certifying Authority.
80. A maintenance period of six (6) months applies to all work in the public road reserve carried out by the applicant - **after** the works have been completed to the satisfaction of Ku-ring-gai Council. In that maintenance period, the applicant shall be liable for any section of the completed public infrastructure work which fails to perform in the designed manner, or as would reasonably be expected under the operating conditions. The maintenance period shall commence once the Applicant receives a written indication from Council stating that the works involving public infrastructure have been completed satisfactorily.
81. Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the Applicants full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services at the appropriate stage of development (including water, phone, gas and the like). Council accepts no responsibility whatsoever for any matter arising from its approval of this application involving any influence upon utility services provided by another authority.
82. All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials and plant must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "*Traffic Control Devices for Work on Roads*". **If pedestrian circulation is not satisfactorily maintained across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.**
83. The provision of temporary sediment and erosion control facilities and measures must be installed, prior to the commencement of any works on the site to eliminate unnecessary erosion and loss of sediment. These facilities must be maintained in working order during construction works up to completion. All sediment traps must be cleared on a regular basis and after each major storm, and/or as directed by the Principal Certifying Authority and Council officers.

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84. Driveways and vehicular access ramps must be designed not to scrape the underside of cars. In all respects, the proposed vehicle access and accommodation arrangements must be designed and constructed to comply with the minimum requirements of Australian Standard 2890.1 (2004) "Off-Street car parking".
85. The Applicant must obtain a **Section 73 Compliance Certificate** under the *Sydney Water Act 1994*. An application must be made through an authorised Water Servicing Coordinator. The Applicant is to refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-developer" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
86. In order to allow unrestricted access at all times for Ku-ring-gai Council waste collection vehicles into the basement garbage collection area - no doors, grilles, gates or other devices are to be **provided in the access driveways to the basement carpark preventing this service**.
87. A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee the excavation procedure.
88. The geotechnical and hydrogeological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the report by Davies Geotechnical and subsequent reports. Over the course of the works a qualified Geotechnical/ hydrogeological Engineer must complete the following:
- Further geotechnical investigations and testing recommended in the above report(s) and as determined necessary,
 - Groundwater modelling and analysis to assess groundwater levels during and after construction and determine ways to ameliorate effects of development,
 - Review and endorse the design for excavation support,
 - Further monitoring and inspection as recommended in the above report(s) and as determined necessary,
 - Written report(s) including certification(s) of the geotechnical inspection, testing and monitoring programs.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

89. The development is to comply with the recommendations of the Access Report by Mark Relf of Accessibility Solutions dated 16 May 2005 for the nominated adaptable units in relation to kitchens, doors and door hardware. Details are to be provided to the satisfaction of the Principal Certifying Authority prior to release of Construction Certificate.

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90. To achieve the minimum energy performance requirements, the following insulation shall be included in the development:

- Insulation with a minimum “R” value of 1.0 in the cavity brick walls;
- Weather seals to windows and doors;
- Insulation with a minimum “R” value of 2.0 in the roof/concrete ceiling and foil under the metal deck roof;
- Insulation with a minimum “R” value of 1.0 to the floor including separation from basement car parking.

Details are to be submitted to the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.

91. In order to achieve an acceptable fit with the nearby heritage items and the locality, the colour scheme is to include a greater proportion of warm/earthy colours. A revised colour schedule is to be submitted to Council prior to the release of the Construction Certificate.
92. To protect the privacy of residents to the east, the balustrade of the terrace to the east of Unit 4.02 is to be set back to a distance of 8.5 metres from the eastern boundary. The area to the east of the balustrade is to be non-trafficable. Details are to be submitted for the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.
93. To protect the privacy of residents to the south, the balustrade of the terrace to the south of Unit 4.03 is to be set back to a distance of 8 metres from the southern boundary. The area to the south of the balustrade is to be non-trafficable. Details are to be submitted for the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.
94. Habitable rooms are to have a minimum floor to ceiling height of 2.7 metres. Details are to be submitted for the approval of the Principal Certifying Authority prior to the release of the Construction Certificate.
95. The development is to provide night lighting along all driveways and footpaths throughout the site such that the full length of travel paths is illuminated. Lighting is to be shielded so that neighbouring residences are not adversely affected. Details are to be provided prior to the release of the Construction Certificate.
96. The fencing and landscaping amendments to the south-west corner of the site required as conditions of this consent, are to be submitted to Council’s Strategic Traffic Engineer and approved prior to the release of the Construction Certificate.
97. The Long Service Levy is to be paid to Council in accordance with the provisions of Section 34 of the Building and Construction Industry Payments Act 1986 prior to the issue of the Construction Certificate.

Note: Required if cost of works exceed \$25,000.00.

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98. It is a condition of consent that the applicant, builder or developer or person who does the work on this residential building project arrange the Builders Indemnity Insurance and submit the Certificate of Insurance in accordance with the requirements of Part 6 of the *Home Building Act 1989* to the Council or other Principal Certifying Authority for endorsement of the plans accompanying the Construction Certificate. It is the responsibility of the applicant, builder or developer to arrange the Builder's Indemnity Insurance for residential building work over the value of \$12,000 and to satisfy the Council or other Principal Certifying Authority by the presentation of the necessary Certificate of Insurance so as to comply with the applicable requirements of Part 6 of the *Home Building Act 1989*. The requirements for the Builder's Indemnity Insurance does not apply to commercial or industrial building work or for residential work less than \$12,000, nor to work undertaken by persons holding an Owner/Builder's Permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).
99. The Infrastructure Restorations Fee calculated in accordance with the Council's adopted schedule of Fees and Charges is to be paid to the Council prior to any earthworks or construction commencing. The applicant or builder/developer will be held responsible for and liable for the cost any damage caused to any Council property or for the removal of any waste bin, building materials, sediment, silt, or any other article as a consequence of doing or not doing anything to which this consent relates. "Council Property" includes footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, litter bins, trees, shrubs, lawns mounds, bushland, and similar structures or features on road reserves or any adjacent public place. Council will undertake minor restoration work as a consequence of the work at this site in consideration of the "Infrastructure Restorations Fee" lodged with the Council prior to the release of the Construction Certificate. This undertaking by the Council does not absolve the applicant or Builder/developer of responsibility for ensuring that work or activity at this site does not jeopardise the safety or public using adjacent public areas or of making good or maintaining "Council property" (as defined) during the course of this project.
100. To maintain residential amenity, all electrical services to the site are to be provided underground and must not disturb the root system of any trees. Please contact the energy supply authority's local customer service office to obtain documentary evidence that the authority has been consulted and that their requirements have been met. This information is to be submitted to Council prior to the release of the Construction Certificate.
101. The developer shall submit to Council a letter from the energy supply authority and either Telstra or Optus, confirming that satisfactory arrangements have been made for the provision of underground telephone and power services, prior to the release of the Construction Certificate. Application may be made to Energy Australia Phone No. 13 1525 and either Optus, Network Operations, Facsimile No 9837 9060, Phone No 9837 9010, or Telstra Phone No 12 455.
102. A contribution is to be paid for the provision, extension or augmentation of community facilities, recreation facilities, open space and administration that will, or are likely to be, required as a consequence of development in the area.

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TOTAL CONTRIBUTION FOR THIS DEVELOPMENT OF 37 ADDITIONAL DWELLINGS IS CURRENTLY \$761,401.80. The amount of the payment shall be in accordance with the Section 94 charges as at the date of payment. The charges may vary at the time of payment in accordance with Council's Section 94 Contributions Plan to reflect changes in land values, construction costs and the consumer price index.

This contribution shall be paid to Council prior to the release of the Construction Certificate and the amount payable shall be in accordance with the Council's adopted Section 94 Contributions Plan for Residential Development, effective from 30 June 2004, calculated for additional person as follows:

1. Community Facilities	\$1 117.76
2. Park Acquisition and Embellishment Works - Killara	\$6 384.75
3. Sportsgrounds Works	\$1 318.32
4. Aquatic / Leisure Centres	\$27.82
5. Traffic and Transport	\$150.28
6. Section 94 Plan Administration	\$100.04

To obtain the total contribution figure the following table of occupancy rates is to be used:

OCCUPANCY RATES FOR DIFFERENT DWELLING SIZES

Small dwelling (under 75 sqm)	1.27 persons
Medium dwelling (75 - under 110 sqm)	1.78 persons
Large dwelling (110 – under 150sqm)	2.56 persons
Very Large dwelling (150sqm or more)	3.48 persons
New Lot	3.48 persons
SEPP (Seniors Living) Dwelling	1.3persons

103. A CASH BOND/BANK GUARANTEE of \$10 000.00 shall be lodged with Council as a Landscape Establishment Bond prior to the release of the Construction Certificate to ensure that the landscape works are installed and maintained in accordance with the approved landscape plan or other landscape conditions.

Fifty percent (50%) of this bond will be refunded upon issue of the final Certificate of Compliance, where landscape works as approved have been satisfactorily installed. The balance of the bond will be refunded 3 years after issue of the building certificate, where landscape works has been satisfactorily established and maintained.

It is the responsibility of the applicant to notify Council in relation to the refunding of the bond at the end of the 3 year period. Where a change of ownership occurs during this period it is the responsibility of the applicant to make all arrangements regarding transference of the bond and to notify Council of such.

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104. A CASH BOND/BANK GUARANTEE of \$6 000.00 shall be lodged with Council prior to the release of the Construction Certificate to ensure that the following trees are maintained in the same condition as found prior to commencement site development work.

The bond will be returned following issue of the final Certificate of Compliance, provided the trees are undamaged.

In the event that any specified trees are found damaged, dying or dead as a result of any negligence by the applicant or its agent, or as a result of the construction works at any time during the construction period, Council will have the option to demand the whole or part therefore of the bond.

Tree/Location

#5 *Liquidambar styraciflua* (Sweet Gum) \$2 000.00
Adjacent to eastern (side) site boundary

#7 *Macadamia tetraphylla* (Macadamia) \$500.00
Adjacent to southern/Greengate Lane site boundary

#14 *Eucalyptus cinerea* (Argyle Apple) \$2 000.00
Adjacent to northern/Bruce Ave site boundary

#37 *Washingtonia filifera* (Cotton Palm) \$500.00
Adjacent to southern/Greengate Lane site boundary

#40 *Jacaranda mimosifolia* (Jacaranda) \$1 000.00
Adjacent to southern/Greengate lane site boundary

105. Prior to issue of the Construction Certificate the Applicant must consolidate the existing Torrens lots which will form the development site. Evidence of lot consolidation, in the form of a plan registered with Land and Property Information, must be submitted for approval of the Principal Certifying Authority prior to issue of the Construction Certificate. This condition is imposed to ensure continuous structures will not be placed across separate titles.
106. The Applicant must submit carry out the following infrastructure works in the Public Road:
- Construct new concrete footpath for the Bruce Avenue frontage of the development.
 - Construct half width road pavement in Greengate Lane (west) and road pavement for the width required by Council in Greengate Lane (south) for the full frontage of the development, including new upright kerb and gutter.

Development Consent under the EP&A Act does NOT give approval to these works on Council property. **THE APPLICANT MUST OBTAIN A SEPARATE APPROVAL UNDER SECTION 138 AND 139 OF THE ROADS ACT 1993** for the works in the Public Road, required by this condition. The Construction Certificate must not be issued, and these

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works must not proceed, until Council has issued a formal written consent under the *Roads Act 1993*.

To obtain consent under the *Roads Act 1993* for the infrastructure works on Council property, full engineering drawings (plans, sections and elevations) and specifications for the infrastructure works are to be prepared by a suitably qualified and experienced consulting civil engineer. These must be submitted and approved by Council prior to issue of the Construction Certificate. Construction of the works must proceed in accordance with any conditions attached to the Council *Roads Act 1993* approval.

All works are to be designed in accordance with Council's "Specification for Road and Drainage Works". In addition, the drawings must detail existing services and trees affected by the works, erosion control requirements and traffic management requirements during the course of works. Traffic management is to be certified on the drawings as being in accordance with the documents SAA HB81.1 – 1996 – Field Guide for Traffic Control at Works on Roads – Part 1 and RTA Traffic Control at Work Sites (1998).

NOTE 1: A minimum of three (3) weeks will be required for assessment of Roads Act submissions. Early submission is highly recommended to avoid delays in obtaining a Construction Certificate.

NOTE 2: An engineering assessment fee (set out in Council's adopted fees and charges) is payable and Council will withhold any consent and approved plans until full payment of the correct fees.

NOTE 3: Plans and specifications must be marked to the attention of Council's Development Engineers. In addition, a copy of this condition must be provided, together with a covering letter stating the full address of the property and the accompanying DA number.

107. Prior to issue of the Construction Certificate the Applicant must submit, for approval by the Principal Certifying Authority, certified parking layout plan(s) to scale showing all aspects of the vehicle access and accommodation arrangements clearly dimensioned. A qualified civil/traffic engineer must review the proposed vehicle access and accommodation layout and provide written certification on the plans that:

- a) All parking space dimensions, driveway and aisle widths, driveway grades, transitions, circulation ramps, blind aisle situations and other trafficked areas comply in full with Australian Standard 2890.1 – 2004 "Off-street car parking".
- b) A clear height clearance of 2.5 metres (required under DCP40 for waste collection trucks) is provided over the designated garbage collection truck manoeuvring areas within the basement.
- c) No doors or gates are provided in the access driveways to the basement carpark which would prevent unrestricted access for internal garbage collection at any time from the basement garbage storage and collection area.

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The vehicle access and accommodation arrangements are to be constructed in accordance with the certified plans.

108. Prior to issue of the Construction Certificate and prior to commencement of any works that may be subject to erosion, the applicant must submit, for approval by the Principal Certifying Authority, a Soil and Erosion Control Plan prepared in accordance with the Landcom document "*Managing Urban Stormwater – Soils and Construction, Volume 1*" (2004). A qualified and experienced civil/environmental engineer shall prepare this plan in accordance with the above guidelines and section 8.2.1 of Councils Water Management Development Control Plan 47.
109. Prior to issue of the Construction Certificate the applicant must submit, for approval by the Principal Certifying Authority, scale construction plans and specifications in relation to the stormwater management and disposal system for the development. The plan(s) must include the following detail:
- Exact location and reduced level of discharge point to the public drainage system.
 - Full layout of the property drainage system components, including but not limited to (as required) gutters, downpipes, spreaders, pits, swales, kerbs, cut-off and intercepting drainage structures, subsoil drainage, flushing facilities and all ancillary stormwater plumbing - all designed for a 235mm/hour rainfall intensity for a duration of five (5) minutes (1:50 year storm recurrence).
 - Location(s), dimensions and specifications for the required rainwater storage and reuse tanks and systems. Where proprietary products are to be used, manufacturer specifications or equivalent shall be provided.
 - Specifications for reticulated pumping facilities (including pump type and manufacturer specifications) and ancillary plumbing to fully utilise rainwater in accordance with the Ku-ring-gai Council Development Control Plan 47 and/or BASIX commitments.
 - Details of the required **on-site detention** tanks required under Ku-ring-gai Council Water Management DCP 47 including dimensions, materials, locations, orifice and discharge control pit details as required (refer chapter 6 and appendices 2, 3 and 5 of DCP 47 for volume, PSD and design requirements).
 - The required basement stormwater pump-out system to cater for driveway runoff and subsoil drainage (refer appendix 7.1.1 of Development Control Plan 47 for design).

The above construction drawings and specifications are to be prepared by a qualified and experienced civil/hydraulic engineer in accordance with Councils Water Management Development Control Plan 47, Australian Standards 3500.2 and 3500.3 - *Plumbing and Drainage Code* and the BCA. The plans may be generally based on Drawings 56979-1 to -4 by Kneebone & Beretta submitted for Development Application approval, which are to be advanced as necessary for construction issue purposes.

110. Prior to issue of the Construction Certificate the Applicant must contact Energy Australia regarding power supply for the subject development. A written response detailing the full requirements of Energy Australia (including any need for underground cabling, substations or similar within or in the vicinity the development) shall be submitted to the Principal

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Certifying Authority for approval prior to issue of the Construction Certificate. Any structures or other requirements of Energy Australia shall be reflected on the plans issued with the Construction Certificate, to the satisfaction of the Principal Certifying Authority and Energy Australia. The requirements of Energy Australia must be met in full prior to issue of the Occupation Certificate.

111. Prior to issue of the Construction Certificate the applicant must make contact with all relevant utility providers whose services will be impacted upon by the approved development. A written copy of the requirements of each provider, as determined necessary by the Principal Certifying Authority, must be obtained. All utility services or appropriate conduits for the same, including electricity, gas, telephone, water and sewerage must be provided by the developer in accordance with the specifications of those supply authorities.

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

112. A report on the existing dwellings is to be submitted and approved to the heritage officer's satisfaction prior to commencement of the work and prior to issue of a Construction Certificate.

The report is to be prepared by a heritage consultant included in the NSW Heritage Office list of recognized consultants or other suitably qualified consultants who have knowledge and experience in preparing archival recording documents.

The report is to be a bound A4 report and must include copies of drawings submitted with the application including site surveys and specialist reports such as heritage assessments, dilapidation report, and builders or engineers reports. Three copies of the report are to be submitted, one copy with negatives. Any archival documents such as family records, old photographs should also be included.

All photographs to be mounted, labelled and cross-referenced to the relevant site plan and floor plans and showing position of camera. A photographic recording sheet to be included. Photographs of the following:

- Each elevation
- All interior rooms (1,3 and 5 Bruce Ave only)
- All structures on site such as sheds, outhouses and significant landscape features
- Several photographs of house from public streets or laneways including several views showing relationship of the group of houses to neighbouring buildings.

Minimum requirements:

- Title page
- Statement of reasons the recording was made
- Location Plan showing relationship of site to nearby area
- Site plan to scale (1:200 – 1:500) showing all structures and site elements
- Floor Plan (1:100)

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- Black & White archival quality photographs, contact prints with negatives and selected prints (one copy of negatives other copies with contact sheets and selected prints)
- Colour slides (one set)

Digital images and CDs may be submitted as supplementary information.

113. Prior to commencing any construction or subdivision work, the following provisions of the Environmental Planning & Assessment Act, 1979 (the 'Act') are to be complied with:
- a. A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.
 - b. A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act.
 - c. Council is to be notified in writing, at least two (2) days prior to the intention of commencing buildings works, in accordance with Section 81A(2)(c) of the Act.
 - d. Should the development be certified by a Principal Certifying Authority other than Council, a fee for each Part 4A Certificate is to be paid to Council on lodgement of those Certificates with Council.
114. Prior to the commencement of any work, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder who intends to carry out the approved works.
115. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s is fenced off at the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

Tree/Location	Radius in Metres
#5 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to eastern (side) site boundary	6.0m
#14 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to northern/Bruce Ave site boundary	6.0m

116. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s excluding that area of Greengate Lane shall be fenced off for the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site:

Tree/Location	Radius From Trunk
#7 <i>Macadamia tetraphylla</i> (Macadamia) Adjacent to southern/Greengate Lane site boundary	4.0m

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#37 *Washingtonia filifera* (Cotton Palm) 3.0m
Adjacent to southern/Greengate Lane site boundary

#40 *Jacaranda mimosifolia* (Jacaranda) 5.0m
Adjacent to southern/Greengate lane site boundary

117. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
118. Tree protection signage is to be attached to each tree Protection Zone and displayed in a prominent position and the sign repeated at 10m intervals or closer where the fence changes direction. Each sign to advise as minimum details, the following:
 1. Tree Protection Zone
 2. this fence has been installed to prevent damage to the trees and their growing environment both above and below ground, and access is restricted.
 3. If encroachment or incursion into this Tree Protection Zone is deemed to be essential the consulting Arborist should be informed prior to the undertaking of such works
 4. Name, address, and telephone number of the developer.
119. The area of the Tree Protection Zone is to be mulched to a depth of 100mm with organic material being 75% leaf litter and 25% wood, and this being composted material preferably from the same genus and species of tree as to that where the mulch is to be applied, ie species specific mulch. The depth of mulch and type as indicated, to be maintained for the duration of the project.
120. No services either temporary or permanent are to be located within the Tree protection Zone. If services are to be located within the Tree Protection Zone, special details will need to be provided by a qualified consulting Arborist for the protection of the tree regarding the location of the service/s.
121. In the event of prolonged dry periods, or where a tree has been transplanted, or where excavation nearby, especially up slope, leads to drying out of soil profiles closest to the tree/s, the tree/s is to be deep root watered thoroughly at least twice a week. The need for such watering is determined readily by observing the dryness of the soil surface within the dripline of the tree by scraping back some mulch. Mulch to be reinstated afterwards. In the event of disrupted ground or surface water flows to the tree due to excavation, filling or construction, an irrigation system may be required to be installed, consideration must be given to volume, frequency, and drainage of water delivered, and this should be in consultation with a qualified consulting Arborist.
122. If a tree is growing down slope from an excavation, a silt fence located along the contours of the site in the area immediately above the Tree Protection Zone fencing may be need to be installed and regularly maintained to prevent burial and asphyxiation of the roots of the tree.

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To allow for the maintenance of both fences, the silt fence must be constructed separately to the tree protection fence and the two fences must be constructed independently of each other and stand alone. To reduce competition the Tree Protection Zone is to be kept free of weeds for the duration of the development works.

123. Upon completion of the installation of the required tree protection measures you are required to contact the principal certifying authority to arrange an inspection of the site. Following the carrying out of a satisfactory inspection and subject to the payment of all relevant monies and compliance with any other conditions of approval, work may commence.
124. Prior to the commencement of **any excavation works** on site the Applicant must submit, for approval by the Principal Certifying Authority (with a copy forwarded to Council) a full dilapidation report on the visible and structural condition of the residence at 9 Bruce Avenue. The report must be completed by a consulting structural/geotechnical engineer. Upon submitting a copy of the dilapidation report to Council (or certification that no report is required), a written acknowledgment from Council development engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site. If the residence has been demolished under a separate approval, no dilapidation report is required.
125. Prior to the commencement of **any** works on site the applicant must submit, for review by Council Engineers, a *Construction and Traffic Management Plan*. The following matters must be specifically addressed in the Plan:
 1. **A plan view of the entire site and frontage roadways indicating:**
 - Dedicated construction site entrances and exits, controlled by a certified traffic controller, to safely manage pedestrians and construction related vehicles in the frontage roadways,
 - Turning areas within the site for construction and spoil removal vehicles, allowing a forward egress for all construction vehicles on the site,
 - The locations of proposed Work Zones in the frontage roadways,
 - Location of any proposed crane standing areas
 - A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries
 - Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected.
 - The provision of an on-site parking area for employees, tradesperson and construction vehicles as far as possible
 2. **Traffic Control Plan(s) for the site**
 - All traffic control devices installed in the road reserve must be in accordance with the RTA publication “Traffic Control Worksite Manual” and be designed by a person licensed to do so (minimum RTA ‘red card’ qualification). The main stages of the development requiring specific construction management measures are to be identified and specific traffic control measures identified for each.

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- Traffic controllers are to be stationed at the intersection(s) of Bruce Avenue and Greengate Lane and at the bend when construction vehicles are approaching the site from Greengate Lane.
- Consideration should be given to using an existing driveway off Bruce avenue for some site access.
- Approval is to be obtained from Ku-ring-gai Council for any temporary road closures or crane use from public property.

3. A detailed description and route map of the proposed route for vehicles involved in spoil removal, material delivery and machine floatage must be provided.

- Light traffic roads and those subject to a load or height limit must be avoided at all times.
- A copy of this route is to be made available to all contractors, and shall be clearly depicted at a location within the site.

In addition, the plan must address:

- Evidence of RTA concurrence where construction access is provided directly or within 20m of an Arterial Rd.
- A schedule of site inductions to be held on regular occasions and as determined necessary to ensure all new employees are aware of the construction management obligations. These must specify that construction-related vehicles to comply with the approved requirements.
- Minimising construction related traffic movements during school peak periods.
- For those construction personnel that drive to the site, the Applicant shall attempt to provide on-site parking so that their personnel's vehicles do not impact on the current parking demand in the area.
- Employee parking is to be provided in the basement as soon as practicable.

The *Construction and Traffic Management Plan* shall be prepared by a suitably qualified and experienced traffic consultant and be certified by this person as being in accordance with the requirements of the abovementioned documents and the requirements of this condition. The construction management measures contained in the approved plan shall be implemented in accordance with the plan prior to the commencement of, and during, works on-site including excavation. As the plan has a direct impact on the local road network, the plan shall be submitted to and reviewed by Council, attention Development Engineer. A written acknowledgment from Council engineers shall be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site. A fee is payable for the assessment of the plan by Ku-ring-gai Council.

126. If a Works Zone is proposed, the Applicant must make a written application to the Ku-ring-gai Local Traffic Committee to install the 'Work Zone'. The application must be made at least 15 days prior to the commencement of any works on site approved under this consent. Works Zones are provided specifically for the set down and pick up of materials and not for

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the parking of private vehicles associated with the site. Works Zones will generally not be approved where there is sufficient space on-site for the setting down and picking up of goods being taken to or from a construction site. If the Works Zone is approved by the Committee, the Applicant must obtain a written copy of the related resolution from the Ku-ring-gai Local Traffic Committee and submit a copy of this to the Principal Certifying Authority for approval prior to commencement of any works on the site. Where approval of the 'Work Zone' is resolved by the Committee, the necessary 'Work Zone' signage shall be installed (at the cost of the Applicant) and the adopted fee paid prior to commencement of any works on the site. Further, at the expiration of the Works Zone approval, the Applicant is required to remove the Works Zone signs and reinstate any previous signs, all at the Applicant's cost.

127. Prior to the commencement of any works on site the applicant shall submit to Ku-ring-gai Council a full dilapidation report on the visible and structural condition (**including a photographic record**) of the following public infrastructure:

- a) Full road pavement width, including kerb and gutter, of Bruce Avenue over the site frontage.
- b) All driveway crossings and laybacks opposite the subject site, including rear accesses and fences to Greengate Road properties.

The report must be completed by a consulting structural/civil engineer. Particular attention must be paid to accurately recording (both via photo and in written format) *existing* damaged areas on the aforementioned infrastructure so that:

- Council is fully informed when assessing any damage to public infrastructure caused as a result of the development, and
- Council is able to refund infrastructure damage bonds, in full or parts thereof, with accuracy.

The developer may be held liable to any recent damage to public infrastructure in the vicinity of the site, where such damage is not accurately recorded under the requirements of this condition prior to the commencement of works. In this respect, the infrastructure damage bond lodged by the subject developer may be used by Council to repair damage regardless. A written acknowledgment from Council engineers must be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any works on site.

128. If the use of temporary rock anchors extending into the road reserve is proposed, then approval must be obtained from Council in accordance with Section 138 of the Roads Act 1993. The Applicant is to submit details of all the work that is to be considered, and the works are not to commence until approval has been granted. The designs are to include details of the following:

- (1) How the temporary rock anchors will be left in a way that they will not harm or interfere with any future excavation in the public road
- (2) That the locations of the rock anchors are registered with Dial Before You Dig

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- (3) That approval of all utility authorities likely to use the public road has been obtained. All temporary rock anchors are located outside the allocations for the various utilities as adopted by the Streets Opening Conference.
- (4) That any remaining de-stressed rock anchors are sufficiently isolated from the structure that they cannot damage the structure if pulled during future excavations or work in the public road.
- (5) That signs will be placed and maintained on the building stating that de-stressed rock anchors remain in the public road and include a contact number for the building manager. The signs are to be at least 600mm x 450mm with lettering on the signs is to be no less than 75mm high. The signs are to be at not more than 60m spacing. At least one sign must be visible from all locations on the footpath outside the property. The wording on the signs is to be submitted to Council's Director Technical Services for approval before any signs are installed.

Permanent rock anchors are not to be used where any part of the anchor extends outside the development site into public areas or road reserves.

All works in the public road are to be carried out in accordance with the Conditions of Construction issued with any approval of works granted under Section 138 of the Roads Act 1993.

CONDITIONS TO BE COMPLIED WITH PRIOR TO OCCUPATION

129. Prior to the release of any occupation certificate, a compliance certificate must be obtained from an accredited certifier, certifying that the building works for the building to be occupied comply with the plans and specifications approved by this development consent; and any construction certificate associated with this consent for the buildings to be occupied. If the PCA is not the Council, then this compliance certificate must be submitted to the Council at the same time as the occupation certificate is submitted to the Council in accordance with Clause 151(2) of the E P & A Act regulations.
130. The landscape works shall be completed prior to release of the Certificate of Occupation and maintained in a satisfactory condition at all times.
131. On completion of the LANDSCAPE WORKS, a Landscape Architect or qualified Landscape Designer shall submit a report certifying correct installation, faithful to the landscape plan to the Principal Certifying Authority with a copy to Council, prior to issue of the Occupation Certificate.
132. Prior to issue of the Occupation Certificate, the Principal Certifying Authority (where not Council) must provide Ku-ring-gai Council with a signed declaration that the following works in the road reserve have been completed in full:
 - New concrete footpath along the Bruce Avenue frontage of the site.
 - New road pavement and kerb and gutter in accordance with the plans approved by Council under the Roads Act.

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- Removal of **all** redundant driveway crossings and kerb laybacks (or sections thereof) and reinstatement of these areas to footpath, turfed verge and upright kerb and gutter. (Reinstatement works to match surrounding adjacent infrastructure with respect to integration of levels and materials).
- Full repair and resealing of any road surface damaged during construction.
- Full replacement of damaged sections of grass verge with a non-friable turf of native variety to match existing.

All works must be completed in accordance with the *General Specification for the Construction of Road and Drainage Works in Ku-ring-gai Council*, dated November 2004. The Occupation Certificate must not be issued until all damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council. Repair works shall be at no cost to Council.

133. Prior to issue of the Occupation Certificate the applicant must create a Positive Covenant and Restriction on the Use of Land under Section 88E of the Conveyancing Act 1919, burdening the owner with the requirement to maintain the on-site stormwater detention facilities on the lot. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instrument for protection of on-site detention facilities" (refer to appendices of Ku-ring-gai Council Water Management DCP 47) and to the satisfaction of Council. For existing Titles, the Positive Covenant and the Restriction on the use of Land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the On-Site Detention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms. Registered title documents showing the covenants and restrictions must be submitted and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.
134. Prior to issue of the Occupation Certificate the applicant must create a Positive Covenant and Restriction on the Use of Land under Section 88E of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site stormwater retention and re-use facilities on the property. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instruments for protection of retention and re-use facilities" (refer to appendices of Ku-ring-gai Council Water Management DCP 47) and to the satisfaction of Council. For existing Titles, the Positive Covenant and the Restriction on the use of Land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the reuse and retention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms. Registered title documents showing the covenants and restrictions must be submitted and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.
135. Prior to issue of the Occupation Certificate the following must be provided to Council (attention Development Engineer):

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- a) A copy of the approved Construction Certificate stormwater detention/retention design for the site, and
- b) A copy of any works-as-executed drawings required under this consent
- c) The Engineer's certification of the as-built system.

This condition is required so Council may maintain its database of as-constructed on-site stormwater detention systems, and applies particularly where the appointed Principal Certifying Authority (PCA) is not Ku-ring-gai Council.

- 136. Prior to issue of an Occupation Certificate the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.
- 137. Prior to issue of an Occupation Certificate the applicant must submit certification from a suitably qualified and experienced traffic/civil engineer to the Principal Certifying Authority. This certification must be based on a site inspection of the constructed vehicle access and accommodation areas, with dimensions measurements as necessary, and must make specific reference to the following:
 - a) That the as-constructed carpark complies with the approved Construction Certificate plans,
 - b) That the completed vehicle access and accommodation arrangements comply in full with Australian Standard 2890.1 – 2004 "Off-Street car parking" in terms of minimum parking space dimensions provided,
 - c) That finished driveway gradients and transitions will not result in the scraping of the underside of cars.
 - d) That no doors, gates, grilles or other structures have been provided in the access driveways to the basement carpark, which would prevent unrestricted access for internal garbage collection from the basement garbage storage and collection area.
 - e) That the vehicular headroom requirements of:
 - Australian Standard 2890.1 - "Off-street car parking",
 - 2.44m height clearance for waste collection trucks (refer DCP 40) are met from the public street into and within the applicable areas of the basement carpark.
- 138. Prior to issue of the Occupation Certificate a qualified and experienced consulting civil/hydraulic engineer must undertake a site inspection of the completed stormwater drainage and management system. The engineer is to provide written certification based on the site inspection to the Principal Certifying Authority, prior to issue of the Occupation Certificate, which makes specific reference to all of the following:
 - a) That the stormwater drainage works have been satisfactorily completed in accordance with the approved Construction Certificate drainage plans.
 - b) That the minimum retention and on-site detention storage volume requirements of BASIX and Ku-ring-gai Council Water Management DCP 47 respectively, have been achieved in full.
 - c) That retained water is connected and available for uses including toilet flushing, laundry and garden irrigation.

Item 2

- d) That basement and subsoil areas are able to drain via a pump/sump system installed in accordance with AS3500.3 and appendix 7.1.1 of Ku-ring-gai Council Water Management DCP 47.
- e) That all grates potentially accessible by children are secured.
- f) That components of the new drainage system have been installed by a licensed plumbing contractor in accordance with the Plumbing and Drainage code AS3500.3 2003 and the BCA, and
- g) All enclosed floor areas, including habitable and garage floor levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices.

The following certification sheets **must be accurately completed and attached** to the certification:

- Rainwater retention certification sheet contained at appendix 13 of Water Management DCP 47
- On-site detention certification sheet contained at appendix 4 of Water Management DCP 47.

139. Prior to issue of the Occupation Certificate a registered surveyor must provide a Works-as-Executed (WAE) survey of the completed stormwater drainage and management systems. The WAE plan(s) must be submitted to the Principal Certifying Authority for approval prior to issue of the Occupation Certificate. The WAE survey must indicate:

- As built (reduced) surface and invert levels for all drainage pits.
- Gradients of drainage lines, materials and dimensions.
- As built (reduced) level(s) at the approved point of discharge to the public drainage system.
- As built location and internal dimensions of all detention and retention structures on the property (in plan view) and horizontal distances to nearest adjacent boundaries and structures on site.
- The achieved storage volumes of the installed retention and detention storages and derivative calculations.
- As built locations of all access pits and grates in the detention and retention system(s), including dimensions.
- The size of the orifice or control fitted to any on-site detention system.
- Dimensions of the discharge control pit and access grates.
- The maximum depth of storage possible over the outlet control.
- Top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system.

The WAE plan(s) must show the as-built details above in comparison to those shown on the drainage plans approved with the Construction Certificate prior to commencement of works. All relevant levels and details indicated must be marked **in red** on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.

140. Prior to issue of the Occupation Certificate a maintenance regime shall be prepared for the basement stormwater pump-out system and submitted to Principal Certifying Authority. The

Item 2

regime shall specify that the system is to be regularly inspected and checked by qualified practitioners.

141. Prior to issue of the Occupation Certificate a suitably qualified and consulting geotechnical engineer is to provide certification to the Principal Certifying Authority that excavation and construction of the basement level, including temporary and permanent shoring and retention measures, have been carried out :

- a) According the relevant Australian Standards and guidelines, and
- b) According to any approved Geotechnical report undertaken for the development, and
- c) In a manner that ensures that the structural amenity of adjoining structures and property is fully maintained.

142. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring with certifications as specified in the Report on Geotechnical Investigation by Davies Geotechnical and the professional geotechnical input over the course of the works, must be compiled in report format and submitted to the Principal Certifying Authority for approval.

143. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate (and at the completion of the works) the Applicant shall submit to the Principal Certifying Authority (PCA) a follow up dilapidation report on the visible and structural condition of the residence at 9 Bruce Avenue.

The Report must be completed by a practicing consulting structural engineer and be submitted for Council records prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate. If the residence has been demolished under a separate approval, no follow-up report is required.

BUILDING CONDITIONS

144. The following are required details and must be submitted to the Principal Certifying Authority *prior to issue of the Construction Certificate*. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.

- a. Details prepared by a practicing structural engineer for all or any reinforced concrete, structural steel or timber framing.
- b. Wind bracing details complying with AS 1684-1992 National Timber Framing Code, AS 1170.2-1989 Wind Load Code or AS 4055-1992 Wind Loads for Housing Code.
- c. Retaining walls and associated drainage.
- d. Wet area waterproofing details complying with the Building Code of Australia.
- e. Mechanical ventilation details complying with Australian Standard 1668-1993 Mechanical Ventilation & Airconditioning.
- f. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
- g. Stormwater disposal details complying with Council's Stormwater Management Manual and/or other conditions of this consent.

Item 2

145. The following are required details and must be submitted to the Council on completion of the works. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.
- a. Wet area waterproofing details complying with the Building Code of Australia.
 - b. Mechanical ventilation details complying with Australian Standard 1684 Mechanical Ventilation & Airconditioning.
 - c. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
 - d. Waterproofing of walls/floors below ground level to prevent the entry of water into the building.
 - e. A Registered Surveyor's Report on completion of footings but before external walls are above floor level verifying compliance with this consent.
 - f. A Registered Surveyor's Reports confirming approved floor levels for all floors.

T Southwell
Development Assessment Officer

R Kinninmont
Team Leader
Assessment Team – South

M Prendergast
Manager
Development Assessment Services

M Miocic
Director
Development & Regulation

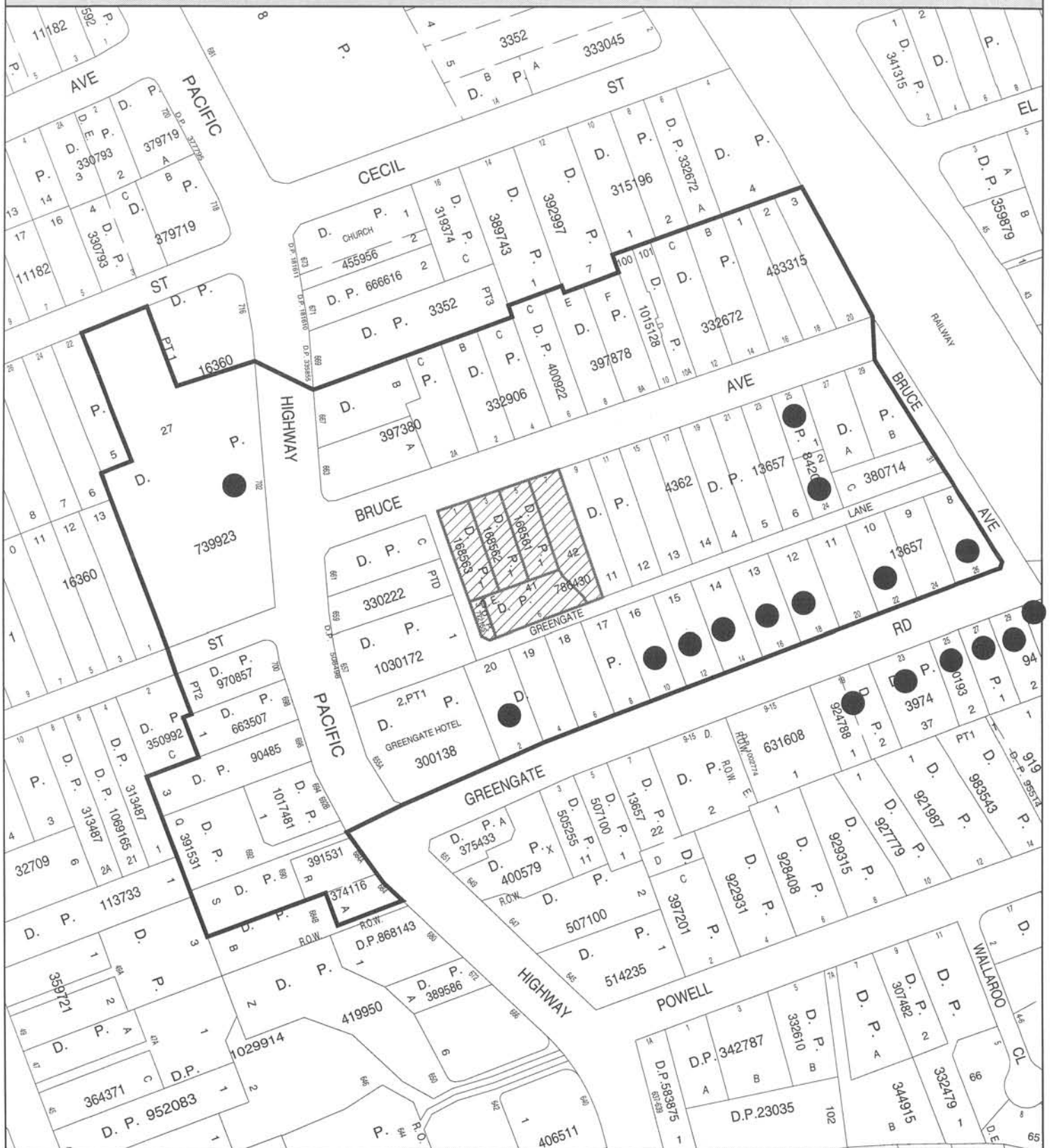
Attachments:

- Location map - 548754**
- Zoning map - 548755**
- Architectural plans – 548933 and 548934**
- Landscape plan - 548760**
- Appendix 1 - 548761**
- Appendix 2 - 548762**

LOCATION SKETCH

1-7 BRUCE AVE & 6 GREENGATE LANE KILLARA.

DEVELOPMENT APPLICATION No 514/05



Scale : 1:2500

24-10-2005



AGREEMENT

OBJECTION

SUBJECT LAND



PETITION

SUBMISSION

CIRCULATED AREA



Zoning Extract

Development Application No 514/05



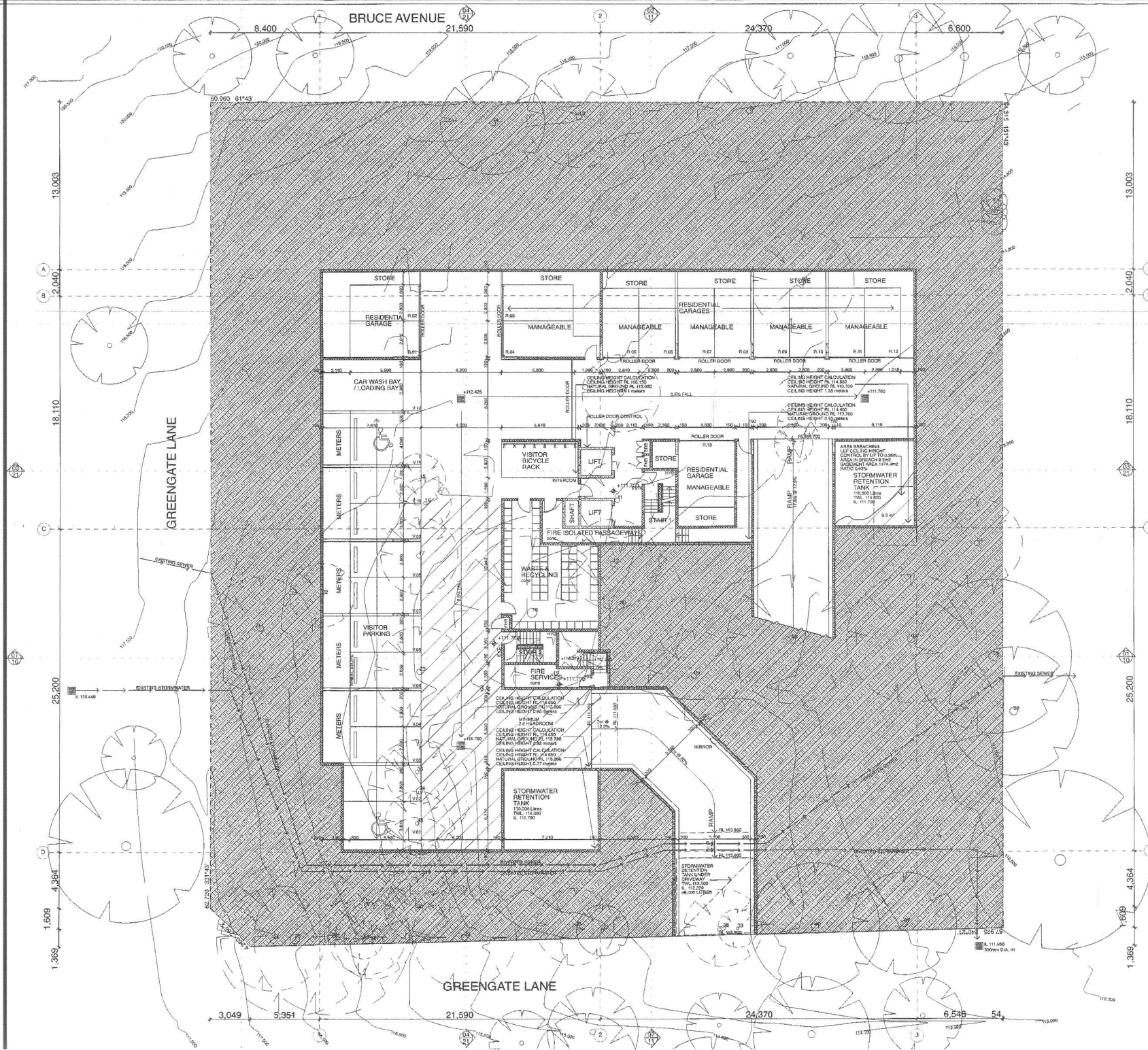
24-10-2005

Scale = 1:2500

- 3(a) BUSINESS 3(a)-(A2)
- EXISTING COUNTY ROAD
- 2(b) RESIDENTIAL 2(b)
- 2(c2) RESIDENTIAL 2(c2)
- 2(d) RESIDENTIAL 2(d)
- 2(d3) RESIDENTIAL 2(d3)

- 2(e) RESIDENTIAL 2(e)
- SCH SPECIAL USES 5(a) (Schools etc)
- SPECIAL USES 5(b) (Railway)



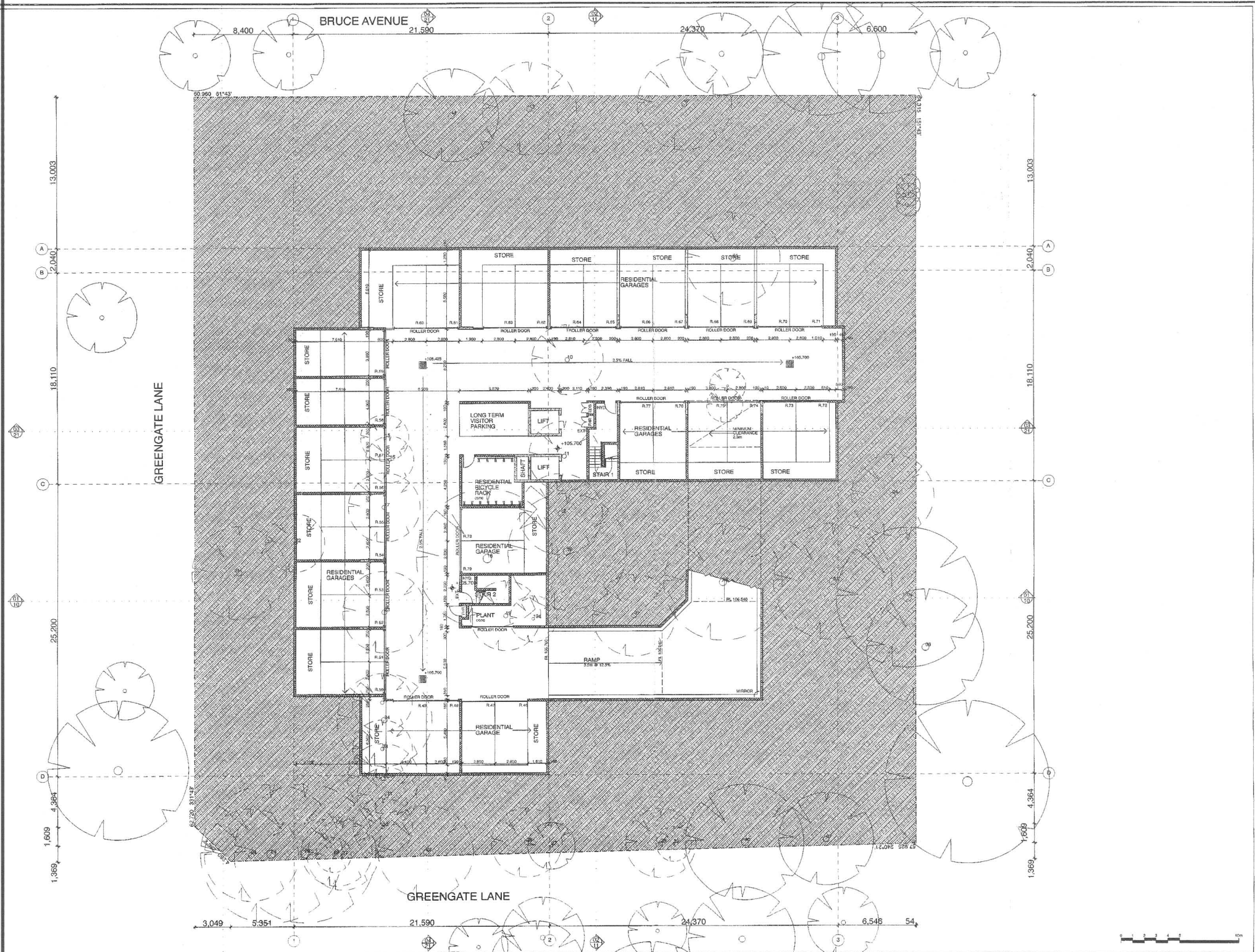


REVISED/ISSUED TO: THE SERVICES ROOM 05/10/05
 C: BUILDING APPROVED & AS NEST 30/06/06
 A: BUILDING APPROVED & AS NEST 24/06/06

**1-7 BRUCE AVE & 6 GREENGATE LANE
KILLARA
NSW 2071**

BASEMENT 1 PLAN

DA-03



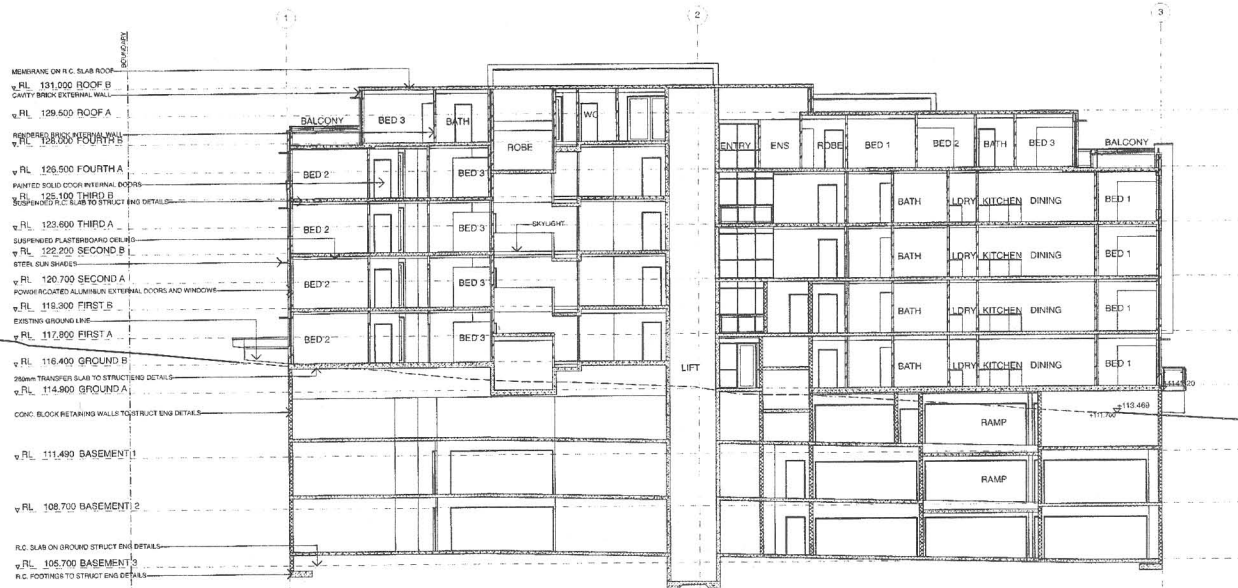
1:7 BRUCE AVE & 6 GREENGATE LANE
KILLARA
NSW 2071

DA-01

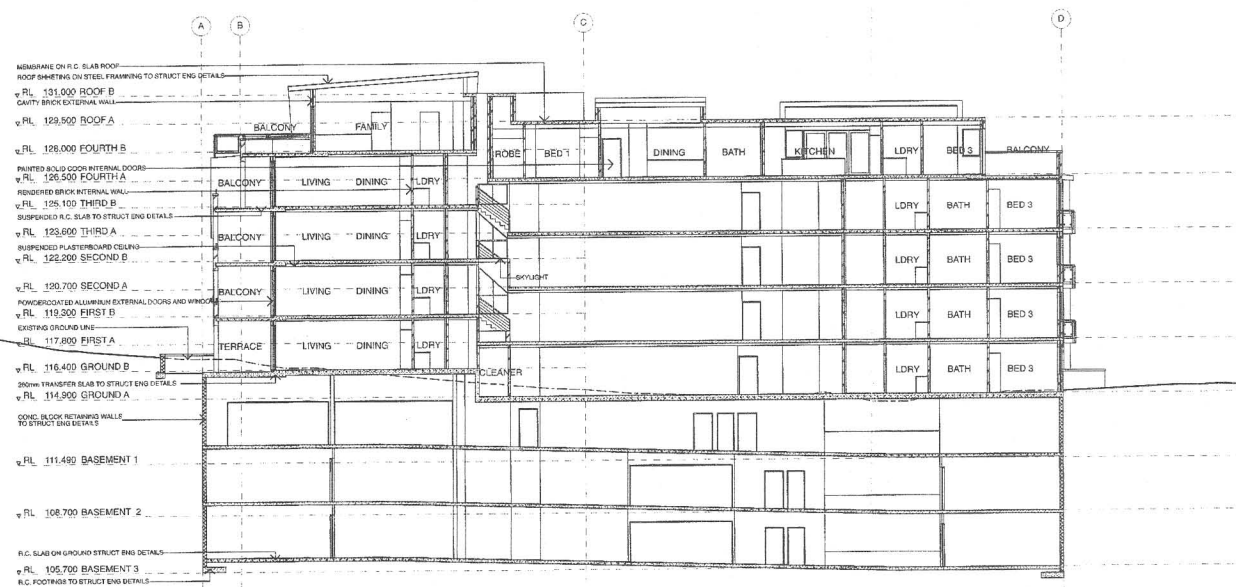
Project Details
1:7 BRUCE AVE & 6 GREENGATE LANE
KILLARA
NSW 2071

Drawn: JG
Checked: JG
Date: 04/18
Scale: 1:100
Drawing Name: BASEMENT 3 PLAN

DA-01



03 SECTION 1:100

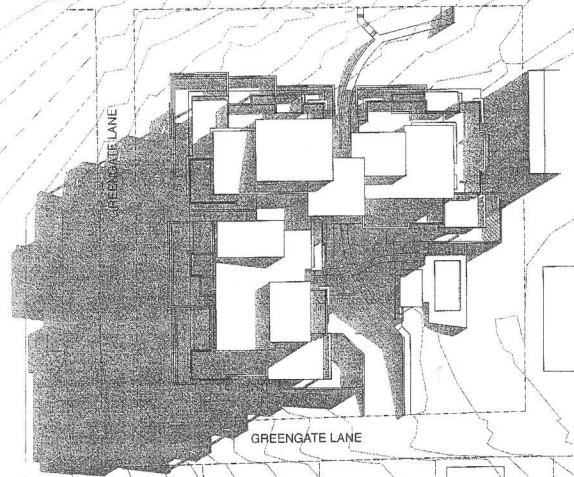


04 SECTION 1:100

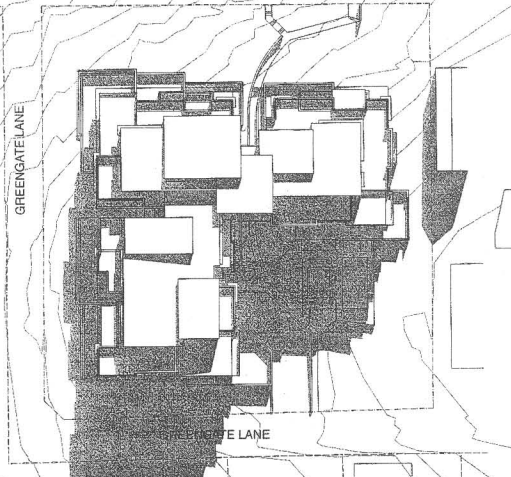
BRUCE AVENUE

BRUCE AVENUE

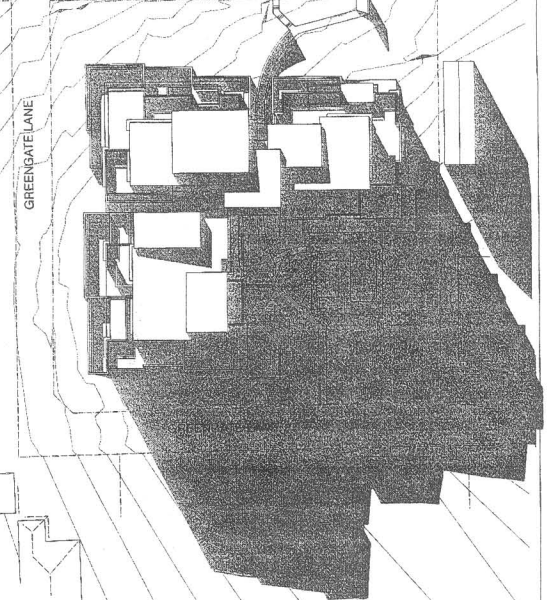
BRUCE AVENUE



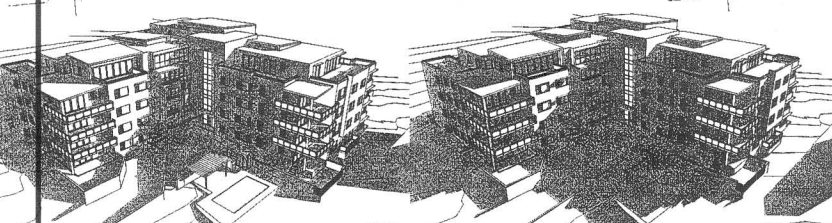
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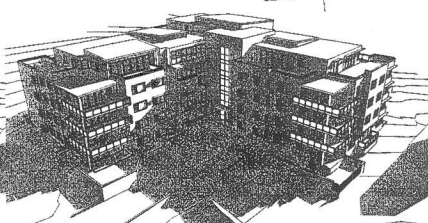
JUN 21st 12noon 1:30pm



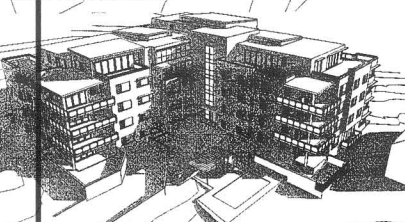
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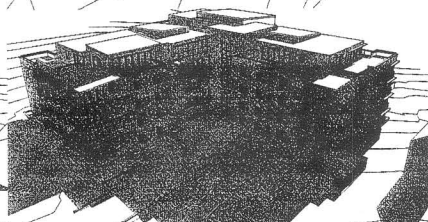
VIEW 1 JUN 21st 9am



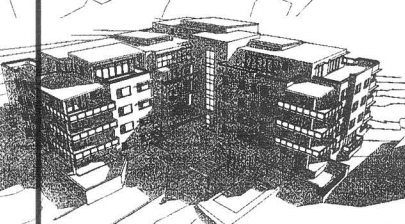
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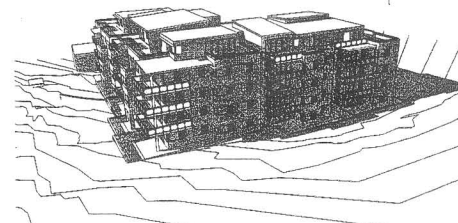
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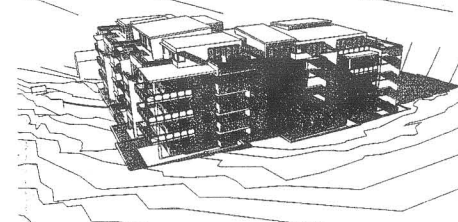
VIEW 1 JUN 21st 11am



VIEW 1 JUN 21st 11am



VIEW 2 JUN 21st 12noon



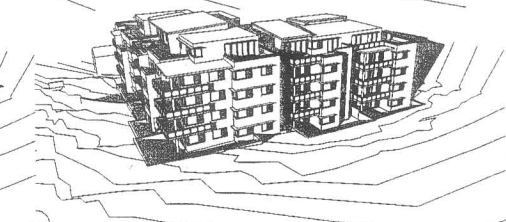
VIEW 2 JUN 21st 1pm



VIEW 2 JUN 21st 2pm



VIEW 2 JUN 21st 3pm



VIEW 2 JUN 21st 3:30pm

BUILDING MOVED 6m EAST
 & BUILDING FORMS REMOVED
 & RELOCATED TO CLIENT

Architects

1. Furey + Grant
 Architects

Project Details

New South Wales
 For Building & Planning Approval

1-7 BRUCE AVE &
 6 GREENGATE LANE
 KILLARA
 NSW 2074

Drawings created by Furey + Grant Architects in accordance with the NSW Building & Planning Act 2006 and the Building & Planning Regulation 2006.

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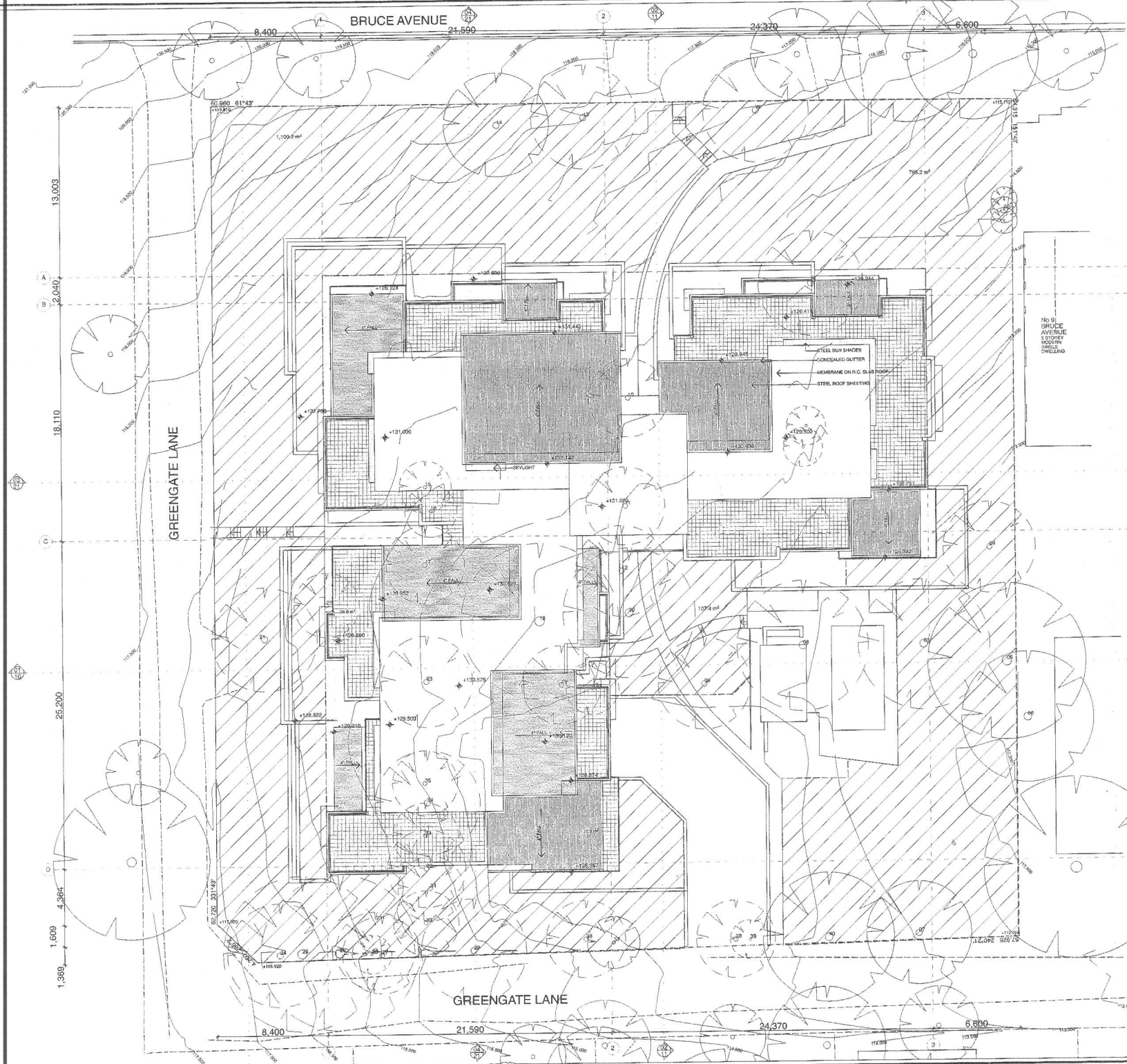
Drawings created by Furey + Grant Architects in accordance with the NSW Building & Planning Act 2006 and the Building & Planning Regulation 2006.

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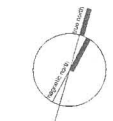
Drawings created by Furey + Grant Architects in accordance with the NSW Building & Planning Act 2006 and the Building & Planning Regulation 2006.



TREE SCHEDULE

TREE NO	TREE TYPE	COND.	RETAIN/REMOVE	REASON
1	JACARANDA	FAIR	REMOVE	WITHIN BUILDING FOOTPRINT
2	4 X CYPRUS	GOOD	RETAINED	GOOD SPECIMENS SCREEN VALUE
3	MACADAMIA	FAIR	REMOVE	WITHIN BASEMENT FOOTPRINT
4	CREPE MYRTLE	POOR	REMOVE	POOR CONDITION
5	LIQUIDAMBER	FAIR	RETAINED	SCREENMENT VALUE
6	CAMELIA	POOR	RETAINED	ON NEIGHBOURS PROPERTY
7	MACADAMIA	FAIR	RETAINED	SCREEN VALUE
8	JACARANDA	FAIR	REMOVE	WITHIN BASEMENT FOOTPRINT
9	MACADAMIA	FAIR	REMOVE	WITHIN BUILDING FOOTPRINT
10	CHINESE JUNIPER	FAIR	REMOVE	WITHIN BUILDING FOOTPRINT
11	MULBERRY	POOR	REMOVE	POOR CONDITION
12	LOCUST	FAIR	REMOVE	TOO CLOSE TO BUILDING
13	BOX ELDER	POOR	REMOVE	POOR CONDITION
14	ARGYLE APPLE	FAIR	RETAINED	SCREEN & STREET SCAPES VALUE
15	JACARANDA	POOR	REMOVE	POOR CONDITION
16	SILKY OAK	GOOD	REMOVED	WITHIN BUILDING FOOTPRINT
17	ILLAWARRA FLAME	GOOD	REMOVED	WITHIN BUILDING FOOTPRINT
18	JACARANDA	FAIR	REMOVE	TOO CLOSE TO BASEMENT
19	RIVER SHEOAK	GOOD	REMOVE	WITHIN BUILDING FOOTPRINT
20	GORDONIA	GOOD	REMOVED	TOO CLOSE TO BUILDING
21	EUROPEAN NETTLE	POOR	REMOVE	POOR CONDITION
22	COINSPOT FERN	GOOD	REMOVED	WITHIN BUILDING FOOTPRINT
23	PEPPERCORN	POOR	REMOVE	POOR CONDITION
24	CAMPOR LAUREL	FAIR	REMOVE	WEED SPECIES
25	CAMPOR LAUREL	FAIR	REMOVE	WEED SPECIES
26	CAMPOR LAUREL	POOR	REMOVE	WEED SPECIES
27	CAMPOR LAUREL	POOR	REMOVE	WEED SPECIES
28	ILLAWARRA FLAME	POOR	REMOVE	POOR CONDITION
29	COMMON OLIVE	POOR	REMOVE	POOR CONDITION
30	JACARANDA	POOR	REMOVE	POOR CONDITION
31	JACARANDA	POOR	REMOVE	POOR CONDITION
32	JACARANDA	POOR	REMOVE	POOR CONDITION
33	JACARANDAH	POOR	REMOVE	POOR CONDITION
34	CHINESE ELM	POOR	REMOVE	POOR CONDITION
35	JACARANDA	POOR	REMOVE	POOR CONDITION
36	MACADAMIA	POOR	REMOVE	POOR CONDITION
37	COTTON PALM	GOOD	RETAINED	GOOD SPECIMENS SCREEN VALUE
38	MACADAMIA	FAIR	REMOVED	WITHIN DRIVEWAY FOOTPRINT
39	MACADAMIA	POOR	REMOVED	POOR CONDITION
40	JACARANDA	FAIR	RETAINED	SCREEN VALUE
W	COTONEASTER	POOR	REMOVE	WEED SPECIES

4.7 m² DEEP SOLAR AREA TOTAL 1995m²



D BUILDING (CONCRETE) ABOVE JAB008
 E BUILDING (CONCRETE) 2nd FLOOR JAB009
 F BUILDING (CONCRETE) 3rd FLOOR JAB010
 G BUILDING (CONCRETE) 4th FLOOR JAB011
 H BUILDING (CONCRETE) 5th FLOOR JAB012

Project Details
 Project Name: 1-7 BRUCE AVE & 6 GREENGATE LANE
 Project Address: KILLARA NSW 2071



ROOF AND SITE PLAN
 Drawing Number: DA-09







being a big attraction with the general public, with many visitors taking photographs and videos. The "water" is pumped into the planters from a drainage point (by gravity) within each planter, which in turn draws to the side stemwater system. The Landscape Contractor is so confident in their satisfaction that the commencement of the works is specified in absolute terms.

planter boxes are waterproofed and well drained prior to the installation of any steel drainage.

All upward and/or outward stems are to be supported to a grade of 50mm with the soil material

removed from site or used to level lawn areas. The resultant outgrade is to be hand compacted to a depth of 150mm. Where cuttings intrude into potting soils gypsum is to be added at the rate of 100g/m² of cuttings.

0.25 kg / square meter. A XXXXX degree of first quality imported topsoil is AG-4419 that is added to green beds and thoroughly turned in and incorporated into the cultivated subgrade prior to

All natural oxide film areas are to be extracted in 150mm. The substrate can either be laser etched

straw to 150 mm depth or till soil material used to level the lower seed. Where cultivation involves subsoil tillage gypsum is to be added at the rate of 0.25 kg / square metre. A 100 mm

depth of first tilling required to make 15-4417 shall be added to lawn beds and thoroughly turned in and incorporated into the subgrade prior to planting. Turf is to be laid over topsoil.

Reported to be free from any material toxic to plant growth, slugs, snails, rodents, clay lumps or other extraneous material and free from viruses or fungicide-like weeds such as red grass.

water (cough, involuntarily cough, with: weed of seas)

Planter Box Areas

Imported soil mix is only to be installed in planter boxes following the completion of steel drainage installation. All planter boxes are to be backfilled with an imported soil mix suitable for plants to be installed. See plan notes for details. The installation is to be completed in a 15-day period from start of work.

light compression by heat at each layer to reduce the extent of coaling in the future. The goal is to finish 300mm across the finished edge of the slabs by 1990 to allow for much installation.

Soil Mix: Equivalent to AN, simpler low mix to be used in plaster Dura.

IRRIGATION: An automatic drip irrigation system is in use across all garden areas. In 1994, the design and layout of

It is the responsibility of the Contractor to provide all necessary permits, fees, and approvals for the system to the Project Manager for approval prior to installation.

corresponding any maintenance work.

All prices are to be the best available plant stock at the time of ordering. Plant sizes to be in accordance with the Street Dimensions unless noted otherwise by the Project Manager.

All tree and palm planting over 75 litres are to be soaked using 5 x 50 x 50 x 1800mm kerbs

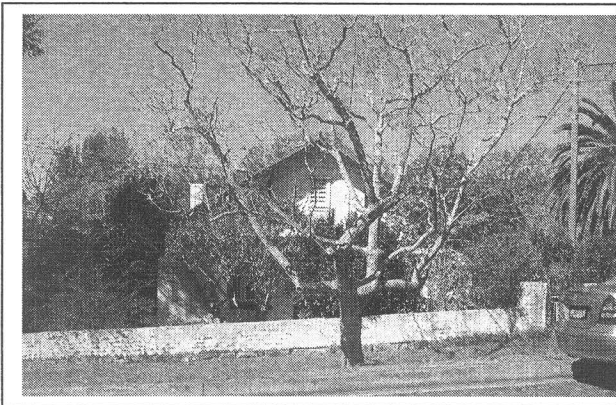
glucose absorption test.



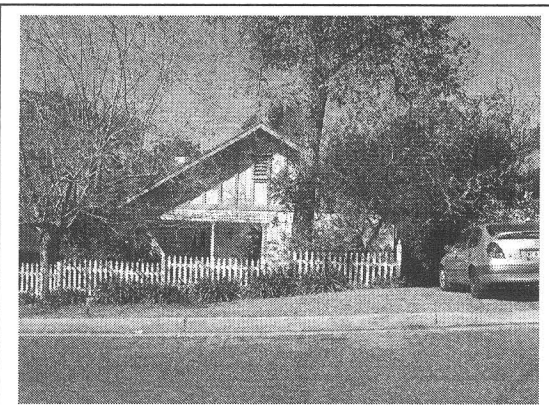
Appendix 1

DA 514/05

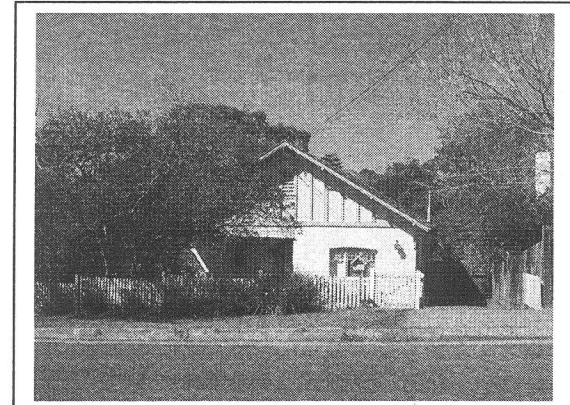
1-7 Bruce Avenue , 6 Greengate Lane, Killara
Subject site



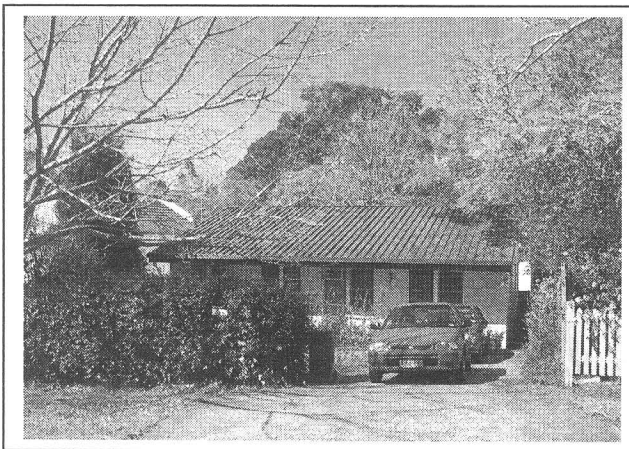
1 Bruce Ave



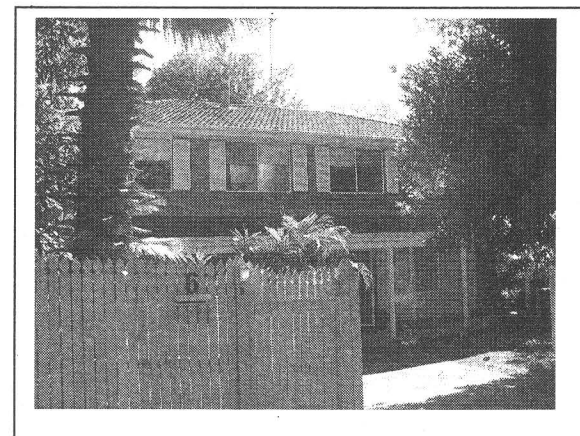
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5 Bruce Ave



7 Bruce Ave

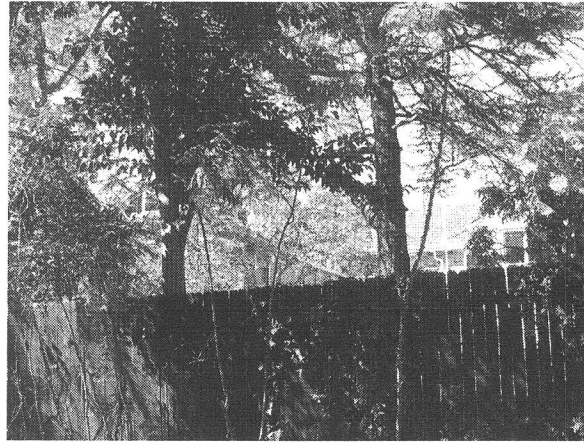


6 Greengate Lane

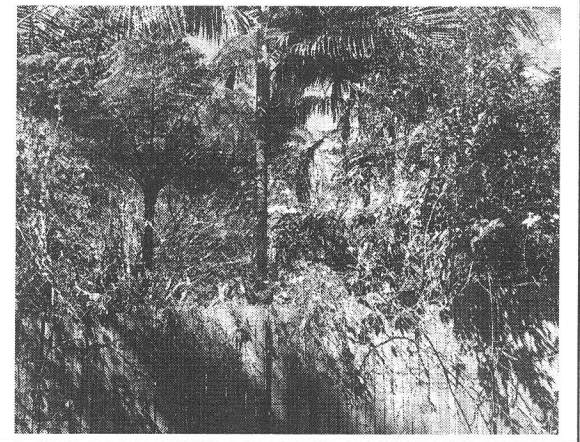
Surrounding development



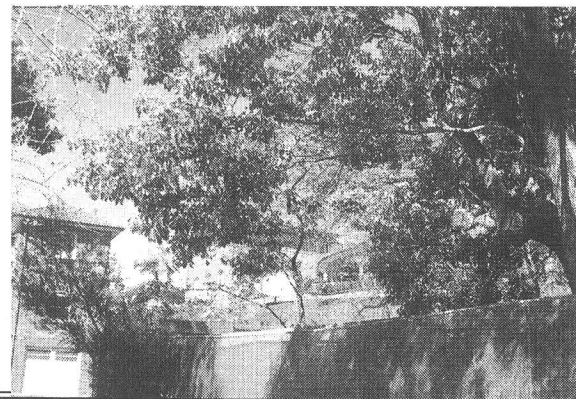
2 Greengate Lane



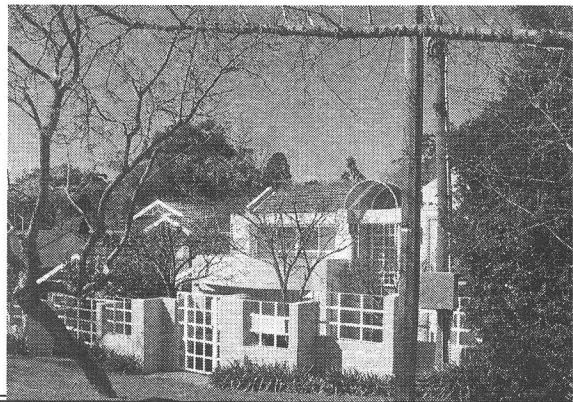
4 Greengate Road



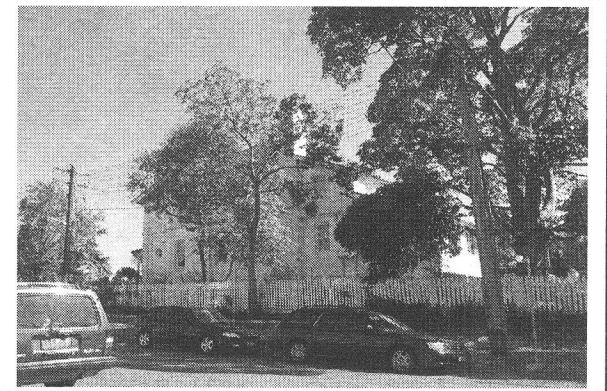
6 Greengate Road



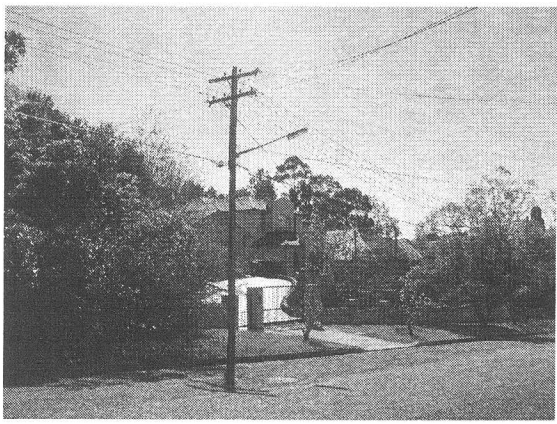
Greengate Hotel (heritage listed)



9 Bruce Ave



663 Pacific Highway (heritage listed)



Bruce Ave, opposite subject site



Greengate Lane, adjacent to subject site



View from lower terrace of Greengate Hotel



View from top terrace of Greengate Hotel

CHRISTMAS/NEW YEAR RECESS DELEGATIONS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:	To grant appropriate Delegations during the Christmas/New Year recess period.
BACKGROUND:	Council at its meeting of 5 April 2005 adopted an amended Meeting Cycle for the Christmas recess period.
COMMENTS:	The Christmas recess period is from the last meeting for the year, which is 13 December 2005 with meetings resuming on 7 February 2006. During this period, it is necessary to grant Delegated Authority to the Mayor, Deputy Mayor and General Manager.
RECOMMENDATION:	That appropriate Delegations of Authority be granted to the Mayor, Deputy Mayor and General Manager.

PURPOSE OF REPORT

To grant appropriate Delegations during the Christmas/New Year recess period.

BACKGROUND

Council at its meeting of 5 April 2005 adopted an amended Meeting Cycle for 2005 through to 7 February 2006.

COMMENTS

The Christmas recess period is from the last meeting for the year, which is to be held on 13 December 2005 through to the first meeting of 2006 on 7 February.

During the recess period, it will be necessary to grant Delegated Authority to the Mayor, Deputy Mayor and General Manager to exercise the functions of Council where such functions could not be deferred until the meeting of Council on 7 February 2006.

CONSULTATION

Not applicable.

FINANCIAL CONSIDERATIONS

Not applicable.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Not applicable.

SUMMARY

Not applicable.

RECOMMENDATION

- A. That the Mayor, Councillor Elaine Malicki, the Deputy Mayor, Councillor Nick Ebbeck and the General Manager, Brian Bell, be granted authority to exercise all powers, authorities, duties and functions of Council except those set out in Section 377 of the Local Government Act 1993 during the period 14 December 2005 to 6 February 2006, subject to the following conditions:

Item 5

S02017
21 November 2005

1. Such powers, authorities and functions may only be exercised by unanimous agreement between the Mayor, Deputy Mayor and General Manager.
 2. Any such power, authority, duty or function shall only be exercised by the Mayor, Deputy Mayor and General Manager jointly where they are of the opinion that the exercise of any such power, authority, duty or function could not be deferred until the meeting of Council on 7 February 2006.
- B. That consultation subject to their availability be held with Ward Councillors on matters where they would normally be contacted before delegation is exercised.

Brian Bell
General Manager

COUNCIL MEETING CYCLE FOR 2006

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To consider amending the Council Meeting Cycle for 2006 because of school holidays, public holidays and the Christmas Recess.

BACKGROUND:

Council has in the past resolved to amend its meeting cycle to take into account the school holiday breaks, the Local Government Association Conference and the Christmas Recess.

COMMENTS:

Options for Council's consideration.

RECOMMENDATION:

That Council's Meeting Cycle for 2006 be amended.

PURPOSE OF REPORT

To consider amending the Council Meeting Cycle for 2006 because of school holidays, public holidays and the Christmas Recess.

BACKGROUND

The scheduled meeting cycle for 2006 is:

February:	7 February 2006	Ordinary Meeting of Council
	28 February 2006	Ordinary Meeting of Council
March:	14 March 2006	Ordinary Meeting of Council
	28 March 2006	Ordinary Meeting of Council
April:	11 April 2006	Ordinary Meeting of Council
	25 April 2006	Ordinary Meeting of Council
May:	9 May 2006	Ordinary Meeting of Council
	23 May 2006	Ordinary Meeting of Council
June:	13 June 2006	Ordinary Meeting of Council
	27 June 2006	Ordinary Meeting of Council
July:	11 July 2006	Ordinary Meeting of Council
	25 July 2006	Ordinary Meeting of Council
August:	8 August 2006	Ordinary Meeting of Council
	22 August 2006	Ordinary Meeting of Council
September:	12 September 2006	Ordinary Meeting of Council
	26 September 2006	Ordinary Meeting of Council
October:	10 October 2006	Ordinary Meeting of Council
	24 October 2006	Ordinary Meeting of Council
November:	14 November 2006	Ordinary Meeting of Council
	28 November 2006	Ordinary Meeting of Council
December:	12 December 2006	Ordinary Meeting of Council
	26 December 2006	Ordinary Meeting of Council

COMMENTS

The school holiday periods for 2006 are:

Autumn:	Friday, 14 April 2006 to Friday, 28 April 2006
Winter:	Monday, 3 July 2006 to Friday, 14 July 2006
Spring:	Monday, 2 October 2006 to Friday, 13 October 2006
Summer:	Friday, 22 December 2006 to Friday, 26 January 2007

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There are scheduled Council Meetings that fall within these periods. Council has in the past resolved to cancel scheduled meetings during school holidays.

The Meeting Cycle for 2006 is also affected by Anzac Day and Boxing Day.

Council could amend the Meeting Cycle for 2006, as follows:

Anzac Day - Public Holiday (during School Holidays)

25 April 2006	Ordinary Meeting of Council	Cancelled
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School Holidays: 3 July to 14 July 2006

11 July 2006	Ordinary Meeting of Council	(transferred to 18 July 2006)
18 July 2006	Ordinary Meeting of Council	
25 July 2006	Ordinary Meeting of Council	

School Holidays: 2 October to 13 October 2006

10 October 2006	Ordinary Meeting of Council	(transferred to 17 October 2006)
17 October 2006	Ordinary Meeting of Council	
24 October 2006	Ordinary Meeting of Council	

Christmas Recess 2006

Council has traditionally held the last Council meeting for the year on the second Tuesday in December and resumed meetings in February, the next year.

As the fourth Tuesday is Boxing Day, it is recommended that the meeting be brought forward to the first Tuesday - 5 December 2006 with the last Ordinary Meeting of Council being held on Tuesday, 12 December 2006. Following the recess, it is further recommended that the first meeting for 2007 be held on Tuesday, 6 February 2007 with the normal meeting cycle to resume on 27 February 2007.

The Local Government Association Conference is to be held from 29 October 2006 to 1 November 2006 and will not affect Council's 2006 Meeting Cycle.

CONSULTATION

Not applicable.

FINANCIAL CONSIDERATIONS

Not applicable.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Not applicable.

SUMMARY

Not applicable.

RECOMMENDATION

- A. That Council amend its meeting cycle for 2006, as follows:

25 April 2006	Ordinary Meeting of Council	Cancelled
11 July 2006	Ordinary Meeting of Council	(transferred to 18 July 2006)
18 July 2006	Ordinary Meeting of Council	
25 July 2006	Ordinary Meeting of Council	
10 October 2006	Ordinary Meeting of Council	(transferred to 17 October 2006)
17 October 2006	Ordinary Meeting of Council	
24 October 2006	Ordinary Meeting of Council	
5 December 2006	Ordinary Meeting of Council	
12 December 2006	Ordinary Meeting of Council	

- B. That the first meeting for 2007 be held on 6 February 2007 and the normal meeting cycle resume on 27 February 2007.

Geoff O'Rourke
Senior Governance Officer

Brian Bell
General Manager

EARLY CHILDHOOD CENTRE AGREEMENTS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To consider the granting of a licence for occupation of the premises at 11-21 Cowan Road, St. Ives, and a lease for Unit 1, 12-18 Tryon Road, Lindfield to Northern Sydney Central Coast Health (NSCCH) for the continued operation of Early Childhood Centres.

BACKGROUND:

Early Childhood Centres, formally Baby Health Centres, have operated in Ku-ring-gai for over 50 years and have done so through a cooperative approach between Council and the Department of Health.

COMMENTS:

Council has negotiated with NSCCH and Hornsby Hospital for the continued operation at the Early Childhood Centre at Lindfield and St Ives. Proposals have been put forward by both parties. The resulting recommendations aim to address all major concerns, and are made with a view of reaching an agreeable outcome.

RECOMMENDATION:

That appropriate agreements be made with NSCCH for the continued occupation at the Early Childhood Centres at Lindfield and St Ives.

PURPOSE OF REPORT

To consider the granting of a licence for occupation of the premises at 11-21 Cowan Road, St. Ives, and a lease for Unit 1, 12-18 Tryon Road, Lindfield to Northern Sydney Central Coast Health (NSCCH) for the continued operation of Early Childhood Centres.

BACKGROUND

Early Childhood Centres, formally Baby Health Centres, have operated in Ku-ring-gai for over 50 years and have done so through a cooperative approach between Council and the Department of Health.

The early agreements were based on the Department of Health contributing 75% of the cost of the building and providing the service. Councils were responsible for the remaining 25% of building costs and the responsibility of maintenance of the buildings. Council also provided the land on which the buildings were constructed.

Over a number of years, the Department of Health has reduced the number of early childhood centres operating in the Ku-ring-gai local government area from 5 to 2. The 2 early childhood centres currently in operation are located at St Ives Shopping Village, Memorial Avenue, St Ives and Suite 1, 12-18 Tryon Road Lindfield. Over the years there has been a trend to transfer early childhood centres from older style facilities to more modern centrally located buildings accessible to the public. The disused early childhood centre buildings have been converted to other, more suitable community related uses.

The current buildings in which early childhood centres operate are fully Council owned facilities with no contribution from the NSW Department of Health. They operate independently of Council and are staffed with NSW Department of Health early childhood professionals.

Facility Details:

St. Ives Early Childhood Centre

Council is the owner of Lot 1 DP 420106, zoned Business 3 (a) – A2 Retail Services and classified as Community Land

The Centre sits within the St. Ives Library complex and shares facilities with the Ku-ring-gai Neighbourhood Centre. Council currently supports the service by way of:

- Providing rent free accommodation
- Building maintenance costs of approximately \$11,000pa (included maintenance costs for St Ives Library and Ku-ring-gai Neighbourhood Centre)
- Payment of Council rates
- Building insurance
- Free use of the St Ives Library meeting room

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Lindfield Early Childhood Centre

Council is the owner of Unit 1 in Strata Plan 37466 being part of Lot 12 DP 804448, zoned Business 3 (b) – B2 Retail Services and classified as Community Land

The centre is located within Strata plan 37466 with Council currently supporting the service by way of:

- Providing rent free accommodation
- Payment of Strata fees, \$5,000pa
- Payment of Council rates
- Building insurance

COMMENTS

Over the past 18 months Council, Northern Sydney Central Coast Health (NSCCH) and Hornsby Hospital have been negotiating the conditions for the use of the premises at St. Ives and Lindfield. Council was eager to formalise leasing arrangements consistent with other buildings under our care and control.

NSCCH Proposal

Council has been advised by NSCCH and Hornsby Hospital that they wish to continue for the foreseeable future the operation of the Early Childhood Centres at St. Ives and Lindfield and has proposed the following leasing arrangements:

St. Ives

Rental:	Have applied for rent free premises
Term of Agreement:	3 years with a 3 year option to renew
Service:	Continue to fund the operation of the Early Childhood Centre service from the premises.
Maintenance:	As per maintenance schedule

Lindfield

Rental:	Have applied for rent free premises
Term of Agreement:	3 years with a 3 year option to renew
Service:	Continue to fund the operation of the Early Childhood Centre service from the premises
Strata Fee:	NSCCH agree to pay the \$5,000 fee as a contribution to maintenance
Maintenance:	As per maintenance schedule

Council's Proposal

During the various meetings and negotiations with NSW Department of Health representatives, the following proposal was submitted for their consideration. This proposal was based using the following criteria:

- i) Early Childhood Centre Services are the primary responsibility of the NSW State Government.

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- ii) Rental costs are a legitimate expense of operating a service and should be met by the auspicing body.
- iii) That the NSW Department of Health has benefited over a number of years through the provision of rent free Council premises.
- iv) A recognition that Early Childhood Centres provide a valuable service and any further reduction in service would have an adverse affect on young families.
- v) That over many years Council and NSW Department of Health has established a very effective working relationship in this area.
- vi) The likely impact on the NSCCH budget if the proposed rental fee came into effect immediately.

Council has made an initial proposal to NSCCH and considers the conditions offered fair when compared to the assistance granted to local community organisations under Council's Policy for Leasing Property to Community Organisations, and the fact that this service is State Government funded:

St. Ives

Rental: \$14,548pa inclusive of GST, this figure is effectively a 50% market rental
 Term: For a period up to 5 years
 Maintenance: Council responsible for all maintenance excluding replacement of safety glass and light globes. Consistent with maintenance schedule and in line with Council's Building Maintenance Program
 Outgoings: Responsibility of lessee

Lindfield

Rental: \$16,825pa inclusive of GST, this figure is effectively a 50% market rental
 Term: For a period up to 5 years
 Maintenance: Strata fees payable by Council. Consistent with maintenance schedule
 Strata Fees: To be met by Council
 Outgoings: Responsibility of lessee

As stated earlier, Community Services does recognise the financial impact that the suggested rental increase would place on the service and proposes to gradually phase in the new rental over a five year period. The suggested rentals for each centre are as follows:

Year	Lindfield	St. Ives
1	\$3,365	\$2,917
2	\$6,370	\$5,834
3	\$10,095	\$8,751
4	\$13,460	\$11,668
5	\$16,825	\$14,585

Council has an obligation to manage its facilities in a cost effective manner without losing sight of providing services to the community. This proposal gives those factors due consideration and allows the introduction of rental fees over a reasonable period of time.

Implications of Rental Increase on Early Childhood Centre Service & Building Utilisation

Should Council's proposal to increase the rental as outlined in this report not be accepted by the NSW Department of Health, the following outcomes may result:

- The closure of the Centre, resulting in a loss of services to the local community
- Relocation of the service to other sites within the local government area
- Amalgamation of the Centres reducing accessibility and availability of services. (This will result in travel for local residents both from the Northern and Southern parts of the Ku-ring-gai Local Government Area).
- Public concern regarding Council's role in the relocation or closure of services

The NSCCH have not advised Council of what their intended action is likely to be, but it is understood they are considering a number of options, including relocating early childhood centres to their own facilities. Hillview Community Health Centre in Turramurra may be one possibility in this area.

Should the NSW Department of Health decide to close down both centres, it would be relatively easy to find alternative community uses for both facilities. This could be achieved through new tenants and/or expansion of existing service providers.

Other Councils

Neighbouring Councils have been contacted regarding arrangements they may have with similar centres. Only North Sydney and Willoughby have early childhood centres operating from council owned premises. The centres in North Sydney operate rent free whilst Willoughby City Council charge rental for their premises.

If NSCCH continue to occupy either of the premises a formal agreement needs to be entered into, irrespective of any rental fee involved.

CONSULTATION

Negotiations have been held with NSCCH and Hornsby Hospital regarding the continued occupation of Early Childhood Services from Council premises at St. Ives and Lindfield. NSCCH have forwarded their proposal to Council consistent with Council's Policy of Leasing Property to Community Organisations. This Council Policy refers specifically to community based non profit organisations and not government departments.

FINANCIAL CONSIDERATIONS

Market rental valuations were carried out by an independent valuer, the State Valuation Office, who determined the rental for the premises at:

- St. Ives \$25,750pa exclusive of GST.
- Lindfield \$29,700pa exclusive of GST

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Taking into consideration a CPI increase from the time of valuation the following rentals have been suggested and represent a 50% rental rebate:

- St. Ives \$14,585pa inclusive of GST
- Lindfield \$16,825pa inclusive of GST

To ease the financial burden placed on the service it is suggested that rental be phased in as indicated below:

Year	Lindfield	St. Ives
1	\$3,365	\$2,917
2	\$6,370	\$5,834
3	\$10,095	\$8,751
4	\$13,460	\$11,668
5	\$16,825	\$14,585

The figure indicated in the final year of the proposed agreement are reflective of a 50% rental rebate and consistent with the approach as used when determining rentals for all Council leased facilities.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Consultation has occurred with Business and Finance and Technical Services Departments.

SUMMARY

Early Childhood Centres have operated in Ku-ring-gai for over 50 years and have done so through a cooperative approach between Council and the Department of Health.

The current buildings which the centres operate from are fully Council owned with Council receiving no rental from NSCCH for these premises. Proposals have been put forward regarding the terms of the occupation of these premises by both parties. In its proposal, Council has considered the fact that the Department of Health has received rent free accommodation for many years and that it has an obligation to manage its facilities in a cost effective and equitable manner for the community.

RECOMMENDATION

- A. That appropriate agreements based on the rental phasing recommended in this report, be granted to the Northern Sydney Central Coast Health for the occupation of the relevant premises for a term of up to five (5) years.
- B. That any approval is subject to the conditions under section 47A of the Local Government Act 1993 and that Council issue a public notice as prescribed by the Act.

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- C. That the Mayor and General Manager be authorised to execute all necessary documents.
- D. That the Council Seal be affixed to the agreements.

Stephen Plumb
Community Facilities
Coordinator

Danny Houseas
Manager Community
Development

Janice Bevan
Director Community Services

PROPOSED DRAINAGE EASEMENT OVER COUNCIL LAND AT 5 MORRIS AVENUE, WAHROONGA (ELDINHOPE GREEN) - APPLICANT AT 42 WESTBROOK AVENUE, WAHROONGA

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

For Council to consider granting a drainage easement over Council land known as Eldinhope Green to the applicant at 42 Westbrook Avenue, Wahroonga.

BACKGROUND:

The applicant, Glendinning Minto & Associates submitted two development applications (DA 1027/04 & DA 790/05) to Council. The former DA is to demolish the existing dwelling and construct detached dual occupancy dwellings and the latter DA is to subdivide the existing lot into two lots under Torrens Title. Both DAs have been approved by Council on 15 June 2005 and 15 August 2005 respectively, subject to the obtaining of the drainage easement over Council land.

COMMENTS:

The applicant submitted an application requesting a drainage easement over Council's reserve known as Eldinhope Green Park. The proposed drainage easement will not interfere with the current usage of the park.

RECOMMENDATION:

That Council approve the granting of the proposed drainage easement over Council land know as Eldinhope Green to the applicant at 42 Westbrook Avenue, Wahroonga, subject to the terms and conditions of this reports and public notification in accordance with the Local Government Act (1993).

PURPOSE OF REPORT

For Council to consider granting a drainage easement over Council land known as Eldinhope Green to the applicant at 42 Westbrook Avenue, Wahroonga.

BACKGROUND

The applicant, Glendinning Minto & Associates submitted two development applications (DA 1027/04 & DA 790/05) to Council on 7 October 2004 and 22 July 2005 respectively. The former DA is to demolish the existing dwelling and construct detached dual occupancy dwellings, and the latter DA is to subdivide the existing lot into two lots under Torrens Title.

The applicant's property is located at 42 Westbrook Avenue, Wahroonga, known as Lot 7 in DP22776 (**Attachment 1**).

Drainage of stormwater from the applicant's proposed development required connection into the existing Council pipeline shown on the proposed inter-allotment Drainage Plan (**Attachment 2**) which runs westerly through Council's reserve (Eldinhope Green) and draining out at a natural watercourse which traverses across the front yards of 7 - 35 Morris Avenue.

The applicant's DA 1027/04 was refused by Council on 18 February 2005 and was subsequently granted on 15 June 2005 by Council as a Deferred Commencement Approval (**Attachment 5**) following a Section 82A Review. One of its conditions requires the Applicant to submit evidence to Council that the applicant's site is benefited by an easement for stormwater drainage to the Council pipeline and has registered Title documents demonstrating this effect. DA 790/05 was determined on 15 August 2005 (**Attachment 6**) granting consent subject to the conditions in the attached Schedule of Consent Conditions which stipulated that all conditions of consent of DA 1027/04 must be satisfied.

The applicant paid the application fee of \$600.00 (including GST) requesting Council consider an application to drain water through Council owned public reserve at the rear of the subject property, connection into an existing stormwater drain (**Attachment 4**).

Location/Property

The land subject to the proposed easement is public garden and recreation space located at 5 Morris Avenue, Wahroonga. The reserve known as Eldinhope Green is situated on the eastern side of Morris Avenue and abuts the rear boundary of 42 Westbrook Avenue. The reserve is predominantly surrounded by residential properties and described as Lot 1 & Lot 6 in DP 209721 (**Attachment 1**).

The reserve is classified as 'Community Land' in accordance with the Local Government Act (1993) and categorised as 'Park' under the Council's Generic Plan of Management adopted in September 2005.

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The Local Government Act (1993) was recently amended by the Local Government Amendment (Miscellaneous) Act 2002, in relation to Community Land. In particular, Section 46 (1) (a1) provides that “A Council may grant an easement over community land to provide pipes under the surface of the ground for the connection of premises adjoining the community land to a facility of the Council or other public utility provider.” An expressed authorisation in a Plan of Management is no longer required for the granting of such easement.

However, Council will still be required to carry out public notification in accordance with Section 47 of the Local Government Act (1993).

COMMENTS

Council’s Engineering Assessment unit within the Development and Regulatory Services Department requested that the applicant provide detailed analysis of the proposed drainage easement as part of the easement application.

On 4 November 2004, Council wrote to the applicant requesting the following technical information in order for Council’s Engineering Assessment team to assess the request and seek resolution of Council (Attachment 3).

1. A survey of the existing piped system passing through the Reserve to which the connection is proposed, prepared by a registered surveyor detailing:
 - * Exact location of in-ground drainage system including all pipes and pits;
 - * Dimensions of all existing pipes and pits;
 - * Invert levels at all junctions and pits;
 - * Existing ground levels in the vicinity of the system.
2. Council’s Open Space Department may require a closed circuit television (CCTV) inspection of the entire in-ground drainage system, and a video copy of the footage to be provided to Council.
3. Certification by a qualified consulting civil hydraulic engineer that:
 - * The existing in-ground piped system is able to operate satisfactorily and without leakage or seepage.
 - * To confirm the existing pipes have adequate capacity to carry design flow rates or detention system overflows where detention systems are to be provided. These calculations to be provided to Council.
 - * Connection of the property drainage pipe to the Council’s drainage system should be constructed in accordance with Council’s Standard Drainage Plan No. 82-024, to the satisfaction of the Director Technical Services.

Council’s Development Engineer makes the following comments:

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“Further information is required before engineering assessment of this application can proceed.

I understand that the applicant is pursuing the matter of the drainage easement over Eldinhope Green reserve with Council’s Open Space section. An easement over the existing pipe through the reserve is required.

Although the drainage easement through 44 Westbrook Avenue is not within the subject property, it is adjacent to the northern boundary. The table drain at the property frontage is not very well defined and the pipe inlet to Council’s underground system is partly overgrown. There are two kerb inlet pits across the road. If blockage of the underground system occurred, the general topography means that water could enter the subject property. The ground floor for the proposed dwelling A is shown as being one metre lower than the floor level of the existing dwelling, and could therefore be liable to inundation.

The applicant should submit a flow assessment prepared by a suitably qualified and experienced engineer to demonstrate that the dwellings and garages would not be subject to inundation in the 100 year ARI event with all systems operating, or the 5 year ARI event with underground systems blocked. Details of measures recommended to ameliorate this situation should be included. This may involve reconstruction of the vehicular crossing, augmentation of the table drain, clearing of the pipe inlet etc. The floor level for dwelling A in particular may need to be raised.”

The applicant has provided the requested information to Council on 16 September 2005.

The information has been reviewed by Technical Services (drainage engineers) and the following comments provided in response (**Attachment 7**):

Reference is made to the Notice of Determination for DA 1027/04, in Council’s letter dated 17 June 2005, (TRIM 509626) that was granted as a Deferred Commencement Approval, subject to Schedule A condition being resolved. Schedule A condition notes:

Prior to the operation of the consent, the applicant shall submit, for Council’s approval, registered title documents demonstrating that the subject site is benefited by the necessary easement(s) for stormwater drainage as far as the approved point of discharge to the public drainage system. This information is to include, as a minimum, registered Title documents demonstrating the benefit and burdens, together with the instruments describing the terms of necessary drainage easement (s).

This condition raises two key requirements:

1. Report to Council for determination of an approved point of discharge to the public drainage system.
2. Drafting of Legal documents to enable registered Title documents demonstrating the benefit and burdens ...with the instruments describing the terms...of drainage easement (s).

Issue 1 - Point of discharge

(Technical Services’ comments on this issue have not been quoted as it is not related to the purpose of this report. For details, please see **Attachment 7**).

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Issue 2 – Easement

Two options exist as a connection point to the Council drainage system:

- * The first, connection via 44 Westbrook Avenue. In essence, this would involve consent of the adjoining owner and amendment to existing easement terms to benefit 42 Westbrook Avenue.
- * A second option, involves connection to Council's pipeline within Eldinhope Green thus requiring an easement within the reserve, and subsequent public notification as required under Section 47 of the Local Government Act 1993.

Drawing plans submitted propose the latter. The following considerations are made in regard to this:

- * The proposed easement is 1.0 metre wide by 3.0 metres in length, located centrally over a 150mm pipe. These dimensions are considered satisfactory for the pipe size.
- * A 0.5m distance is allowed from all sides the 150mm pipe to the easement boundary as clearance for installation and future access. The easement therefore extends over Council's system by 0.5m at the connection. A letter of 14 December 2004 by AFCE, note they consider it only necessary to create an easement no further than the Council pipe, proposing a length of 2m to be sufficient. A minimum length of 2.5 metres would however be required given the above and as measured on plans.
- * AFCE cite concerns regarding maintenance responsibility. The easement extent is considered appropriate and full coverage over Council's system is not intended to pass any obligation of maintenance onto the subject owner except for instances of those resulting from damages caused by the connection or subject damages as ordinarily applies under terms of easements.
- * It is recommended that the easement be created pursuant to Section 88B of the Conveyancing Act 1919. Council also use this for creation of Positive Covenants over on-site detention systems and for other drainage related matters.
- * The subject easement benefits the applicant only and there is no community benefit. As such, all costs for survey, legal and construction should be borne by the applicant. Any costs involved with checking by Council should also be borne by the Applicant.

Recommendation

From a drainage perspective, Technical Services has no objections to the proposed connection subject to the following conditions:

- A. Compliance with drawing plan No.352278, Sheet D1, Rev 0 by AFCE Environment + Building, dated September 2005 for the inter-allotment drainage system through Eldinhope Green.
- B. That Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, over the identified flood zone burdening the property with the requirement to maintain the site levels on the northern side of both proposed dwellings. Registered title documents showing the covenants and restrictions must

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be submitted and approved by the Principal Certifying Authority (PCA) prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate.

For existing Titles, the Positive Covenant and the Restriction on the use of Land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the flood zone in relation to the building footprint must be shown on a scale sketch, attached as an annexure to the request forms.

- C. That all costs associated with the creation of easement including costs for survey, legal as well as construction be borne by the Applicant.

The plans and information were submitted by the applicant and were given conditional approval by the Director Technical Services on 4 October 2005, subject to Council approval.

The proposed easement will not interfere with the current usage of the reserve. The area of the proposed easement is only a small proportion of the total reserve area.

Should Council not grant this easement, the applicant has the right to lodge an appeal to the Land and Environment Court to have the matter resolved. This would involve substantial additional cost for Council and the applicant.

CONSULTATION

Council has consulted with the applicant's civil engineer (Appleyard Forrest Consulting Engineers Pty Ltd) and the applicant (Glendinning Minto & Associates P/L) concerning the process involved in seeking Council approval on the granting of the proposed drainage easement and connection to the pipeline.

Should Council approve the granting of an easement over the Council Reserve, public notification as prescribed by Section 47 of the Local Government Act (1993) will be required.

FINANCIAL CONSIDERATIONS

On 4 November 2004, 16 September 2005, 11 October 2005 and 21 November 2005, Council officers advised the applicant of the approximate costs involved in the proposed easement application:-

Easement application fee:	\$600.00	(includes GST – Fees and charges 2004/2005)
Legal costs:		At full cost to applicant
Valuation Report Costs:	\$990.00	(inclusive of GST)
Compensation Amount:	\$900 plus GST	(determined by R.J. Hodgson & Co. Pty.)
		<i>* see notes below</i>
Public notification fees:	\$500 to \$1,000	(excludes GST)
Legal instruments:	-	At full cost to applicant
Independent studies on		

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capacity of existing pipe: At full cost to applicant
Any repairs, replacement
or alterations to existing
pipe: At full cost to applicant

*As the NSW Department of Commerce (State Valuation Office) was very busy with its General Valuation programs and unable to provide valuation services to Council within one month period, R.J. Hodgson & Co. Pty (Real Estate Valuers & Property Consultants) was instructed by Council on 7 November 2005 to determine the compensation payable to Council, for the granting of the proposed easement (**Attachment 8**).

The applicant confirmed on 16 September 2005 that they pay all associated costs with the creation of this easement (**Attachment 4**).

On 21 November 2005, the applicant has undertaken to pay the compensation amount of \$990.00 (inclusive of GST) and the valuation report costs of \$990.00 (inclusive of GST) associated with the compensation assessment (**Attachment 9**).

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

All relevant departments were consulted in the preparation of this report.

SUMMARY

By the process of a Section 82A review of the "Refusal" determination dated 17 February 2005, Development Application No 1027/04 to demolish an existing dwelling and construct detached dual occupancy dwellings at 42 Westbrook Avenue, Wahroonga, was granted as a Deferred Commencement Approval on 15 June 2005, subject to the conditions in Schedules A & B being resolved to the satisfaction of Council. The applicant was informed of this approval by Council's letter dated 17 June 2005.

The approval was subject to deferred commencement conditions requiring the Applicant to submit evidence to Council that the subject site was benefited by an easement to the council pipeline and registered.

Whilst the original Development Application was being assessed, officers advised the applicant that they were required to submit an application for drainage easements, involving a separate process for approval.

Should Council not grant this easement, the applicant has the right to make application to the Land and Environment Court to have an easement granted. This would involve substantial additional cost for Council and the applicant.

The merits of the applicant's submission for the connection to the Council stormwater pipe has been assessed by the Technical Services drainage engineers. From a drainage perspectives, Technical Services have expressed no objection to the proposed easement, subject to the conditions outlined in

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this report.

Council has authority to grant such easements under the Local Government Act 1993 (as amended). Council is required to carry out public notification of the proposed easement in accordance with Section 47 of the Local Government Act (1993), should it resolve to grant this easement.

Proposed Next Steps

Subject to Council resolution:

1. Public notification.
2. Council solicitors to prepare Section 88B Instrument, Terms and Conditions.
3. Applicant to carry out Technical Services Report recommendations dated 4 October 2005, in conjunction with the deferred commencement conditions (Attachment 5)
4. Instrument to be executed.
5. Remaining associated costs to be paid by the applicant.
6. Section 88B Instrument to be lodged at Land Information Office.

RECOMMENDATION

- A. That Council approves the granting of the proposed drainage easement over Council land at 5 Morris Avenue, Wahroonga, known as Eldinhope Green Park to the applicant at 42 Westbrook Avenue, Wahroonga, as proposed in this Report.
- B. That Council issues a public notice as prescribed by Section 47 of the Local Government Act (1993).
- C. That Council authorises the Mayor and General Manager to sign the documentation associated with the proposed easement, should no substantial objections be received following the public notice.
- D. That Council authorises the affixing of the Common Seal to the documentation associated with the proposed easement, should no substantial objections be received following the public notice.
- E. That a report be brought back to Council if there are any substantial objections through the period of public notice.

Amanda Colbey
Manager Parks Sport & Recreation

Steven Head
Director Open Space & Planning

Greg Piconi
Director Technical Services

Ian Taylor
Manager Support Services

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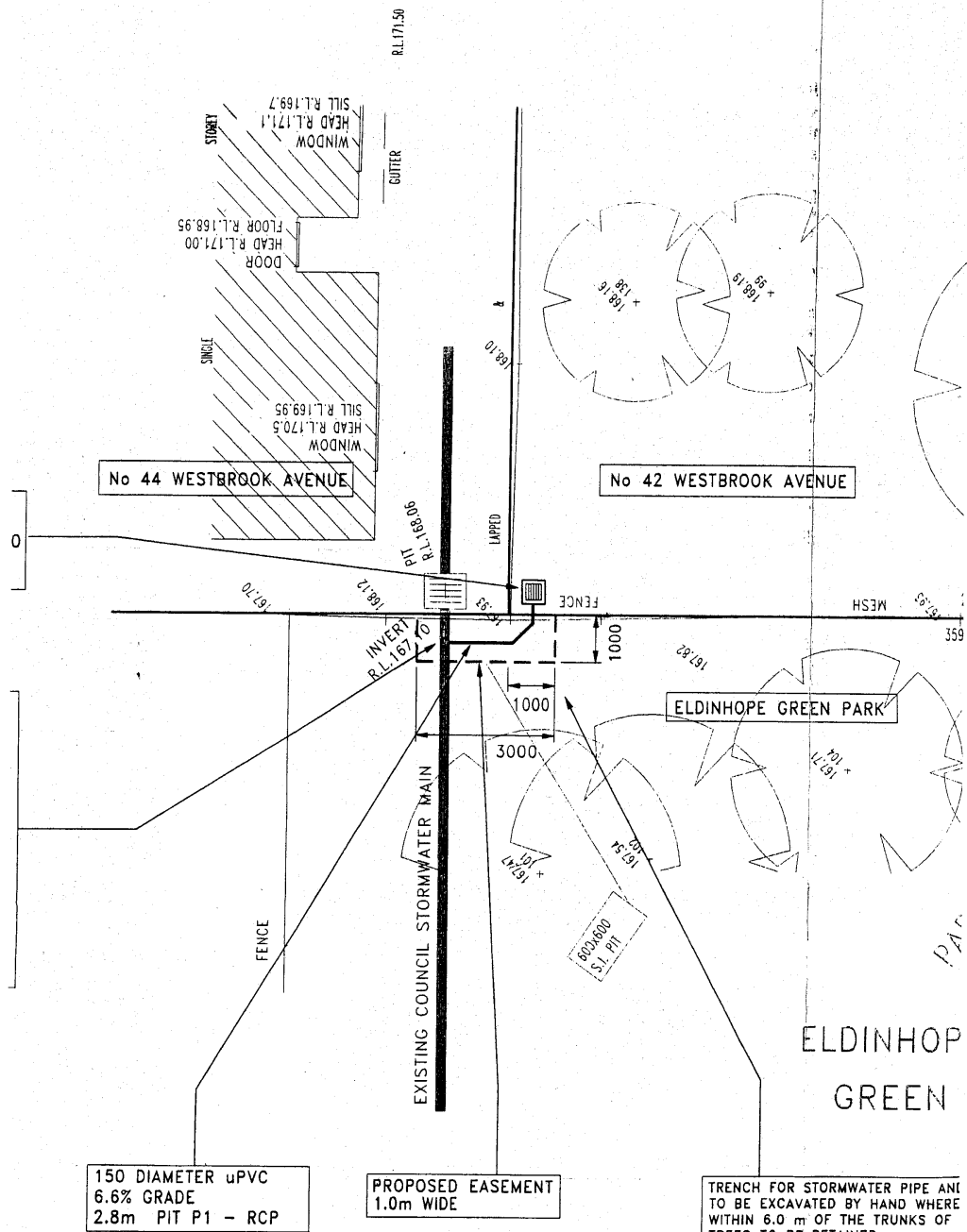
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Attachments:

- 1. Location Plan - 556622**
- 2. Inter-allotment Plan - 556626**
- 3. Council letter of 4/11/2004 to Applicant - 452155**
- 4. Applicant's request letter of 16/9/2005 -535935**
- 5. DA1027/04 Approval letter of 17/6/2005 - 509626**
- 6. DA0790/05 Approval letter of 16/8/2005 - 523932**
- 7. Technical Services' Memo of 4/10/2005 - 540004**
- 8. Valuation Report by RJ Hodgson & Co. Pty Ltd- 555797**
- 9. Signed Copy of Council's letter of 21/11/2005 from applicant - 556267**



INFOMASTER GE



Terri Southwell

1027/04

4 November 2004

Mr & Mrs de Mestre
c/- Glendinning Minto
PO Box 225
Thornleigh NSW 2120

Dear Sir/Madam

**PREMISES: 42 WESTBROOK AVE WAHROONGA
PROPOSAL: DEMOLITION OF EXISTING STRUCTURES, CONSTRUCTION
OF DETACHED DUAL OCCUPANCY
DEVELOPMENT APPLICATION N^o: 1027/04**

Your proposal has been referred to Council's Open Space Department and Development Engineers for comment. The Open Space Officer has provided the following comments:

- The Council Reserve adjacent to the applicants property is Community Classified land and as such is managed by way of a Plan of Management (POM)
- Section 46 of the Local Government Act 1993, deals with leases, licences & other estates in respect of community land (see attached)
- Section 46(a1) specifically permits Council to grant an estate for the purpose of providing pipes, conduits or other connections under the surface of the ground for the connection of premises adjoining community land. An expressed authorisation in a plan of management is no longer required for the granting of such easement.
- However, Council will still be required to carry out public notification in accordance with Section 47 of the Local Government Act 1993.
- In addition, Council authorisation to the creation of the easement is required and no commitment can be given to approve any application until a formal resolution of Council has been adopted.
- The applicants would be required to formally request Council to consider an application to drain water through Council owned public reserve at the rear of the subject property tapping into an existing stormwater drain.
- All costs associated with the creation of the easement including compensation to Council for the granting of the easement are to be borne by the applicant. And the applicant must provide an undertaking to Council in relation to these costs. Costs include the following:

1. Application fee of \$500 (non-refundable). This fee covers the initial investigation of the proposed easement.
 2. Legal costs
 3. Valuation fees for compensation
 4. Compensation amount as determined by State Valuation Office
 5. Any detailed reports required by Open Space in order to assess the application and condition of existing pipe, capacity of pipe, fauna and flora assessment, review of environmental factors report.
 6. All costs associated with the upgrade of existing pipes.
 7. The cost of Section 88B instrument, plan to be registered, and all registration fees associated with registering a sec 88B
 8. Remediation costs at the Reserve.
- Council would require that the applicant provide detailed analysis of the proposed drainage easement, which would include the following technical information, in order for Council's engineering assessment team to assess the request, and seek resolution of Council.
 1. A survey of the existing piped system passing through the reserve to which the connection is proposed, prepared by a registered surveyor detailing;
 - Exact location of in-ground drainage system including all pipes and pits;
 - Dimensions of all existing pipes and pits
 - Invert levels at all junctions and pits
 - Existing ground levels in the vicinity of the system.
 2. Open Space may require a closed circuit television (CCTV) inspection of the entire in-ground drainage system, and a video copy of the footage to be provided to Council.
 3. Certification by a qualified consulting civil hydraulic engineer that the existing inground piped system is able to operate satisfactorily and without leakage or seepage.
 4. Confirmation that the existing pipes have adequate capacity to carry design flow rates or detention system over flows where detention systems are to be provided. These calculations to be provided to Council.
 - Council would undertake a valuation for compensation

Council's Development Engineer makes the following comments:

Further information is required before engineering assessment of this application can proceed.

I understand that the applicant is pursuing the matter of the drainage easement over Edenhope Reserve with Council's Open Space section. An easement over the existing pipe through the reserve is required.

Although the drainage easement through 44 Westbrook Avenue is not within the subject property, it is adjacent to the northern boundary. The table drain at the property frontage is not very well defined and the pipe inlet to Council's

underground system is partly overgrown. There are two kerb inlet pits across the road. If blockage of the underground system occurred, the general topography means that water could enter the subject property. The ground floor for the proposed dwelling A is shown as being one metre lower than the floor level of the existing dwelling, and could therefore be liable to inundation.

The applicant should submit a flow assessment prepared by a suitably qualified and experienced engineer to demonstrate that the dwellings and garages would not be subject to inundation in the 100 year ARI event with all systems operating, or the 5 year ARI event with underground systems blocked. Details of measures recommended to ameliorate this situation should be included. This may involve reconstruction of the vehicular crossing, augmentation of the table drain, clearing of the pipe inlet etc. The floor level for dwelling A in particular may need to be raised.

As Council is required by law to deal with your application promptly, you are requested to submit the required information or details within a period of twenty one (21) days from the date hereon. Should the required information not be submitted within that period, Council will have no alternative but to determine the application in its present form.

Should you have any further enquiries in this regard, please contact the above nominated officer on telephone 9424 0888 or facsimile 9418 1117. As staff are required for field work and to attend pre-arranged interviews, the preferred time to contact specific staff is between the hours of 8.30am and 10.00am or 4.00pm and 4.30pm Monday to Friday.

Yours faithfully

Rachel Josey
Acting Team Leader
Wahroonga Ward

glendinning minto & associates p/l

planning & development control consultants abn 68 091 465 271

16 September 2005
GMA Ref: 282/2004

The General Manager
Ku-ring-gai Council
Locked Bag 1056
PYMBLE 2073

Attention: Amanda Colbey

Dear Amanda

**PROPOSED STORMWATER CONNECTION TO COUNCIL PIPELINE
42 WESTBROOK AVENUE, WAHROONGA
DA 1027/04**

Application is made under Section 46 of the Local Government Act for Council to consider an application to drain water through a Council owned public reserve at the rear of the subject property by tapping into the existing stormwater drain.

All costs associated with the creation of the easement will be borne by the owner of the subject property.

In support of this application please find enclosed:

- Cheque for \$600 for Council's application fees.
- Proposed Interallotment Drainage System plan prepared by AFCE Environment & Building, Job No 352278 Sheet No D1 which sets out the extent of the proposed easement and the proposed drainage works associated with connecting the subject site to the existing pipeline.
- Overland Flow Conveyance Report prepared by AFCE, dated December 2004.
- Letter from AFCE, dated December 2004, certifying the capacity and operational adequacy of the existing pipes.

Please contact me should you have any queries in relation to this matter.

Yours Sincerely



Andrew Minto
DIRECTOR



S:\M\Murray de Mestre\140905\letter re easement council land.doc

visit our new website at www.glendinningminto.com.au

address: 6/265-271 pennant hills road, thornleigh postal address: po box 225 thornleigh 2120

telephone: 9875 4788 facsimile: 9875 4799 e-mail: planning@glendinningminto.com.au

Our Reference:

352278/mdt:mt

Your Reference:



14 December 2004

The Manager
Glendinning Minto & Associates
PO Box 225
THORNLEIGH NSW 2120

Attn: Mr Andrew Minto

Dear Mr Minto,

Re: Proposed Dual Occupancy Development
No 42 Westbrook Avenue, Wahroonga
Proposed Stormwater Connection to Council Pipeline

We refer to your instructions in relation to this matter. We also confirm receipt of a copy of the letter from Ku-ring-gai Council dated 4 November 2004 in which Council requested the following information with respect to the capacity of the Council pipeline to which connection is proposed:

- "3. *Certification by a qualified consulting civil hydraulic engineer that the existing inground piped drainage system is able to operate satisfactorily and without leakage or seepage.*
4. *Confirmation that the existing pipes have an adequate capacity to carry design flowrates or detention system overflows where detention systems are to be provided. These calculations to be provided to Council.*"

We have inspected the subject site and the associated Council drainage system. As determined in our Overland Flow Conveyance Report dated December 2004, Revision 1.0, the catchment upstream from the Council drainage pipeline in No 44 Westbrook Avenue has a total area of 3.5 hectares. The associated 100-year and 20 year ARI (average recurrence interval) flowrates associated with this catchment are approximately 1.8 m³/s and 1.3 m³/s respectively. We have identified the inlet structures to this drainage system and have calculated their respective inlet capacities as follows (using published Inlet Pit Capacity charts and assuming inlet blockage factors of 20% for on-grade pits and 50% for sag pits as per Australian Rainfall & Runoff (1998)):

- a. On-grade pit, east side Westbrook Avenue : inlet capacity = 0.044 m³/s.

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Appleyard Forrest
Consulting Engineers Pty Ltd
ACN 002 610 522
ABN 46 193 475 686

PO Box 140
Gordon NSW 2072 Australia

Gosford
58-60 Hills Street
Gosford NSW 2250 Australia
Telephone: 02 4324 3499
Facsimile: 02 4324 2951

Castle Hill
Unit 35
7 Anella Avenue
Castle Hill NSW 2154 Australia
Telephone: 02 9634 6311
Facsimile: 02 9634 6544

Bowral
Suite 1
407-409 Bong Bong Street
Bowral NSW 2576 Australia
Telephone: 02 4862 1507
Facsimile: 02 4862 1568

International
Telephone: +(612) 4324 3499
Facsimile: +(612) 4324 2951

Email
postmaster@appleyardforrest.com.au

Website
www.appleyardforrest.com.au

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AFCE Environment + Building

Appleyard Forrest Consulting
Engineers (Hong Kong) Ltd

Appleyard Forrest Consulting
Engineers (Singapore) Pte Ltd



- b. Sag pit, east side Westbrook Avenue : inlet capacity = 0.32 m³/s.
- c. Pipe inlets, west side Westbrook Avenue : inlet capacity = 0.16 m³/s.
- d. Assumed inflow from No 44 itself = 0.018 m³/s.
- e. Sag pit at end driveway No44, inlet capacity = 0.10 m³/s.
- f. Total inlet capacity = 0.64 m³/s.

The subject Council pipeline traversing No 44 Westbrook Avenue and Eldinhope Green will therefore have a maximum flowrate of 0.64 m³/s for up to the 100 year ARI storm.

The capacity of this pipe for conditions of flowing full but not under head (conservative) is approximately 0.82 m³/s (determined from respective published RCP discharge diagrams based on Mannings equation, slope = 5.2%, diameter = 450mm).

On this basis it is concluded that the subject pipeline will not reach full capacity due to limited upstream inlet capacity. The pipeline has a spare capacity of approximately 0.18 m³/s. The maximum contribution from No 42 Westbrook Avenue for the 20 year ARI storm event is approximately 0.047 m³/s ($C_{20} = 0.74$, $^{20}_{17} = 179$ mm/hr, $A = 0.128$ ha). It is therefore concluded that the subject Council pipeline has the capacity to carry the proposed design flow rate from No 42 Westbrook Avenue.

With respect to other matters related to the proposed connection to the Council pipeline in Eldinhope Green, we make the following comments:

- i. We note that in the event that the Council pipeline did not have the capacity for additional flow, any overflows from No 42 Westbrook Avenue resulting from such insufficient capacity would flow as overland flow across Eldinhope Green to the commencement of the downstream watercourse as is the current (pre-development) situation anyway.
- ii. It is our expectation as civil and stormwater drainage engineers, with substantial accumulated experience of drainage systems within Ku-ring-gai, that the subject Council pipe is in a serviceable condition. We find the need to certify that this system is operating "satisfactorily without leakage or seepage" a questionable requirement to be placed on a development applicant given that in this case the ownership and associated maintenance of the pipe rests with Council itself as asset manager. It is suggested that this requirement is intended rather to apply to shared private, or non-Council, pipelines prior to discharge to the Council system.
- iii. The Council letter implies that a drainage easement is required over the existing Council drainage pipe through Eldinhope Green to the discharge point of this pipe. We consider that, should an easement be required, it is only necessary to create the easement to the Council pipe and no further; that is, an easement of length approximately 2.0m. Indeed, we are aware of other similar instances where this has been agreed to by Council. To create an easement over the existing Council pipe would raise questions regarding ongoing maintenance responsibility where clearly such responsibility should remain with Council.



- iv. It would be physically possible to discharge directly to the Council pipe within No 44 Westbrook Avenue rather than within Eldinhope Reserve. The terms of the Council drainage easement would in this case require amendment to remove the reference to Westbrook Avenue from the purpose of the easement. Council's Development Engineers may wish to consider the approval of the subject development application on a deferred commencement basis in which case the conditions associated with such an approval should be flexible enough to allow this connection option as well.

Should you have any further queries in relation to this matter please do not hesitate to contact Mark Taylor in our Gosford office.

Yours faithfully

Appleyard Forrest Consulting Engineers Pty Ltd

Per:

Our Reference:

Your Reference:



14 December 2004

The Manager
Glendinning Minto & Associates
PO Box 225
THORNLEIGH NSW 2120

Attn: Mr Andrew Minto

Dear Mr Minto,

Re: Proposed Dual Occupancy Development
No 42 Westbrook Avenue, Wahroonga
Proposed Stormwater Connection to Council Pipeline

We refer to your instructions in relation to this matter. We also confirm receipt of a copy of the letter from Ku-ring-gai Council dated 4 November 2004 in which Council requested the following information with respect to the capacity of the Council pipeline to which connection is proposed:

- "3. *Certification by a qualified consulting civil hydraulic engineer that the existing inground piped drainage system is able to operate satisfactorily and without leakage or seepage.*
4. *Confirmation that the existing pipes have an adequate capacity to carry design flowrates or detention system overflows where detention systems are to be provided. These calculations to be provided to Council."*

We have inspected the subject site and the associated Council drainage system. As determined in our Overland Flow Conveyance Report dated December 2004, Revision 1.0, the catchment upstream from the Council drainage pipeline in No 44 Westbrook Avenue has a total area of 3.5 hectares. The associated 100 year and 20 year ARI (average recurrence interval) flowrates associated with this catchment are approximately 1.8 m³/s and 1.3 m³/s respectively. We have identified the inlet structures to this drainage system and have calculated their respective inlet capacities as follows (using published Inlet Pit Capacity charts and assuming inlet blockage factors of 20% for on-grade pits and 50% for sag pits as per Australian Rainfall & Runoff (1998)):

- a. On-grade pit, east side Westbrook Avenue : inlet capacity = 0.044 m³/s.

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- b. Sag pit, east side Westbrook Avenue : inlet capacity = $0.32 \text{ m}^3/\text{s}$.
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- e. Sag pit at end driveway No44, inlet capacity = $0.10 \text{ m}^3/\text{s}$.
- f. Total inlet capacity = $0.64 \text{ m}^3/\text{s}$.

The subject Council pipeline traversing No 44 Westbrook Avenue and Eldinhope Green will therefore have a maximum flowrate of $0.64 \text{ m}^3/\text{s}$ for up to the 100 year ARI storm.

The capacity of this pipe for conditions of flowing full but not under head (conservative) is approximately $0.82 \text{ m}^3/\text{s}$ (determined from respective published RCP discharge diagrams based on Mannings equation, slope = 5.2%, diameter = 450mm).

On this basis it is concluded that the subject pipeline will not reach full capacity due to limited upstream inlet capacity. The pipeline has a spare capacity of approximately $0.18 \text{ m}^3/\text{s}$. The maximum contribution from No 42 Westbrook Avenue for the 20 year ARI storm event is approximately $0.047 \text{ m}^3/\text{s}$ ($C_{20} = 0.74$, $20_{17} = 179 \text{ mm/hr}$, $A = 0.128 \text{ ha}$). It is therefore concluded that the subject Council pipeline has the capacity to carry the proposed design flow rate from No 42 Westbrook Avenue.

With respect to other matters related to the proposed connection to the Council pipeline in Eldinhope Green, we make the following comments:

- i. We note that in the event that the Council pipeline did not have the capacity for additional flow, any overflows from No 42 Westbrook Avenue resulting from such insufficient capacity would flow as overland flow across Eldinhope Green to the commencement of the downstream watercourse as is the current (pre-development) situation anyway.
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- iii. The Council letter implies that a drainage easement is required over the existing Council drainage pipe through Eldinhope Green to the discharge point of this pipe. We consider that, should an easement be required, it is only necessary to create the easement to the Council pipe and no further; that is, an easement of length approximately 2.0m. Indeed, we are aware of other similar instances where this has been agreed to by Council. To create an easement over the existing Council pipe would raise questions regarding ongoing maintenance responsibility where clearly such responsibility should remain with Council.



- iv. It would be physically possible to discharge directly to the Council pipe within No 44 Westbrook Avenue rather than within Eldinhope Reserve. The terms of the Council drainage easement would in this case require amendment to remove the reference to Westbrook Avenue from the purpose of the easement. Council's Development Engineers may wish to consider the approval of the subject development application on a deferred commencement basis in which case the conditions associated with such an approval should be flexible enough to allow this connection option as well.

Should you have any further queries in relation to this matter please do not hesitate to contact Mark Taylor in our Gosford office.

Yours faithfully

Appleyard Forrest Consulting Engineers Pty Ltd

Per:

Our Reference:

352278/mdt:mt

Your Reference:



14 December 2004

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PO Box 225
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We have inspected the subject site and the associated Council drainage system. As determined in our Overland Flow Conveyance Report dated December 2004, Revision 1.0, the catchment upstream from the Council drainage pipeline in No 44 Westbrook Avenue has a total area of 3.5 hectares. The associated 100 year and 20 year ARI (average recurrence interval) flowrates associated with this catchment are approximately 1.8 m³/s and 1.3 m³/s respectively. We have identified the inlet structures to this drainage system and have calculated their respective inlet capacities as follows (using published Inlet Pit Capacity charts and assuming inlet blockage factors of 20% for on-grade pits and 50% for sag pits as per Australian Rainfall & Runoff (1998)):

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With respect to other matters related to the proposed connection to the Council pipeline in Eldinhope Green, we make the following comments:

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Should you have any further queries in relation to this matter please do not hesitate to contact Mark Taylor in our Gosford office.

Yours faithfully

Appleyard Forrest Consulting Engineers Pty Ltd

Per:

Overland Flow Conveyance Report

for

Proposed Dual Occupancy Development

at

No 42 Westbrook Avenue, Wahroonga

Report Prepared By:

AFCE Environment + Building
(A Division of Appleyard Forrest Consulting Engineers Pty Ltd)

58 Hills Street
Gosford NSW 2250

Unit 35, 7 Anella Avenue
Castle Hill NSW 2154

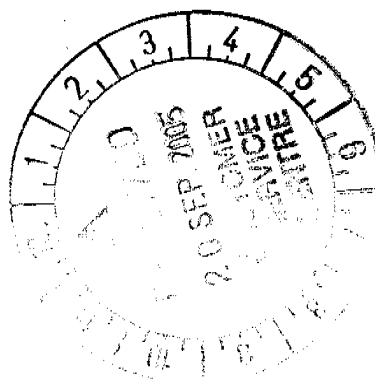
Consent Authority:

Ku-ring-gai Council

Development Application No: 1027/04

Report Prepared For:

Mr M de Mestre



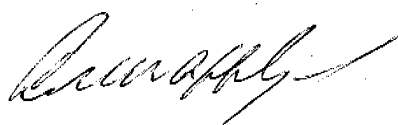
Revision: 1.0
Date: December 2004
Our Ref: 352278-20041208

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Document History

Revision No.	1.0
Prepared By:	M D Taylor BE BSc MEnvEngSc GradDipUrbRegPlan MIE Aust CP Eng Senior Civil & Environmental Engineer
Approved By:	 L D Appleyard MEngSc MEnvEngSc MIEAust CPEng NPER-3 (Civil and Structural) Director and Environmental Engineer

AFCE Environment + Building (A Division of Appleyard Forrest Consulting Engineers Pty Ltd)

Project: No. 42 Westbrook Avenue, Wahroonga
Job Number: 352278
Revision: 1.0
Date: December 2004

INTELLECTUAL PROPERTY RIGHTS APPLY



Table of Contents

1.0	Introduction
2.0	Determination of Overland Flow Rate through No 42 Westbrook Avenue
3.0	Proposed Development, Mitigation Measures and Overland Flow Conditions
4.0	Recommendations and Conclusion
5.0	Annexures
Annexure 1	Catchment Area
Annexure 2	Drawing 352278 : Post Development Overland Flow and Proposed Mitigation Measures
Annexure 3	Photos



1.0 Introduction

Development Application 1027/04 has been lodged with Ku-ring-gai Council for a proposed dual occupancy development at No 42 Westbrook Avenue, Wahroonga.

By letter dated 4 November 2004, Council has requested (*inter alia*) the following supporting information:

"Further information is required before engineering assessment of this application can proceed.

I understand that the applicant is pursuing the matter of the drainage easement over Edenhope Reserve with Council's Open Space section. An easement over the existing pipe through the reserve is required.

Although the drainage easement through 44 Westbrook Avenue is not within the subject property, it is adjacent to the northern boundary. The table drain at the property frontage is not very well defined and the pipe inlet to Council's underground system is partly overgrown. There are two kerb inlet pits across the road. If blockage of the underground system occurred, the general topography means that water could enter the subject property. The ground floor for the proposed dwelling A is shown as being one metre lower than the floor level of the existing dwelling, and could therefore be liable to inundation

The applicant should submit a flow assessment prepared by a suitably qualified and experienced engineer to demonstrate that the dwellings and garages would not be subject to inundation in the 100 year ARI event with all systems operating, or the 5 year ARI event with underground systems blocked. Details of measures recommended to ameliorate this situation should be included. This may involve reconstruction of the vehicular crossing, augmentation of the table drain, clearing of the pipe inlet etc. The floor level for dwelling A in particular may need to be raised."

AFCE Environment + Building has been commissioned by M de Mestre to prepare the required Overland Flow Conveyance Report.

This report has relied upon the following documentation:

- i. Architectural drawings by Rob Crump Design, reference 1778, Revision A dated 10 November 2004.
- ii. Plan of Detail by Mepstead and Associates Pty Ltd, reference 4042, dated 17 November 2004.

We confirm having carried out a site inspection on 2 December 2004.

AFCE Environment + Building (A Division of Appleyard Forrest Consulting Engineers Pty Ltd)

Project: No 42 Westbrook Avenue, Wahroonga

Job Number: 352278

Revision: 1.0

Date: December 2004

INTELLECTUAL PROPERTY RIGHTS APPLY



2.0 Determination of Overland Flowrate through No. 42 Westbrook Avenue

A Council drainage easement is present within No. 44 Westbrook Avenue along the northern boundary of the subject site. The upstream catchment area of the drainage system associated with this easement was determined by reference to Council cadastral maps and by site inspection. Refer to Annexure I for a copy of the relevant Council cadastral map showing the extent of the catchment.

The sag in Westbrook Avenue is located outside the frontage of No. 44 Westbrook Avenue. It is expected that overland flow originating from this sag during extreme storm events would overtop Westbrook Avenue generally across the frontage of No. 44 and partially across the frontages of No's 42 and 46. It appears that the driveway constructed within No. 44 Westbrook Avenue has been designed as an overland flow path.

For the purposes of this Report, it is conservatively assumed that the portion of the overall catchment contributing from the southern approach to the sag is directed wholly onto No. 42 Westbrook Avenue. Refer to the Catchment Plan in Annexure A.

On this basis, the sub-catchment was measured by electronic planimeter to be 1.9 hectares, out of the total catchment of 3.5 hectares. Accordingly, the total 100 year overland flow rate, with no allowance for underground drainage, was calculated to be $1.0 \text{ m}^3/\text{s}$ ($t_c = 8 \text{ mins}$, $C = 0.89$, $^{100}i = 220 \text{ mm/hr}$, $A = 1.9 \text{ ha}$, $q = 1.0 \text{ m}^3/\text{s}$). The profile of the table drain outside No. 42 Westbrook Avenue was measured on-site and its capacity calculated by Mannings formula to be approximately $0.2 \text{ m}^3/\text{s}$. This table drain directs flow to the driveway flowpath through No. 44 Westbrook Avenue. The total design 100 year ARI flow traversing No. 42 Westbrook Avenue is therefore assumed to be $0.8 \text{ m}^3/\text{s}$ ($0.8 = 1.0 - 0.2$).

3.0 Proposed Development, Mitigation Measures and Overland Flow Conditions

It is proposed to demolish the existing dwelling on the subject property and to construct a detached dual occupancy development. Refer to drawing 352278/F1 in Annexure 2.

The following mitigation measures are proposed to safeguard the proposed dwellings from overland flow, as shown in drawing 352278/F1:

- i. The finished ground floor level of dwelling A to be raised from RL 170.30 to RL 170.60.
- ii. The finished floor level of the garage of dwelling A to be raised from RL 169.70 to RL 170.00
- iii. The finished ground floor level of dwelling B to be raised from RL 169.10 to RL 169.30. The floor level of the garage of dwelling B to remain at RL 168.93.

AFCE Environment + Building (A Division of Appleyard Forrest Consulting Engineers Pty Ltd)

Project: No 42 Westbrook Avenue, Wahroonga

Job Number: 352278

Revision: 1.0

Date: December 2004

INTELLECTUAL PROPERTY RIGHTS APPLY



- iv. The provision of an overland flow path generally along the northern side of both proposed dwellings.
- v. The provision of measures in the front yard of dwelling A which will direct overland flow to the northern elevation of dwelling A.
- vi. No impediments to overland flow to be placed along the northern elevations of the two (2) proposed dwellings including solid gates, fences, hot water systems and air conditioning units.

The following comments are made regarding post-development overland flow conditions:

- a. The 100 year ARI overland flow along the northern elevation of proposed dwelling A is approximately 0.3 m deep with a velocity-depth product of approximately $0.47 \text{ m}^2/\text{s}$ as calculated using the Mannings formula (available flow width = 1.7 m, slope = 3%, Mannings $n = 0.04$, $q = 0.8 \text{ m}^3/\text{s}$, then $d = 0.3 \text{ m}$, $v = 1.6 \text{ m/s}$). The available freeboard to the proposed floor level above this flow is 0.3 m which meets the requirements of section 7.4 (c) of Ku-ring-gai Council DCP 47 – Water Management. The velocity-depth product approximately meets the $0.4 \text{ m}^2/\text{s}$ limit of Section 7.4 (e) of DCP 47. The minor exceedance is considered acceptable given that the flow path area is not primary private open space area and that the exceedance would occur for a brief period at the peak of the respective hydrograph only.
- b. The 100 year ARI overland flow along the northern elevation of proposed dwelling B is approximately 0.3 m deep with a velocity-depth product of $0.4 \text{ m}^2/\text{s}$ as calculated using the Mannings formula (available flow width = 2.0 m, slope = 3%, Mannings $n = 0.04$, $q = 0.8 \text{ m}^3/\text{s}$, then $d = 0.27$, $v = 1.5$, $vd = 0.4 \text{ m}^2/\text{s}$). The available freeboard to the proposed floor level above this flow is 0.3 m which meets the requirements of Section 7.4 (c) of DCP 47. The velocity-depth product meets the requirements of Section 7.4 (e) of DCP 47.
- c. Flow levels on the neighbouring property No. 44 Westbrook Avenue will not be raised by the proposed development since the proposed overland flow path is to be generally below natural ground level.



4.0 Recommendations and Conclusions

A dual occupancy development is proposed at No. 42 Westbrook Avenue, Wahroonga. It is recommended that the following measures be undertaken in order to safeguard the proposed dwellings from the 100 year ARI overland flow, as shown in Drawing 352278/F1 (refer Annexure 2):

- i. The finished ground floor level of dwelling A to be raised from RL 170.30 to RL 170.60.
- ii. The finished floor level of the garage of dwelling A to be raised from RL 169.70 to RL 170.00
- iii. The finished ground floor level of dwelling B to be raised from RL 169.10 to RL 169.30. The floor level of the garage of dwelling B to remain at RL 168.93.
- iv. The provision of an overland flow path generally along the northern side of both proposed dwellings.
- v. The provision of measures in the front yard of dwelling A which will direct overland flow to the northern elevation of dwelling A.
- vi. No impediments to overland flow to be placed along the northern elevations of the two (2) proposed dwellings including solid gates, fences, hot water systems and air conditioning units.

On the basis of the implementation of the above measures, it is concluded that:

- a. The proposed dwellings will meet the freeboard requirements of Section 7.4 (c) of DCP 47.
- b. The proposed flow path traversing the subject site generally meets the velocity depth product requirements of Section 7.4 (e) of DCP 47.
- c. Flow levels on the neighbouring property No. 44 Westbrook Avenue will not be increased as a result of the proposed development.



Annexure I

Catchment Area



Annexure 2

Drawing 352278/F1: Post Development Overland
Flow and Proposed Mitigation Measures



Annexure 3

Photos



Photo 1 : Westbrook Avenue viewed northerly
across frontage of No 42.



Photo 2 : Driveway crossing to No 44 with
No 42 on left side.

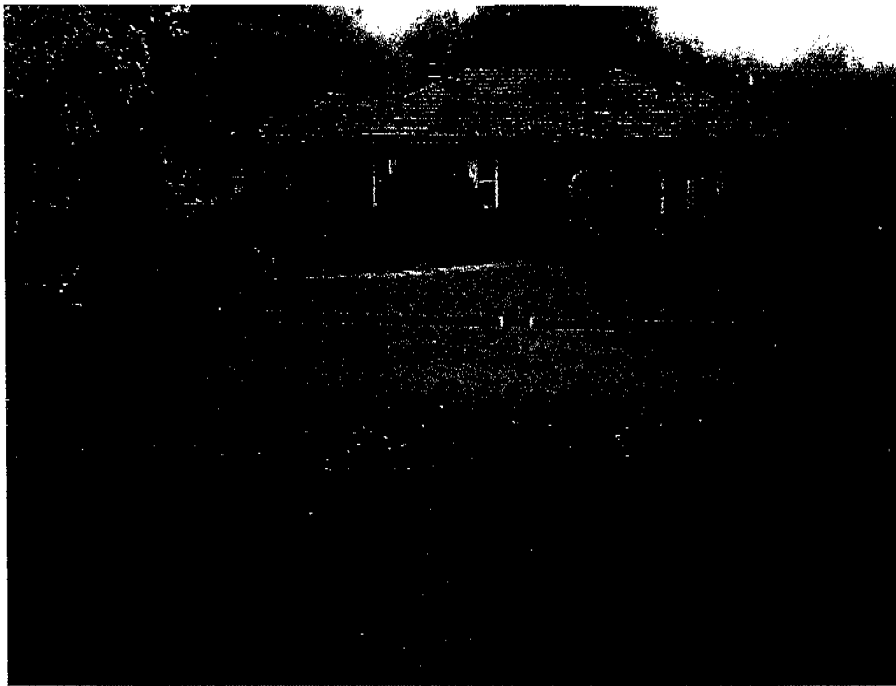


Photo 3 : No 42 viewed from Westbrook Avenue.



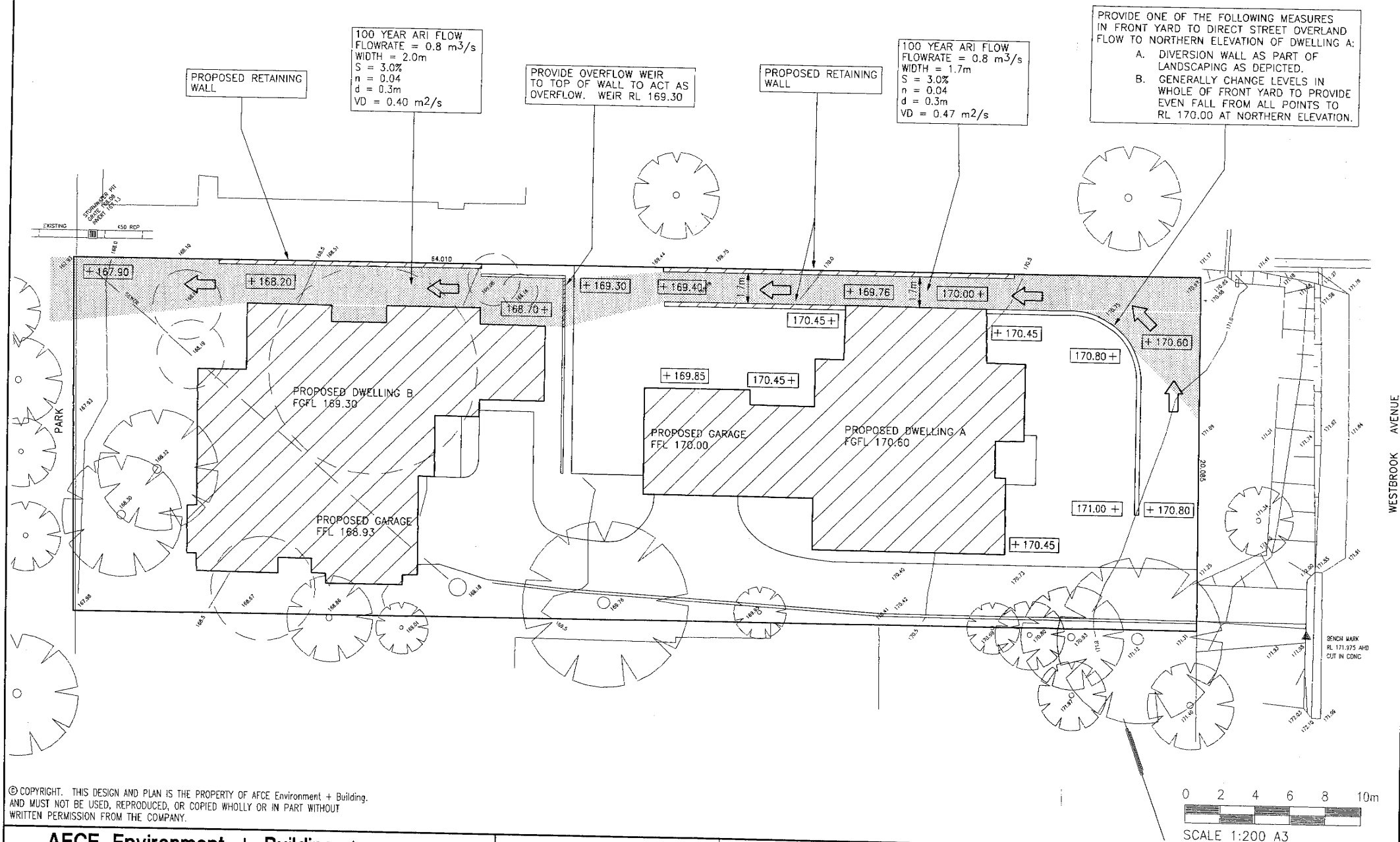
Photo 4 : Driveway to No 44 viewed from Westbrook Avenue.

Ku-ring-gai Council

No 57517
Receipt: 20/9INTERNAL USE ONLY
Fees & Charges 2005/2006

FINANCE AND GOVERNANCE

Finance & Business					
Fee Details	Fee For 2005/2006	Pricing Policy	GST	Account No	Code
Administration					
Freedom of Information					
Access to records by natural person about their personal affairs - after first 20 hours of work, per hour.	\$30.00	SF	NA	GL 21012166	423
All other requests for access to records, per hour.	\$30.00	SF	NA	GL 21012166	423
Internal Review	\$40.00	SF	NA	GL 21012166	422
Freedom of Information Processing Charge					
Access to records by natural person about their personal affairs, after 20 hours of work, per hour.	\$30.00	SF	NA	GL 21012166	423
All other requests for access to records, per hour.	\$30.00	SF	NA	GL 21012166	423
Annual Report					
Annual Report under Section 428 of the Local Government Act 1993.	\$31.80	NM	NA	GL 21012119	391
Council Minutes					
Annual Subscription.	\$341.00	NM	NA	GL 21012105	420
Copies of reports per page.	\$0.60	NM	NA	GL 21012105	420
In excess of 1 month of meeting date.	\$18.00	NM	NA	GL 21012105	420
Section 12					
Any document available under Section 12 of the Local Government Act 1993 - per page (or at an individual document cost whichever is the lesser to cover costs).	\$0.60	NM	NA	GL 21012119	391
Tape Recording					
Tape Records of Council/Committee Meetings (per hour or part thereof, plus cost of tape).	\$41.00	NM	NA	GL 21012105	421
Cheque Dishonour					
Administration Charge	\$25.00	EA	C	Debtors	DEB
Property					
Applications					
Property Easement/Right Of Way Applications.	\$600.00	EA	C	GL 22512166	718
Application for purchase of land.	\$750.00	EA	C	GL 22512166	718
Section 54 Local Government Act					
Certificate for Classification of Council Land.	\$30.00	SF	I	GL 22512166	718
Bonds/Leasing					



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AFCE Environment + Building

A DIVISION OF APPELYARD FORREST CONSULTING ENGINEERS PTY LTD

ABN: 46 193 475 686

58-60 Hills Street, Gosford NSW 2250 Australia Tel: (02) 4324 3499 Fax: (02) 4324 2951

Unit 35, 7 Anella Avenue, Castle Hill NSW 2154 Australia Tel: (02) 9634 6311 Fax: (02) 9634 6544

Suite 1, 407-409 Bong Bong Street Bowral NSW 2576 Australia Tel: (02) 4862 1507 Fax (02) 4862 1568



PROJECT :
 PROPOSED DUAL OCCUPANCY
 No 42 WESTBROOK AVENUE,
 WAHROONGA

CLIENT :
 MR M DE MESTRE

DESIGNED. mdt
DRAWN. mdt
CHECKED. bak

DIRECTOR

DATUM: AHD
DATE

TITLE POST-DEVELOPMENT OVERLAND FLOW AND
 PROPOSED MITIGATION MEASURES
 CADFILE : R/DESCAD/352278F1

JOB No.
 352278

SHEET NO.
 F1

No. OF SHEETS
 1

REVISION
 0

David Aitken

DA1027/04

17 June 2005

M & Y de Mestre
C/- Glendinning Minto & Associates
PO Box 225
THORNLEIGH NSW 2120

Dear Sir and Madam

**NOTICE OF DETERMINATION OF DEVELOPMENT APPLICATION
SECTION 81(1)(A) ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979
DEVELOPMENT APPLICATION N^o DA1027/04**

Applicant's Name and Address:	M & Y de Mestre C/- Glendinning Minto & Associates PO Box 225, THORNLEIGH NSW 2120
Land to be Developed:	Lot 7, DP 22776, 42 Westbrook Avenue, Wahroonga
Proposed Development:	Demolition of existing dwelling and construction of detached dual occupancy dwellings
Date of Determination:	15 June 2005
Date from which Consent Operates:	Deferred Commencement
Date of Expiry:	2 years and 1 day from date of completion of Schedule A

This determination is granted as a **DEFERRED COMMENCEMENT APPROVAL** in accordance with provisions of Section 80(3) of the Environmental Planning & Assessment Act 1979, and Clause 95 of the Environmental Planning & Assessment Regulation 2000 subject to the condition/s in Schedule A being resolved to the satisfaction of Council's Director Environment & Regulatory Services. Upon completion of the Schedule A requirements the applicant is to obtain written notification from Council that works can commence on site, referring to the attached Schedule B.

You are advised of your right of review of this determination by Council under Section 82A of the Environmental Planning and Assessment Act 1979.

You are advised that if you are dissatisfied with the determination you have a right of appeal to the Land and Environment Court within 12 months of the date you receive this Notice.

M Leotta
Team Leader
Development Assessment - North

Attachments

509626-Approval Letter of 17 June 05.doc/sr/1

**DEVELOPMENT APPLICATION N^o DA1027/04
PREMISES: LOT 7, DP 22776, 42 WESTBROOK AVENUE, WAHROONGA**

SCHEDULE A

1. Prior to the operation of the consent, the applicant shall submit, for Council's approval, registered title documents demonstrating that the subject site is benefited by the necessary easement(s) for stormwater drainage as far as the approved point of discharge to the public drainage system. This information is to include, as a minimum, registered Title documents demonstrating the benefit and burdens, together with the instruments describing the terms of necessary drainage easement (s).

NOTE: The matters referred to in Schedule A must be completed to Council's satisfaction within TWO YEARS from the date of this Deferred Commencement Approval before the Consent operates.

NOTE: It is the applicant's responsibility to check the title of the subject land to establish if the application is affected by any easements, covenants or restrictions on the use of the land that may affect the proposed structure.

THIS CONSENT will be ISSUED SUBJECT TO CONDITIONS OF APPROVAL as specified hereunder in Schedule B.

This permit shall be read in conjunction with the approved plans and specifications.

The following conditions specified hereunder in Schedule B shall be imposed on Development Application.

SCHEDULE B

GENERAL CONDITIONS

The issue of this consent does not permit any construction work to commence on the site until such time as a construction certificate has been obtained.

Detailed working drawings and specifications, which are consistent with the Development Consent and conditions, must be submitted for consideration of the issue of a construction certificate.

Alterations, modification or variations to this consent can only be effected where Council approves an application to modify the Consent under Section 96 of the Environmental Planning and Assessment Act.

This consent shall lapse and be void if the building work or use to which it refers is not physically commenced prior to the date of expiry of the consent.

1. The development to be in accordance with Development Application No **DA1027/04** and Development Application plans prepared by **Rob Crump Design**, reference number **1778/01D; 02D and 03D**, dated **30 August 2004** and lodged with Council on **3 May 2005**.
2. To minimise loss of amenity to the dwelling located on the northern boundary, the north facing windows of the rumpus room of Dwelling B are to be fixed glazing only. Details are to be shown on the Construction Certificate plans.
3. All building works shall comply with the Building Code of Australia.

4. The submission of the approved plans to Sydney Water, before any work is commenced to ensure that the proposed structure meets that Authority's By-Laws. Failure to submit these plans before commencing work will render the owner liable to a penalty and may result in the demolition of work.
5. The approved building shall not be occupied unless the development has been completed in accordance with all conditions of consent and the approved plans and a Occupation Certificate has been issued.
6. The opening of any footway, roadway, road shoulder or any part of the road reserve shall not be carried out without a Road Opening Permit being obtained from the Council (upon payment of the required fee) beforehand.
7. For the purpose of ensuring the compliance with the terms of the approval, an approved copy of the plan and this Consent and Construction Certificate shall be kept on site at all times.
8. For the purpose of safety and amenity of the area, no building materials, plant or the like are to be stored on the road or footpath without the written approval being obtained from the Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.
9. **HOURS OF WORK:** For the purpose of residential amenity, noise generating work carried out in connection with building and construction operation, including deliveries of building materials and equipment, is restricted to the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted. The use of the following items of plant on the site is also restricted to the abovementioned hours: compressors, bulldozers, power operated woodworking machines, excavators and loaders, jackhammers, Ramset guns, concrete mixers and concrete delivery wagons, hoists, winches, welding and riveting plant.

Whilst work on Saturdays may be performed until 5.30pm, such work or any associated activities shall not involve the use of any noise generating processes or equipment.
10. For the purpose of public safety, a sign shall be erected on the site prior to any work commencing which is clearly visible from a public place stating that unauthorised entry to the site is not permitted and showing the name of the builder or another person responsible for the site and a telephone number for contact outside working hours. The sign may only be removed on satisfactory completion of the works.
11. A sign shall be erected in a prominent position on the site which states the name and contact details of the Principal Certifying Authority.
12. All excavations shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.
13. Compliance with the notations overdrawn on the consent plans.
14. To maintain existing ground levels all excavated material shall be removed from the site.

15. Any excavation of rock involving hydraulic or compressed air rock hammers or other excavation equipment shall comply with the requirements of Council's Code for the Control and Regulation of Noise on Building Sites.
16. Toilet facilities are to be provided, within the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
17. All noise generating equipment associated with any proposed mechanical ventilation system/s shall be located and/or soundproofed so the equipment is not audible within a habitable room in any other residential premises before 7am and after 10pm Monday to Friday and before 8am and after 10pm Saturday, Sunday and Public Holidays. Furthermore, the operation of the unit outside these restricted hours shall emit a noise level of not greater than 5dbA above the background when measure at the nearest adjoining boundary.
18. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
19. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
20. Demolition work, including removal of material or debris from the site, on any building in a residential area shall only be carried out during the following hours: Mondays to Fridays inclusive: 7.00am to 5.30pm. Saturdays: 8.00am to 12.00 noon. Sundays and Public Holidays: Not Permitted.
21. A person taking down or demolishing or causing to be taken down or demolished any building or part thereof shall, upon identifying or suspecting that asbestos is present in the building, immediately notify the Workcover Authority. The Authority is the controlling body for the safe removal, handling and disposal of asbestos. The Authority supervises and monitors contractors engaged in asbestos removal.

The requirements and standards imposed by the Authority, its consultants or contractors shall be complied with.

22. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.
23. Dust control measures shall be taken on all demolition sites so as to avoid a nuisance to adjoining properties and harm to the environment.
 - a. A person taking down or demolishing or causing to be taken down or demolished any building or portion of any building shall:
 - i. cause the windows or other openings in the external walls to be close boarded or otherwise covered;
 - ii. cause screens of canvas, hessian, boards, mats or other suitable material to be fitted in appropriate locations;
 - iii. cause areas, components and debris to be wetted down; in such a manner as to minimise, as far as practicable, the nuisance arising from the escape of dust during such taking down or demolition.

- b. Such person shall not chute, throw or let fall or cause to chute, throw or let fall from the floor to floor or into any basement of such building any building materials or any other matter so as to cause dust to escape from the building or cause any such material to fall or cast upon a public way to the annoyance, inconvenience, or danger of persons using such public way.
- 24. Soil on vacant sites is to be stabilised as soon as possible to prevent erosion and the site shall be kept clear of excess vegetation.
 - 25. A temporary construction exit and sediment trap to reduce the transport of sediment from the site onto public roads shall be provided before demolition commences.
 - 26. Existing stormwater lines on the site are to be blocked and made inoperable after buildings are demolished so as to prevent the conveyance of silt or sediments into the gutter or street drainage system.
 - 27. All combustible material shall be removed from the site on a daily basis. Material shall not be burnt on the site.
 - 28. Materials salvaged from a demolition may be stored on site provided they are non combustible, neatly and safety stockpiled and not likely to become a harbourage for vermin.
 - 29. Trees and vegetation on a site shall not be disturbed except with the approval of the Council.
 - 30. Adequate precautions shall be taken to ensure the protection of adjoining premises and persons therein from damage and injury during the process of demolition.
 - 31. Buildings built prior to the 1970's may contain lead based paint. Lead dust is a hazardous substance. You are advised to follow the attached WorkCover guidelines to prevent personal and environmental contamination.
 - 32. A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:
 - a. stating that unauthorised entry to the work site is prohibited, and
 - b. showing the name of the person in charge of the work site and a telephone number at which that person may be contacted outside working hours.

Any such sign is to be removed when the work has been completed.

This clause does not apply to:

- a. building work carried out inside an existing building, or
 - b. building work carried out on premises that are to be occupied continuously (both during and outside working hours) while the work is being carried out.
- 33. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.

34. Stormwater runoff from all hard surfaces generating runoff or landscaped areas which are not at natural ground level shall be piped to the interallotment stormwater drainage line benefiting the subject site. The interallotment line is to be covered by the necessary easement for drainage which may exist or need to be created under this consent.
35. An on-site stormwater detention and/or retention system(s) must be provided for each dwelling in accordance with Council's requirements described in chapter 6 of Councils Water Management Development Control Plan 47, available in hard copy at Council and on the Council website. Separate systems are to be provided for each residence, except where a single combined system may be located in a common location readily accessible by both owners (such as under a shared driveway). In this case appropriate cross burdens are to be created on title(s) as necessary.
36. Where required, the adjustment of any utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the Applicants responsibility to ascertain impacts of the proposal upon utility services and Council accepts no responsibility for any matter arising from its approval to this application involving an influence upon utility services provided by another authority.
37. All public footways and roadways fronting and adjacent to the site are to be maintained in a safe condition at all times during the course of the development works. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to the public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where circulation is diverted on to the roadway, clear directional signage and protective barricades must be installed in accordance with AS1742-3 1996 "*Traffic Control Devices for Work on Roads*". **If pedestrian circulation is not satisfactorily maintained, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.**
38. The provision of temporary sediment and erosion control facilities and measures are to be installed, prior to the commencement of any works on the site to eliminate unnecessary erosion and loss of sediment. These facilities must be maintained in working order during construction works and up to the completion of the maintenance period. All sediment traps must be cleared on a regular basis and after each major storm, and/or as directed by the Principal Certifying Authority and Council officers.
39. The Applicant must obtain a **Section 73 Compliance Certificate** under the *Sydney Water Act 1994*. An application must be made through an authorised Water Servicing Coordinator. Please refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-developer" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
40. Compliance with the recommendations of the Overland Flow Conveyance Report, AFCE Environment + Building Report 352278-20041208, dated December 2004, which are as follows:
 - Finished ground floor level of Dwelling A is to be at or above RL170.3;
 - Finished floor level of Garage A is to be at or above RL170.0;
 - Finished ground floor level of Dwelling B is to be at or above RL169.3;

- An overland flow path is to be provided generally along the northern side of both proposed dwellings, or measures to direct overland flow to the northern elevation of Dwelling A are to be provided in the front yard of Dwelling A;
- No impediments to overland flow are to be placed along the northern elevations of the two dwellings, including solid gates, fences, hot water systems and air conditioning units.

41. A Tree Preservation Order exists within the Ku-ring-gai Council area whereby the removal, lopping or destruction of any tree exceeding 5.0 metres in height or 4.0 metres in canopy spread (except where exempt as defined under Council's Tree Preservation Order) without prior written consent of Council is prohibited.

Release of the Construction Certificate gives automatic approval to the removal ONLY of those trees located on the subject property within the footprint of a proposed new building/structure or within 3.0 metres of a proposed new dwelling. Where this application is for a building/structure other than a dwelling then ONLY trees within the area to be occupied by this building/structure may be removed. Other trees SHALL NOT be REMOVED or DAMAGED without an application being made under Council's Tree Preservation Order.

42. The landscape works shall be completed prior to issue of final Certificate of Compliance and maintained in a satisfactory condition at all times.
43. The screen planting shall be completed prior to the issue of the final Certificate of Compliance and be maintained in a satisfactory condition at all times.
44. Tree planting to satisfy tree retention/replenishment requirements shall be completed prior to the issue of the final Certificate of Compliance.
45. Paving works within the specified radius of the trunk/s of the following tree/s shall be constructed to ensure that existing water infiltration and gaseous exchange to the tree/s root system is maintained. Details for the paving shall be submitted to the Principal Certifying Authority for approval by a suitably qualified professional prior to the commencement of paving construction:

Tree/Location	Radius From Trunk
<i>Jacaranda mimosifolia</i> (Jacaranda) The site's central southern boundary.	5 metres

46. The applicant shall ensure that at all times during the construction period no activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order.
47. The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along WESTBROOK AVENUE. The tree/s used shall be 25 litre container size specimen/s:

Tree Species

1 *Angophora costata* (Sydney Red Gum), *Corymbia gummifera* (Red Bloodwood) or *Syncarpia glomulifera* (Turpentine).

48. On completion of the LANDSCAPE WORKS including TREE and SCREEN PLANTING, a Landscape Architect or qualified Landscape Designer shall submit a report certifying correct installation, faithful to the landscape plan to the Principal Certifying Authority with a copy to Council, prior to issue of final Certificate of Compliance.
49. The following noxious and/or undesirable plant species shall be removed from the property prior to completion of the proposed building works. Documentary evidence of compliance with this condition shall be submitted to the Principal Certifying Authority prior to the release of the final Compliance Certificate:

Plant Species

Hedera helix (English Ivy)

Nephrolepis cordifolia (Fishbone fern)

50. All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.
51. Transplanting of the following trees/shrubs shall be directly supervised by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate.

Species/Location

Photinia sp (Hawthorn)/At northern boundary relocate behind new retaining wall and at reduced new levels forming the proposed overland flow path.

52. A contribution is to be paid for the provision, extension or augmentation of community facilities, recreation facilities, open space and administration that will, or are likely to be, required as a consequence of development in the area.

TOTAL CONTRIBUTION FOR THIS DEVELOPMENT OF 1 ADDITIONAL DWELLINGS IS CURRENTLY \$32,324. The amount of the payment shall be in accordance with the Section 94 charges as at the date of payment. The charges may vary at the time of payment in accordance with Council's Section 94 Contributions Plan to reflect changes in land values, construction costs and the consumer price index.

This contribution shall be paid to Council prior to the release of the Construction Certificate and the amount payable shall be in accordance with the Council's adopted Section 94 Contributions Plan for Residential Development, effective from 30 June 2004, calculated for additional person as follows:

1. Community Facilities	\$1 117.76
2. Park Acquisition and Embellishment Works - Wahroonga	\$6 574.28
3. Sportsgrounds Works	\$1 318.32
4. Aquatic / Leisure Centres	\$27.82
5. Traffic and Transport	\$150.28
6. Section 94 Plan Administration	\$100.04

To obtain the total contribution figure the following table of occupancy rates is to be used:

OCCUPANCY RATES FOR DIFFERENT DWELLING SIZES

Small dwelling (under 75 sqm)	1.27 persons
Medium dwelling (75 - under 110 sqm)	1.78 persons
Large dwelling (110 – under 150sqm)	2.56 persons
Very Large dwelling (150sqm or more)	3.48 persons
New Lot	3.48 persons
SEPP (Seniors Living) Dwelling	1.3persons

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

53. The Long Service Levy is to be paid to Council in accordance with the provisions of Section 34 of the Building and Construction Industry Payments Act 1986 prior to the issue of the Construction Certificate.

Note: Required if cost of works exceed \$25,000.00.

54. It is a condition of consent that the applicant, builder or developer or person who does the work on this residential building project arrange the Builders Indemnity Insurance and submit the Certificate of Insurance in accordance with the requirements of Part 6 of the *Home Building Act 1989* to the Council or other Principal Certifying Authority for endorsement of the plans accompanying the Construction Certificate. It is the responsibility of the applicant, builder or developer to arrange the Builder's Indemnity Insurance for residential building work over the value of \$12,000 and to satisfy the Council or other Principal Certifying Authority by the presentation of the necessary Certificate of Insurance so as to comply with the applicable requirements of Part 6 of the *Home Building Act 1989*. The requirements for the Builder's Indemnity Insurance does not apply to commercial or industrial building work or for residential work less than \$12,000, nor to work undertaken by persons holding an Owner/Builder's Permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).
55. The Infrastructure Restorations Fee calculated in accordance with the Council's adopted schedule of Fees and Charges is to be paid to the Council prior to any earthworks or construction commencing. The applicant or builder/developer will be held responsible for and liable for the cost any damage caused to any Council property or for the removal of any waste bin, building materials, sediment, silt, or any other article as a consequence of doing or not doing anything to which this consent relates. "Council Property" includes footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, litter bins, trees, shrubs, lawns mounds, bushland, and similar structures or features on road reserves or any adjacent public place. Council will undertake minor restoration work as a consequence of the work at this site in consideration of the "Infrastructure Restorations Fee" lodged with the Council prior to the release of the Construction Certificate. This undertaking by the Council does not absolve the applicant or Builder/developer of responsibility for ensuring that work or activity at this site does not jeopardise the safety or public using adjacent public areas or of making good or maintaining "Council property" (as defined) during the course of this project.
56. Prior to commencing any construction or subdivision work, the following provisions of the Environmental Planning & Assessment Act, 1979 (the 'Act') are to be complied with:
- A Construction Certificate is to be obtained in accordance with Section 81A(2)(a) of the Act.
 - A Principal Certifying Authority is to be appointed and Council is to be notified of the appointment in accordance with Section 81A(2)(b) of the Act.

- c. Council is to be notified in writing, at least two (2) days prior to the intention of commencing buildings works, in accordance with Section 81A(2)(c) of the Act.
 - d. Should the development be certified by a Principal Certifying Authority other than Council, a fee for each Part 4A Certificate is to be paid to Council on lodgement of those Certificates with Council.
57. Prior to issue of the Construction Certificate footpath and driveway levels for any fully new, reconstructed or extended sections of driveway crossings between the property boundary and road alignment must be obtained from Council. Such levels are only able to be issued by Council under the *Roads Act 1993*. All footpath crossings, laybacks and driveways are to be constructed according to Council's specifications "Construction of Gutter Crossings and Footpath Crossings" or as specified by Council. These are issued with alignment levels after completing the necessary application form at Customer Services and payment of the adopted fee.

The grading of such footpaths or driveways outside the property shall comply with Council's standard requirements. The suitability of the grade of such paths or driveways inside the property is the sole responsibility of the applicant and the alignment levels fixed by Council may affect these.

Approval of this Development Application is for works wholly within the property. DA consent does not imply approval of footpath or driveway levels, materials or location within the road reserve regardless of whether this information is shown on the application documents.

NOTE 1: The construction of footpaths and driveways outside the property, in materials other than those approved by Council, is not permitted and Council may require immediate removal of unauthorised installations.

NOTE 2: When completing the request for driveway levels application from Council, the applicant must attach a copy of the relevant Development Application drawing which indicates the position and proposed level of the proposed driveway at the boundary alignment. Failure to submit this information may delay processing.

58. Prior to issue of the Construction Certificate the applicant shall submit, for approval by the Principal Certifying Authority (PCA), full construction drawings for the proposed method of achieving Council storage volume requirements for an on-site stormwater detention/retention system. The design shall be generally based on the concept plan by AFCE Environment + Building, and shall be advanced for construction issue purposes. The storage volumes and design shall comply with Council's Water Management DCP 47 (available on the Council website and at Council customer services), the manufacturers' specifications and the relevant plumbing codes. Rainwater tank(s) shall be designed to capture and retain runoff from a minimum 100m² roof area for each 5000 litres of storage. Overflow shall revert to the main drainage system. The design and construction plans, with all supporting documentation, are to be prepared by a qualified and experienced civil/hydraulic engineer and may be incorporated on the overall site drainage plan.
59. Prior to issue of the Construction Certificate the applicant shall submit, for approval by the Principal Certifying Authority (PCA), details for the proposed method of achieving Council requirements for the mandatory re-use of water on the property including garden irrigation, laundry and toilet flushing. The necessary pumping, housing, filtration and delivery plumbing equipment for re-use shall be shown on this design. The plans, with all supporting documentation, are to be prepared by a qualified and experienced civil/hydraulic engineer. These details may be incorporated on the overall stormwater management plan and design for the retention/detention system.

60. Prior to issue of the Construction Certificate the applicant shall submit, for approval by the Principal Certifying Authority (PCA), construction design drawings and calculations for the property drainage system components. The property drainage system (including but not limited to gutters, downpipes, pits, joints, flushing facilities and all ancillary plumbing) shall be designed for a 235mm/hour rainfall intensity for a duration of five (5) minutes (1:50 year storm recurrence) and shall be compatible with the necessary retention and/or detention devices. Plans and calculations are to be prepared by a suitably qualified and experienced civil/hydraulic engineer in accordance with Council's Water Management Development Control Plan 47 available on the Council website and at Council, and AS 3500.2 - Plumbing and Drainage Code.
61. Prior to issue of the Construction Certificate the applicant shall submit, for approval by the Principal Certifying Authority (PCA), full hydraulic design documentation for the required interallotment drainage system from the subject property to the approved point of discharge to the public drainage system. Plans are to be prepared by a suitably qualified and experienced consulting civil/hydraulic engineer in accordance with Council's Water Management DCP 47 (available on Council's website and at Customer Services) and the Plumbing and Drainage Code (AS3500). New pipes within the downstream easement drainage system must be sized to have adequate capacity to carry design flowrates, or detention system overflows where detention systems are to be provided, from the subject property. The following details must be included:
- Plan view of interallotment system to scale showing dimensions, location and reduced levels of all pits, gratings, pipe inverts, flushing facilities and exact point of discharge,
 - The contributing catchment calculations and supporting pipe sizing information,
 - Longitudinal section showing existing ground levels and proposed pipe invert levels, grades and flow capacities,
 - Surrounding survey detail including all trees within seven (7) metres of the proposed drainage system,
 - Means to preserve the root systems of trees within seven (7) metres of the drainage system.
62. The Construction Certificate plans, including the Landscape Plan, are to be endorsed by a suitably qualified and experienced civil/hydraulic engineer that compliance is achieved with the recommendations of the Overland Flow Conveyance Report, AFCE Environment + Building Report 352278-20041208, dated December 2004, as follows:
- Finished ground floor level of Dwelling A is at or above RL170.3;
 - Finished floor level of Garage A is at or above RL170.0;
 - Finished ground floor level of Dwelling B is at or above RL169.3;
 - An overland flow path is provided generally along the northern side of both proposed dwellings, or measures to direct overland flow to the northern elevation of Dwelling A are provided in the front yard of Dwelling A;
 - No impediments to overland flow will be placed along the northern elevations of the two dwellings, including solid gates, fences, hot water systems and air conditioning units.

The endorsed plans are to be submitted to and approved by the Principal Certifying Authority prior to issue of the Construction Certificate.

63. An amended plan and specification of the proposed landscape works for the site shall be prepared in accordance with Council's Development Control Plan No 38, by a Landscape Designer to enhance the amenity of the built environment and protect the Ku-ring-gai landscape character.

The landscape plan shall include the following items:

At least 50% of the tree and shrub plantings on the landscape plan for the site shall be selected from the Sydney Turpentine/Ironbark Forest as the site is located between 100 and 300 metres from bushland.

Screen planting of the NORTHERN, WESTERN and SOUTHERN BOUNDARIES incorporating species capable of attaining a height of 2.5, 4 and 3 metres respectively.

The plan must be submitted to Council prior to the release of the Construction Certificate and be approved by Council's Landscape Development Officer prior to the commencement of works.

64. The property shall support a minimum number of 7 trees that will attain 13.0 metres in height on the site, to preserve the tree canopy of Ku-ring-gai, in accordance with Council's policy of Tree Retention/Replenishment on Residential Allotments adopted 26 April 1988. The existing tree/s, and additional tree/s to be planted, shall be shown on the Landscape Plan/Site Plan. The plan shall be submitted to Council prior to release of Construction Certificate and approved by Council's Landscape Development Officer, prior to commence of work.
65. The 7 trees to be planted shall be maintained in a healthy and vigorous condition until they attain a height of 5.0 metres whereby they will be protected by Council's Tree Preservation Order. Any of the trees found faulty, damaged, dying or dead shall be replaced with the same species.
66. A CASH BOND/BANK GUARANTEE of \$2,000 shall be lodged with Council as a Landscape Establishment Bond prior to the release of the Construction Certificate to ensure that the landscape works are installed and maintained in accordance with the approved landscape plan or other landscape conditions.

Fifty percent (50%) of this bond will be refunded upon issue of the final Certificate of Compliance, where landscape works as approved have been satisfactorily installed. The balance of the bond will be refunded 3 years after issue of the building certificate, where landscape works has been satisfactorily established and maintained.

It is the responsibility of the applicant to notify Council in relation to the refunding of the bond at the end of the 3 year period. Where a change of ownership occurs during this period it is the responsibility of the applicant to make all arrangements regarding transference of the bond and to notify Council of such.

67. The applicant shall ensure that no underground services (ie water, sewerage, drainage and gas) shall be laid beneath the canopy of any tree protected under Council's Tree Preservation Order, located on the subject allotment and adjoining allotments.

A plan detailing the routes of these services shall be submitted to the Principal Certifying Authority for approval prior to the release of the Construction Certificate.

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

68. Prior to the commencement of any work, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder who intends to carry out the approved works.

69. External finishes and colours are to be sympathetic to the surrounding environment.
70. To preserve the following tree/s, no work shall commence until the area beneath the canopy of the following tree/s excluding that area of the proposed DRIVEWAY shall be fenced off for the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site:

Tree/Location	Radius From Trunk
<i>Jacaranda mimosifolia</i> (Jacaranda) The site's central southern boundary.	5 metres
<i>Cordyline australis</i> (New Zealand Cabbage Tree) The site's central southern boundary.	2 metres

71. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
72. Upon completion of the installation of the required tree protection measures you are required to contact Council on telephone 9424 0888 or facsimile 9418 1117 to arrange an inspection of the site, in this regard a minimum of 24 hours notice is required. Following the carrying out of a satisfactory inspection and subject to the payment of all relevant monies and compliance with any other conditions of approval, work may commence.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF THE FINAL COMPLIANCE CERTIFICATE

73. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site stormwater retention and re-use facilities on the property. The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instruments for protection of retention and re-use facilities" (available from Council on request) and to the satisfaction of Council. Registered title documents showing the covenants and restrictions must be submitted and approved by the Principal Certifying Authority (PCA) prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate.

For existing Titles, the Positive Covenant and the Restriction on the use of Land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the reuse and retention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

74. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, the following must be provided to Council (attention Development Engineer):
- a. A copy of the approved Construction Certificate stormwater detention/retention design for the site, and

- b .A copy of the works-as-executed drawing of the as-built on-site detention/retention system, and
- c. The Engineer's certification of the as-built system.

This condition is required so Council may maintain its database of as-constructed on-site stormwater detention systems, and also applies if the Principal Certifying Authority (PCA) is not the Council.

- 75. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, any damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) must be fully repaired to the satisfaction of Council Engineers at no cost to Council.
- 76. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority (PCA).
- 77. Prior to issue of an Occupation Certificate a suitably qualified consulting civil/hydraulic engineer (as defined in Water Management Development Control Plan 47) is to provide certification for approval by the Principal Certifying Authority (PCA). The certification must make specific reference to each of the following
 - That construction of the stormwater drainage systems has been carried out by a plumbing contractor licensed to do so.
 - All Sydney Water approvals have been obtained for the augmentation of reticulated water.
 - That the as-built detention and retention systems achieve the design storage volumes approved by the Principal Certifying Authority with the Construction Certificate (engineer must complete form in appendix 4 of DCP47 in relation to the on-site detention system).
 - The as-built drainage layout (including pits, pipes, spreaders and the like) is in accordance with the relevant stormwater management and drainage plans approved by the Principal Certifying Authority with the Construction Certificate,
 - That all enclosed floor areas, including habitable and basement levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices.
 - The completed as-built drainage and stormwater management systems will achieve the full intent of the approved design plans and Councils Water Management DCP47.
- 78. Prior to issue of an Occupation Certificate the applicant shall submit the following Works-as-Executed (WAE) drawing(s) to the Principal Certifying Authority in relation to the installed property stormwater drainage and managements systems:
 - As built reduced surface and invert levels for all drainage pits and junctions.
 - As built reduced level(s) at the approved point of discharge to the public drainage system.
 - Gradients of drainage lines, materials and dimensions.
 - As built location and internal dimensions of all detention and retention structures on the property (plan view) and horizontal distances to nearest adjacent boundaries and buildings on site
 - As built locations of all access pits and grates in the detention system, including dimensions.
 - The size of the orifice or pipe control fitted.

- Dimensions of the discharge control pit and access grates.
- The achieved capacity of the retention and detention storages and derivative calculation.
- The maximum depth of storage over the outlet control.
- Top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system.

The WAE(s) is to be prepared by a registered surveyor and shall show all critical constructed levels, materials and dimensions in comparison to those shown in the relevant designs approved by the Principal Certifying Authority with the Construction Certificate. All relevant details indicated must be marked in red on the Principal Certifying Authority stamped construction certificate stormwater drawings.

79. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, the construction of the required interallotment drainage system must be completed in full. The designing engineer or equivalent professional engineer must supervise the works. At the completion of works, and prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, the following shall be submitted to the Principal Certifying Authority (PCA):
- a. Certification from the supervising engineer that that the as-constructed works comply with the approved interallotment design documentation, and
 - b. A full works-as-executed drawing of the as built drainage line (dimensions, grades, materials, invert levels) prepared by a registered surveyor, and
 - c. Certification from the surveyor that all drainage structures are wholly contained within the drainage easement(s).
80. The as-built development, including landscaping, is to be certified by a suitably qualified and experienced civil/hydraulic engineer to comply with the approved Construction Certificate drawings and the recommendations of the Overland Flow Conveyance Report, AFCE Environment + Building Report 352278-20041208, dated December 2004, as follows:
- Finished ground floor level of Dwelling A is at or above RL170.3;
 - Finished floor level of Garage A is at or above RL170.0;
 - Finished ground floor level of Dwelling B is at or above RL169.3;
 - An overland flow path has been provided generally along the northern side of both proposed dwellings, or measures to direct overland flow to the northern elevation of Dwelling A have been provided in the front yard of Dwelling A;
 - No impediments to overland flow have been placed along the northern elevations of the two dwellings, including solid gates, fences, hot water systems and air conditioning units.

Certification is to be provided to and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.

BUILDING CONDITIONS

Note: If Council is the Principal Certifying Authority, the following building conditions shall form part of this consent.

81. The following are required details and must be submitted to the Principal Certifying Authority *prior to issue of the Construction Certificate*. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.

- a. Details prepared by a practicing structural engineer for all or any reinforced concrete, structural steel or timber framing.

82. Termite protection which will provide whole of building protection in accordance with Australian Standard 3660 - "*Protection of Buildings from Subterranean Termites*" is to be provided.

Council has a non chemical policy for termite control but will consider proposals involving physical barriers in combination with approved chemical systems. Handspraying is prohibited.

Where a monolithic slab is used as part of a termite barrier system, the slab shall be constructed in accordance with Australian Standard 2870.1 or as designed by a structural engineer but in either case shall be vibrated to achieve maximum compaction.

To ensure compliance with this condition, a Compliance Certificate or documentary evidence from a suitably qualified person is to be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.

83. The following are required details and must be submitted to the Council on completion of the works. Any matter listed below must have a Certificate attached from a suitably qualified person to the effect that the design or matter complies with the relevant design Standard or Code which the Certificate must identify.

- a. Wet area waterproofing details complying with the Building Code of Australia.
- b. Mechanical ventilation details complying with Australian Standard 1684 Mechanical Ventilation & Airconditioning.
- c. Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
- d. Stormwater disposal details complying with Council's Stormwater Management Manual and/or other conditions of this consent.
- e. A Compliance Certificate from a suitably qualified person that the works complies with the relevant deemed to satisfy provisions of the Building Code of Australia.

*****END OF CONDITIONS*****

Sandra McCarry

DA 790/05

16 August 2005

Mr & Mrs De Mestre
Glendinning Minto & Associates
PO Box 225
THORNLEIGH NSW 2120

Dear Mrs De Mestre

**NOTICE OF DETERMINATION OF DEVELOPMENT APPLICATION
SECTION 81(1)(A) ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979
DEVELOPMENT APPLICATION N^O 790/05**

Applicant's Name and Address:	Mr & Mrs De Mestre C/- Glendinning Minto & Associates PO Box 225, Thornleigh NSW 2120
Land to be Developed:	Lot 7, DP 22776, 42 Westbrook Avenue, Wahroonga
Proposed Development:	Subdivide one lot into two lots under Torrens Title
Date of Determination:	15 August 2005
Date from which Consent Operates:	16 August 2005
Date of Expiry of Consent:	17 August 2007

This application is determined by the granting of consent subject to the conditions in the **attached** Schedule of Consent Conditions.

You are advised of your right of review of this determination by Council under Section 82A of the Environmental Planning and Assessment Act 1979.

You are advised that if you are dissatisfied with the determination you have a right of appeal to the Land and Environment Court within 12 months of the date you receive this Notice.

Yours faithfully

M Leotta
Team Leader
Development Assessment - North

Attachments

523932-Approval Letter of 16 Aug 05.docJM/1

**SCHEDULE OF CONSENT CONDITIONS
DEVELOPMENT APPLICATION N^o 790/05
PREMISES: LOT 7, DP 22776, 42 WESTBROOK AVENUE, WAHROONGA**

GENERAL CONDITIONS

The issue of this consent does not permit any construction work to commence on the site until such time as a construction certificate has been obtained.

Detailed working drawings and specifications, which are consistent with the Development Consent and conditions, must be submitted for consideration of the issue of a construction certificate.

Alterations, modification or variations to this consent can only be effected where Council approves an application to modify the Consent under Section 96 of the Environment Planning and Assessment Act.

This consent shall lapse and be void if the building work or use to which it refers is not physically commenced prior to the date of expiry of the consent.

1. The development to be in accordance with Development Application **No. 1027/04**, plans numbered **1778/08, 1778/01 (D);02D and 03D**, dated **30 August 2004**, and Development Application No **790/05** and Development Application plans prepared by **Rob Crump Design**, reference number **1778/08**, dated **30 August 2004** and lodged with Council on **22 July 2005**.
2. All building works shall comply with the Building Code of Australia.
3. The submission of the approved plans to Sydney Water, before any work is commenced to ensure that the proposed structure meets that Authority's By-Laws. Failure to submit these plans before commencing work will render the owner liable to a penalty and may result in the demolition of work.

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUE OF A SUBDIVISION CERTIFICATE

4. The appropriate fees set out in Councils adopted Schedule of Fees and Charges is payable to Council, prior to the issue of the Subdivision Certificate.
5. The subdivision certificate must not be issued until all conditions of consent of DA 1027/04 for the proposed dual occupancy development have been satisfied and a final Occupation Certificate issued for that development by the Principal Certifying Authority. This condition is imposed to ensure that all development works related to the subdivision are completed to an acceptable standard prior to transfer of responsibility for the site and development.
6. For endorsement of the linen plan/issue of the subdivision certificate, the applicant shall submit an original plan of subdivision plus six (6) copies, suitable for endorsement by Council. The following details **must** be submitted with the plan of subdivision and copies:
 - Council's Subdivision Lodgement Form, available from Council's Customer Services;
 - The endorsement fee current at the time of lodgement;
 - The 88B Instruments plus six (6) copies;
 - A copy of the final occupation certificate ;
 - All Surveyor's and/or Consulting Engineer's certification(s) required under this consent;

- The Section 73 (Sydney Water) Compliance Certificate for the subdivision.

Council will check the consent conditions on the subdivision. Failure to submit the required information will delay endorsement of the linen plan, and may require payment of rechecking fees.

Note 1: Plans of subdivision and copies must not be folded.

Note 2: Council will not accept bonds in lieu of completing subdivision works.

7. For endorsement of the linen plan / issue of the subdivision certificate, the Applicant shall submit an original instrument under Section 88B of the Conveyancing Act with the plan of subdivision, plus six (6) copies. This is to create any required easements, rights-of-carriageway, positive covenants, restrictions-on-use or other burdens/benefits as may be required. Ku-ring-gai Council must be named as the authority whose consent is required to release, vary or modify the same.
8. The developer shall submit to Council a letter from the energy supply authority and either Telstra or Optus, confirming that satisfactory arrangements have been made for the provision of underground telephone and power services, prior to the release of the Subdivision Certificate. Application may be made to Energy Australia Phone No. 13 1525 and either Optus, Network Operations, Facsimile No 9837 9060, Phone No 9837 9010, or Telstra Phone No 12 455.
9. Prior to release of the linen plan/issue of the subdivision certificate by the Consent Authority, the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the **on-site stormwater detention facilities** on the property. The terms of the instruments are to be generally in accordance with the Council's "Standard terms of Section 88B instrument for protection of on-site detention facilities" (available in Appendix 14.1 of DCP47 from Councils website) and to the satisfaction of Council. **The location of the on-site detention facilities is to be denoted on the final plan of subdivision.**
10. Prior to release of the linen plan/issue of the subdivision certificate, the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, burdening the property with the requirement to maintain the **on-site retention and re-use facilities** on the property. The terms of the instruments are to be generally in accordance with the Council's "Standard terms of Section 88B instrument for protection of on-site retention and re-use facilities" (available in Appendix 14.2 of DCP47 from Councils website) and to the satisfaction of Council. **The location of the on-site retention and re-use facilities is to be denoted on the final plan of subdivision.**
11. Prior to release of the linen plan/issue of the subdivision certificate, the following works must be completed:
 - a. Construction of the new driveway crossing and layback in accordance with the levels and specifications issued by Council,
 - b. Removal of all redundant driveway crossings, pipe crossing and/or kerb laybacks. Full reinstatement of these sections to footway, and/or turfed verge and/or kerb and gutter to the satisfaction of Council. Reinstatement works shall match surrounding adjacent infrastructure with respect to marrying of levels and materials.
 - c. Any sections of damaged grass verge are to be replaced with a non-friable turf of native variety to match existing.

Any damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) must be fully repaired to the satisfaction of Council - at no cost to Council.

12. Prior to release of the linen plan/issue of the subdivision certificate, the applicant shall create all burdens including but not limited to drainage easements, easements for services and rights-of-carriageway, as required. A registered surveyor is to certify, prior to release of the linen plan/issue of the subdivision certificate, that all existing interallotment drainage lines, services and/or driveways are fully contained within the proposed burdens and/or that future provision of such are fully covered by the proposed burdens. Alternatively, where the surveyor is of the opinion that no interallotment easements or rights-of-carriageway are required, then certification to this effect must be submitted to the Principal Certifying Authority (PCA).
13. Creation of suitable drainage easements with minimum widths in accordance with Council's Water DCP47 over all of the inter-allotment and Council drainage systems.
14. Prior to release of the linen plan/issue of the subdivision certificate, the Section 73 Sydney Water compliance certificate which refers to the subdivision application must be obtained and submitted to the Council.

*****END OF CONDITIONS*****

4 October 2005

MEMORANDUM

TO: MANAGER PARKS SPORTS & RECREATION - AMANDA COLBEY

FROM: MANAGER SUPPORT SERVICES - IAN TAYLOR

SUBJECT: **TECHNICAL SERVICES COMMENTS - SCHEDULE A
CONDITIONS, FOR DA1027/04 AT 42 WESTBROOK
AVENUE, WAHROONGA**

I refer to an e-mail by Land Administration Officer, Arthur Liu on 26 September to process a drainage easement application from and provide comments.

Reference is therefore made to the Notice of Determination for DA 1027/04, in Council's letter dated 17 June 2005, (TRIM 509626) that was granted as a Deferred Commencement Approval, subject to Schedule A condition being resolved. Schedule A condition notes:

Prior to the operation of the consent, the applicant shall submit, for Council's approval, registered title documents demonstrating that the subject site is benefited by the necessary easement(s) for stormwater drainage as far as the approved point of discharge to the public drainage system. This information is to include, as a minimum, registered Title documents demonstrating the benefit and burdens, together with the instruments describing the terms of necessary drainage easement (s).

This condition raises two key requirements:

1. Report to Council for determination of an approved *point of discharge to the public drainage system.*
2. Drafting of Legal documents to enable *registered Title documents demonstrating the benefit and burdens ...with the instruments describing the terms...of drainage easement (s).*

Issue 1 - Point of discharge

The applicant has submitted engineering documentation prepared by AFCE Environment + Building supporting the point of discharge as follows:

- Overland Flow Conveyance report, dated December 2004, Rev 1
- Stormwater Plans and details, AFCE drawing No. 352278, sheet D1, Rev 0, September 2005.

Documentation has been assessed and considered satisfactory in respect to the following main areas:

- Identification of surface flows and proposed mitigation measures to convey these flows adjacent to the northern boundary. The flow assessment by AFCE has demonstrated that the dwellings and garages would not be subject to inundation in accordance with DCP 47. Measures recommended to ameliorate this situation involve shaping surface levels and provision of walls to direct and control surface flow beside the dwellings, and raised floor level.
- The pipeline was determined to have spare pipe capacity (of 180 l/s), and the design flow rate from a 20 year storm (of 47 l/s) from 42 Westbrook Avenue could be accommodated.

Protection of the identified flood zone

The overland flow zone over this site is identified on drawing plan No.352278, Sheet F1, by AFCE, and shows a calculated depth of 300mm corresponding to the 100 year ARI flow of 800L/s. This is an engineered flood/overland flow zone provided over the site, designed to be compatible with the new dwellings under DA 1027/04.

The flood zone is required to ensure an appropriate flow of water through site in the event of blockage of the Council system, lack of capacity, or other unforeseen event. In general this appears to be provided in Schedule B conditions of DA 1027/04.

Under Schedule B, General condition No 40 below, is similar to conditions 62 and 77 under Conditions to be complied with prior to issue of construction certificate and issue of final compliance certificate respectively. Condition 40 notes as follows:

Compliance with the recommendations of the Overland Flow Conveyance Report, AFCE Environment + Building Report 352278-20041208, dated December 2004, which are as follows:

- *Finished ground floor level of Dwelling A is to be at or above RL170.3;*
- *Finished floor level of Garage A is to be at or above RL170.0;*
- *Finished ground floor level of Dwelling B is to be at or above RL169.3;*
- *An overland flow path is to be provided generally along the northern side of both proposed dwellings, or measures to direct overland flow to the northern elevation of Dwelling A are to be provided in the front yard of Dwelling A;*
- *No impediments to overland flow are to be placed along the northern elevations of the two dwellings, including solid gates, fences, hot water systems and air conditioning units.*

It is however noted that in past practice, when a flood zone is identified (or created as a result of development) a "restriction on use" has been placed over the flood zone/overland flow path (by way of condition), for the following reasons:

- The flood zone is identified to any relevant interested party
- It informs that no structures/fill or other devices are to be placed in the identified flood/overland zone, which may impede, obstruct or alter the flow of water through that zone.
- Changing the flow regime over a flood/overland flow zone may have an adverse impact on the existing dwelling and/or adjoining dwellings.

Council may be forced to share in a liability claim where it was found that a flood/overland zone has been identified over the site (through DA process), and then subsequently disturbed because Council failed to make this information available to existing or future owners on title.

It is therefore recommended to require the creation of a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, over the identified flood zone.

Issue 2 – Easement

Two options exist as a connection point to the Council drainage system:

- The first, connection via 44 Westbrook Avenue. In essence, this would involve consent of the adjoining owner and amendment to existing easement terms to benefit 42 Westbrook Avenue.
- A second option, involves connection to Council's pipeline within Eldinhope Green thus requiring an easement within the reserve, and subsequent public notification as required under Section 47 of the Local Government Act 1993.

Drawing plans submitted propose the latter. The following considerations are made in regard to this:

- The proposed easement is 1.0 metre wide by 3.0 metres in length, located centrally over a 150mm pipe. These dimensions are considered satisfactory for the pipe size.
- A 0.5m distance is allowed from all sides the 150mm pipe to the easement boundary as clearance for installation and future access. The easement therefore extends over Council's system by 0.5m at the connection. A letter of 14 December 2004 by AFCE, note they consider it only necessary to create an easement no further than the Council pipe, proposing a length of 2m to be sufficient. Indeed, a minimum length of 2.5 metres would however be required given the above and as measured on plans.

AFCE cite concerns regarding maintenance responsibility. The easement extent is considered appropriate and full coverage over Council's system is not intended to pass any obligation of maintenance of onto the subject owner except for instances of those resulting from damages caused by the connection or subject damages as ordinarily applies under terms of easements.

- It is recommended that the easement be created pursuant to Section 88B of the Conveyancing Act 1919. Council also use this for creation of Positive Covenants over on-site detention systems and for other drainage related matters.
- The subject easement benefits the applicant only and there is no community benefit. As such, all costs for survey, legal and construction should be borne by the applicant. Any costs involved with checking by Council should also be borne by the Applicant.

Recommendation

From a drainage perspective, Technical Services has no objections to the proposed connection subject to the following conditions:

- A. Compliance with drawing plan No.352278, Sheet D1, Rev 0 by AFCE Environment + Building, dated September 2005 for the inter-allotment drainage system through Eldinhope Green.
- B. That Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate, the applicant shall create a Positive Covenant and Restriction on the Use of Land under Section 88B of the Conveyancing Act 1919, over the identified flood zone burdening the property with the requirement to maintain the site levels on the northern side of both proposed dwellings. Registered title documents showing the covenants and restrictions must be submitted

and approved by the Principal Certifying Authority (PCA) prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate.

For existing Titles, the Positive Covenant and the Restriction on the use of Land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the flood zone in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

- C. That all costs associated with the creation of easement including costs for survey, legal as well as construction be borne by the Applicant.

Ian Taylor
MANAGER SUPPORT SERVICES

R.J Hodgson & Co Pty Limited

Real Estate Valuers & Property Consultants

12 McIntosh Street
GORDON NSW 2072

PO Box 147
KILLARA NSW 2071

Mobile: 0414 226 504
ABN 38 001 386 634
bobhoddo@ozemail.com.au

18 November, 2005

Arthur Liu
Land Administration Officer
Ku-ring-gai Council
Level 1 842 Pacific Highway
GORDON NSW 2072

Dear Arthur,

RE: Proposed Drainage Easement over Council Land, 5 Morris Ave, Wahroonga

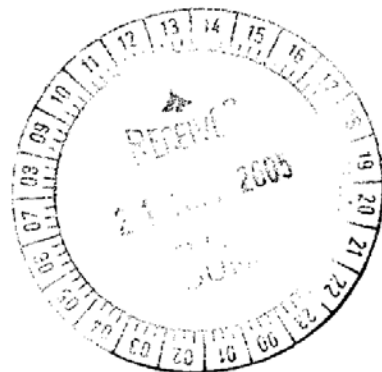

Please find valuation of the above property, together with our account.

If you require any further assistance in this matter, please do not hesitate to contact the writer.

Yours faithfully

R J HODGSON & Co Pty Limited

R.J. Hodgson H.D.A., F.A.P.I.
Registered Real Estate Valuer
All Real Estate (No. 49)



R.J Hodgson & Co Pty Limited

Real Estate Valuers & Property Consultants

12 McIntosh Street
GORDON NSW 2072

PO Box 147
KILLARA NSW 2071

Mobile: 0414 226 504
ABN 38 001 386 634
bobhoddo@ozemail.com.au

16 November 2005

TAX INVOICE

Our Reference: 2889-05

Your Reference: P63149

Fax To 9404 0952

Arthur Liu
Land Administration Officer
Ku-ring-gai Council
Level 1 842 Pacific Highway
GORDON NSW 2072

RE: Proposed Drainage Easement over Council Land, 5 Morris Ave, Wahroonga

Valuation Fee	\$900-00
GST	<u>\$90-00</u>
	<u>\$990-00</u>

Please send payment to

Box 147
KILLARA NSW 2071



R.J Hodgson & Co Pty Limited

Real Estate Valuers & Property Consultants

12 McIntosh Street
GORDON NSW 2072

PO Box 147
KILLARA NSW 2071

Mobile: 0414 226 504
ABN 38 001 386 634
bobhoddo@ozemail.com.au

Our Reference: 2889-05
Your Reference: P63149

8 November 2005

Arthur Liu
Land Administration Officer
Ku-ring-gai Council
Level 1 842 Pacific Highway
GORDON NSW 2072

Dear Arthur

**RE: PROPOSED DRAINAGE EASEMENT OVER COUNCIL LAND AT 5 MORRIS
AVENUE WAHROONGA (ELDINHOPE GREEN PARK).**

I refer to your instructions dated 7th November 2005 requesting a valuation of a drainage easement over Ku-ring-gai Council's community land at 5 Morris Avenue Wahroonga (Eldinhope Green Park).

The landowners at 42 Westbrook Avenue, Wahroonga require a drainage easement as part of development applications (DA 1027/04 and DA 790/05) for demolition of existing dwellings, construction of detached dual occupancy dwellings and a 2 lot subdivision. Approval of the development applications is subject to the creation of a drainage easement within the council reserve (known as Eldinhope Green Park) in favour of the landowners parcel at 42 Westbrook Avenue by tapping the drainage systems of the new dwellings into the existing Council stormwater main within Eldinhope Green Park.

The proposed easement is located off Morris Avenue at Eldinhope Green Park within an established residential area comprising mainly detached dwellings of varying ages. It is in close proximity to Wahroonga Primary School and Knox Grammar School, being about three kilometres east of Hornsby shopping area and about 23 kilometres north west of the Sydney General Post Office.

The easement will affect the land described as Lot 1 and 6 DP 209721. The land is of a regular shape and from Morris Avenue has a gentle fall to a low lying point, then has a gentle rise in an easterly direction to the rear of the site. The site is mainly cleared, contains several mature trees, and is improved with playground facilities for community use.

42 Westbrook Avenue is described as Lot 7 DP 2277, is zoned "Open Space 6(a) – Recreation Existing" in accordance with Ku-ring-gai Planning Scheme prescribed on 1-10-1971 and has a gentle fall from Westbrook Avenue in a westerly direction towards the boundary.

The proposed easement is to be situated along the eastern boundary of Eldinhope Green Park and will run for a length of three metres and have a width of one metre, it will connect onto Ku-ring-gai councils existing stormwater. The area of the proposed easement is three square metres and adjoins a mesh fence. The strip of land is cleared and it is considered that the immediate area of the proposed easement is unlikely to be developed in the foreseeable future.

This valuation of the proposed easement has been assessed by having regard to surrounding property sales and arriving at deduced site value, which has then been applied to the subject easement. The rate has then been adjusted taking into account the benefit to the adjoining owner, the overall small area of land affected and its location relative to improvements on the land. As the land can continue to be used as it is presently being used, the blight on the property is considered to be minor.

A sample of sales evidence is as follows:

1. Address: 23 Westbrook Ave, Wahroonga
Sale Price: \$1,650,000
Contract Date: 1/7/05
Area: 2748m²
Comments: Improvements comprise a 1950s dwelling. Shows a deduced land value of \$608/m².
2. Address: 35 Grosvenor Street, Wahroonga
Sale Price: \$750,000
Contract Date: 25/1/05
Area: 1310m²
Comments: Improved site to be redeveloped. After allowing for demolition of the improvements shows a deduced land value of \$588/m².
3. Address: 93 Junction Road, Wahroonga
Sale Price: \$620,000
Contract Date: 7/3/05
Area: 939.1m²
Comments: Cleared vacant site shows a land value of \$639/m².

Sales evidence shows a rate of \$580 to \$640 to be appropriate for the subject land, however in this case of the effect of the easement is considered to be a blot on title only and a minor affection. A rate of 10-50% should be considered. The upper end of this range has been adopted due to the small nature of the proposed easement and the nominal amount of compensation.

Value of easement 3m² at \$600/m² \$1,800.

Reduction of the land covered by the easement (reflecting the effect of the easement as a blot on title only)

Adopt 50% affectation \$900.

VALUATION

It is considered that the current market value of the within described easement as at 8th November 2005 is the amount of:

Nine Hundred Dollars (\$900-00)

Note that our assessment is exclusive of GST.

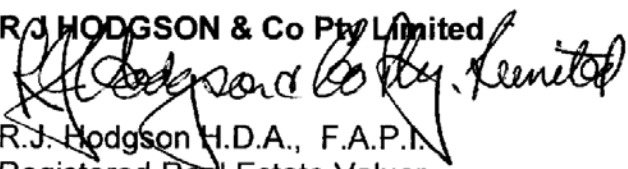
The valuation is on the basis that all legal, survey, administration, site restoration, replacement fencing and any other related costs for the easement will be borne by the developer.

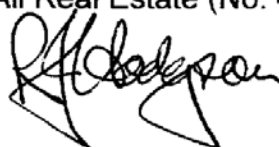
This valuation is current as at the date of valuation only. The value assessed herein may change significantly and unexpectedly over a relatively short period (including as a result of general market movements or factors specific to the particular property). We do not accept liability for losses arising from such subsequent changes in value. Without limiting the generality of the above comment we do not assume any responsibility or accept any liability where this valuation is relied upon after the expiration of three months from the date of valuation.

Finally, and in accordance with our standard practice, we must state that this report is for the use only of the party to whom it is addressed and for the purpose for which instructions were given, and no responsibility is accepted to any third party for the whole or any part of its contents and no liability for damage howsoever caused arising out of its use by any third party is accepted.

Yours faithfully,

R.J. HODGSON & Co Pty Limited

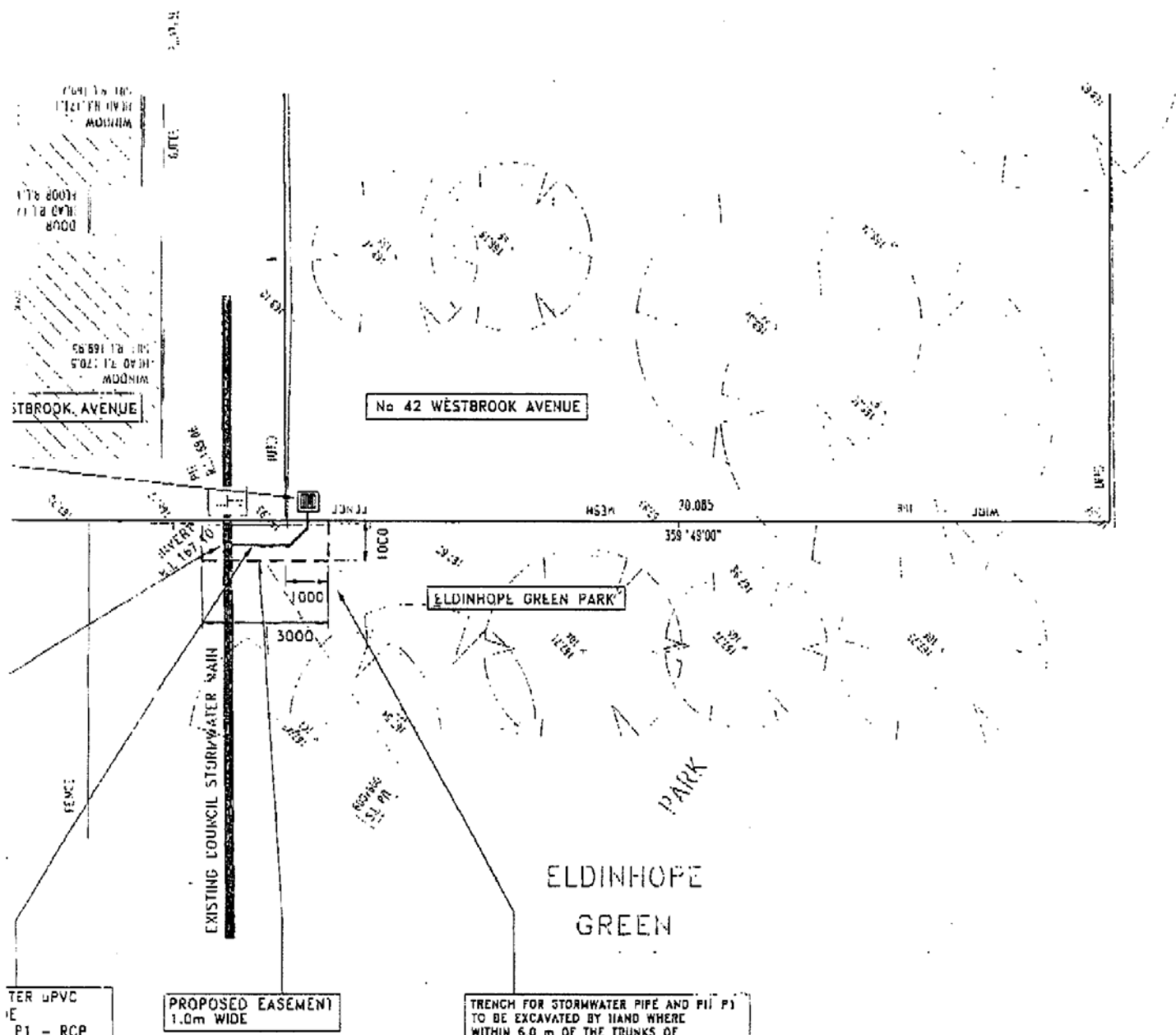

R.J. Hodgson H.D.A., F.A.P.I.
Registered Real Estate Valuer
All Real Estate (No. 49)



Proposed easement.



DRAINAGE WAHROONGA



AND COUNCIL PIPE

ANALYSIS

JNCL PIPE SPARE CAPACITY

DOWNSTREAM OF No 42 WESTBROOK AVENUE = 3.5 ha

SUS = 40%; $C_{20} = 0.70$

$Q_4 = 18 \text{ mins}$, $Q_{18} = 123 \text{ mm/hr}$

PIPE AND GRADE : 450mm AT 7.8%

BUT NO. HEAD = 1.0 m $\frac{3}{4}$

CAPACITY IN COUNCIL PIPE = 1.0 m $\frac{3}{4}$

FILE No: DA 1027/04
LETTER No: 535938

PI	SUBCATCHMENT AREA m^2	TOTAL CATCHMENT AREA m^2	C_{100}	Q_{100} min/hr	Q_{100} l/s	DIAMETER mm	GRADE %	PIPE CAPACITY l/s	COMMENTS
P1	1285 x 60%	771	1.1	257	35	150	4.0	60	CAPACITY OK

glendinning minto & associates p/l
planning & development control consultants

ABN 68 091 465 271

4-54
21/11

ATTENTION : ARTHUR LIU

RE: 42 WESTBROOK AVE, WAHROONGA

With Compliments

6/265-271 pennant hills road, thornleigh
po box 225 thornleigh 2120
phone: 9875 4788
fax: 9875 4799
e-mail: planning@glendinningminto.com.au



21/11 '05 12:15 FAX 94240882

KU-RING-GAI_TECH

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Ku-ring-gai Council

Council Chambers, 818 Pacific Highway, Gordon NSW 2072
 Phone: (02) 9424 0888, Fax: (02) 9424 0880
 DX 8703 GORDON, TTY: (02) 9424 0875



BY FAX and MAIL

Contact: Arthur Liu

In reply please quote:

P33906

21 November 2005

Glendinning Minto & Associates P/L
 P O Box 225
 THORNLEIGH NSW 2120

Attention: Mr Andrew Minto

Dear Mr Minto

**RE : DRAINAGE EASEMENT APPLICATION - 42 WESTBROOK AVENUE,
 WAHROONGA (DA 1027/04)**

I refer to Council's letter of 11 October 2005 and email of 3 November 2005 to you and your email of 4 November 2005.

As you have advised Council of your client's consent to the Council's use of a private valuer firm for the assessment of the proposed easement compensation payable to Council, R. H. Hodgson & Co Pty (real estate valuers & property consultants) has been instructed to prepare the assessment report and has now faxed it to Council. The assessment for the proposed easement compensation amounts to \$900.00 (exclusive of GST).

Council urgently requires a letter of confirmation from your client that the above compensation amount of \$900.00 (exclusive of GST) is acceptable by your client by Thursday 24 November 2005, so that I can submit to Council a report attached with your confirmation on time for the Council meeting of 6 December 2005 for resolution.

Council's Accounts Receivable Department will shortly be sending your office a tax invoice for the amount of \$990 (inclusive of GST), being re-imbursement for the valuation fee, in accordance with Council's letter of 4 November 2004 to you (copy attached).

For summary, I understand that your client has undertaken to pay the approximate costs below as indicated in your letter of 16 September 2005:-

- Easement application fee (non-refundable): \$600.00 (already paid by you)
- Legal costs: At full cost to applicant
- Valuation fees for compensation: \$ 990.00 (inclusive of GST)
- Compensation Amount: \$900 plus GST (assessed above)
- Public notification fees: \$500 to \$1,000 (excludes GST)
- Legal Instruments: At full cost to applicant
- Independent studies on capacity of existing pipe: At full cost to applicant.

555522/2

21/11 '05 12:15 FAX 04240952

KU-RING-GAI_TECH

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- Remediation costs to existing pipeline: At full cost to applicant
- Any detailed reports required by Council in order to assess the application and condition of existing pipe, capacity of pipe, fauna and flora assessment, review of environmental factors report.

Upon receipt of your client's agreement to the above costs, preferably by Thursday 24 November 2005, a report can be submitted on time for the Council meeting of 6 December 2005 for resolution to the granting of the proposed drainage easement to your client.

Please send or fax (No. 9424 0952) to Council a duly signed copy of this letter agreeing to the contents of this letter as soon as possible so that the matter can progress promptly.

My direct line is 9424 0820 if you have any further questions.

Yours sincerely,


Arthur Liu
Land Administration Officer

- With enclosure

It is confirmed that I undertake to pay all the costs stated in this letter:

Signature: M de Mestre
Name: MURRAY de MESIRE
Capacity: OWNER
Date: 21/11/05

DISTRICT PARK LANDSCAPE MASTER PLANS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To advise Council of the process of District Park Landscape Master Planning being commenced during 2005/2006.

BACKGROUND:

Predicted increases in the population will have a significant impact on the ability of our existing parks and sportsgrounds to cater for the needs of current and future residents. The staged preparation of district park landscape masterplans offers Council the opportunity to plan, prioritise and carry out improvements at each location effectively and within a reasonable timeframe.

COMMENTS:

District parks offer a range of recreational opportunities such as passive shaded areas, active areas for play, paths, social/picnic spaces, large open space areas which are often adjacent to sports fields and/or tennis courts. The preparation of landscape master plans will also allow for improvements at district parks to occur in stages, as funding becomes available, with the knowledge that all projects are in keeping with and will contribute to a long term vision for the park.

RECOMMENDATION:

That the District Parks Landscape Master Planning process be commenced for St Ives Village Green, Kissing Point Village Green and Swain Gardens during 2005/2006 and that the District Parks Landscape Master Planning process be commenced in future years for the other sites as outlined in the report.

PURPOSE OF REPORT

To advise Council of the process of District Park Landscape Master Planning being commenced during 2005/2006.

BACKGROUND

Demand for developed open space in Ku-ring-gai is high and the provision of parks and sportsgrounds is relatively low and not evenly distributed, with some suburbs having far less developed open space per population than others. Predicted increases in the population will have a significant impact on the ability of our existing parks and sportsgrounds to cater for the needs of current and future residents.

The staged preparation of district park landscape masterplans offers Council the opportunity to plan, prioritise and carry out improvements at each location. The preparation of landscape master plans will also allow for improvements at district parks to occur in stages, as funding becomes available, with the knowledge that all projects are in keeping with and will contribute to a long term vision for the park.

Acknowledging that a significant component of expenditure for these projects will be sourced from Section 94 funds, the preparation and implementation of landscape master plans will assist Council in ensuring that these funds are utilised to the best effect for the local community and within a reasonable timeframe.

The Open Space Distribution Needs Study (2000) identified that *“Council’s local and district parks are not (in terms of both quantity and suitability) fully meeting the recreation needs of existing populations and do not have the capacity, therefore to absorb the recreation needs and demands of new populations”*.

Further the current 2004/2009 Section 94 plan acknowledges that *“a large number of parks require further embellishments to more effectively meet the needs and expectations of (existing and future) recreational users”*.

Recognising the inability of existing parks in Ku-ring-gai to meet the needs of the current population in conjunction with the impact of predicted increases in population Council included the preparation of District Park Landscape Master Plans into the Community Development section of Council’s 2005/2009 Management Plan. It is the purpose of this report to advise Council of the process being undertaken to confirm the classification of parks as district facilities and to summarise the steps involved in preparing landscape master plans and propose a timeframe for the development of these plans.

COMMENTS

The classification of Parks as, Regional District or Local

The Open Space Strategy, the generic Plan of Management for Parks and for Sportsgrounds and Service Plans for both parks and sportsgrounds broadly apply a hierarchy of local, district and regional classification in terms of maintenance, facilities and upgrade potential for each location.

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District parks are defined in the Open Space Distribution and Needs Study as *‘including sportsground, tennis/netball courts, other sports facilities and large parks with combinations of picnic, barbeque and play facilities and perhaps formal gardens. The parks attract visitors from a wider catchment – large sections of, or perhaps the whole of, the Ku-ring-gai LGA. Access is predominantly by car (and to a lesser extent by bicycle and public transport).’*

District parks offer a range of recreational opportunities such as a passive shady place, active areas for play, paths, social/picnic spaces, large open space areas and are often adjacent to a sportsfield and/or tennis courts. Additionally, district parks also have toilet facilities and car parking areas to cater for people who travel to the park by car and possibly stay for a number of hours as well as attracting local visitors/residents.

The process of identifying sites which are district parks includes the consideration of a number of issues including:-

- The distribution and proximity of facilities offering similar or complementary opportunities.
- The range of activities the park offers, or has the potential to offer with further acquisition and/or embellishment opportunities.
- The projected increases in residential population in the vicinity of the park and possible open space acquisition opportunities.
- The possibility of funding sources for improvements identified through the master planning process, including Section 94 funding, direct Council funding and possible (though limited) commercial opportunities such as kiosk/café type facilities.

A number of existing parks are immediately recognisable as district parks including the two large ‘Village Greens’ (Kissing Point Village Green and St Ives Village Green) and six ‘suburb’ parks (Wahroonga Park, Pymble Park, Turramurra Park, Killara Park, Lindfield Park and Roseville Park).

In addition, there are a number of other large parks which provide opportunities consistent with a district park. These locations have been included for consideration in this landscape master planning process and a number of them have also been identified for funding in Council’s current Section 94 plan.

Regional facilities are, in general, larger facilities which offer a wide range of recreational opportunities, have unique attributes and/or provide the only opportunities for specific types of recreation within the area. Regional facilities in Ku-ring-gai are Bicentennial Park, St Ives Showground and the Ku-ring-gai Wildflower Garden.

- Bicentennial Park is a large park with two sportsgrounds, netball courts, large areas of parkland, remnant bushland, a network of walking paths, community facilities, West Pymble pool and picnic and play facilities.
- St Ives Showground is a large bushland site with unique (within Ku-ring-gai) facilities for activities including equestrian activities (dressage), mini bike track, model flying and model car area and dog training rings.

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- Ku-ring-gai Wildflower Garden is a unique bushland facility which offers recreational facilities and specialist educational opportunities.

These locations will also serve as both district and local open space facilities for Ku-ring-gai residents.

At the other end of the continuum are local parks, which are generally smaller areas with a limited range of facilities or activities. The Open Space Distribution and Needs Study (2000) defines local open space as *'small parks and children's playgrounds, predominantly used by residents from within the immediate neighbourhood – usually within 500 metre walking distance.'*

Considering the classification process as a continuum (regional-district-local) there are a number of locations which meet some of the criteria for both regional and district, or district and local, and as a result fall between the specific categories. For example, although smaller and offering a far narrower range of recreation opportunities both Echo Point Park and Swain Gardens are important within a district context because of their cultural significance and distinctive landscape character.

There is a specific Plan of Management for Echo Point Park which includes detailed actions and opportunities for future embellishment of the park and, as such, an additional master plan is not required for this site, at this stage. Swain Gardens has specific on-going maintenance and embellishment needs and an active community group, "Friends of Swain Garden". In accordance with Council's resolution of 20 September 2005, a landscape master plan will be prepared for Swain Gardens during this financial year and its inclusion is addressed within this report.

Considering the distribution and accessibility of sites, in conjunction with other open space and areas identified in the Residential Strategy for Medium Density Housing, it is anticipated that the identification of locations and the process of preparing District Park Landscape Master Plans will evolve over time. The Open Space Acquisition Strategy which will be prepared during this year will represent the first step.

An example of a location that may provide further opportunity is Bancroft Park. Whilst this park does not currently provide the facilities and opportunities necessary to identify it as a district park, considerable development is expected within the nearby area as a consequence of LEP 194. The park represents one of the few open space facilities within the immediate area, and its existing size and range of facilities offered, may need review in the future.

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Table 1 outlines the list of the current proposed District Parks and their facilities and/or ability to cater for a greater range of opportunities:-

Park	Range of recreational opportunities	Ability to cater for a greater range of opportunities with development or embellishment.	Accessible to a wide range of the population	Playground	Picnic/BBQ facilities	Car Parking	Amenities	Adjacent sports facilities
Golden Jubilee*	✓	✓	✓	✓	✗	✓	Poor	✓
Gordon Rec Ground*	✓	✓	✓	✓	✗	✗	Poor	✓
Hassell Park *	✓	✓	✓	✓	✗	✓	Poor	✓
Killara Park	✓	✓	✓	2	✗	✓	Poor	✓
Kissing Point Village Green*	✓	✓	✓	✓	✓	✓	✓	✓
Lindfield Park*	✓	✓	✓	✓	✗	✓	Poor	✓
Pymble Park	✓	✓	✓	✓	✗	✓	Poor	✓
Queen Elizabeth Reserve	✓	✓	✓	✓	✓	✓	Poor	✓
Regimental Park *	✓	✓	✓	✗	✗	✗	Poor	✓
Roseville Park	✓	✓	✓	✓	✓	✓	Poor	✓
St Ives Village Green *	✓	✓	✓	✓	✗	✓	Poor	✓
The Glade *	✓	✓	✓	✓	✗	✓	Poor	✓
Turramurra Park *	✓	✓	✓	✓	✗	✓	Poor	✓
Wahroonga Park *	✓	✓	✓	✓	✗	✓	✗	✓
North Turramurra Rec. Area **	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a

* Denotes locations identified in the 2004/2009 Section 94 Plan.

** Landscape master planning for the active and passive recreation opportunities at North Turramurra Recreation Area will be developed through a separate process.

Note: A map of Ku-ring showing the location of the above parks is included as Attachment 1.

Landscape master plans will assist Council in protecting the inherent values of each site by identifying the character, history and values of that site and will provide a framework for the renewal and evolution of Ku-ring-gai's open space network.

In addition, the process of preparing landscape master plans offers Council the opportunity to undertake consultation specific to each park to identify what is needed at each location to meet the needs and expectations of the community. By consulting with the community at the landscape

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master planning stage, a clear and realistic vision for the embellishment and upgrade of each site can be undertaken within a reasonable funding time frame. The planning will apply a creative 'ideas' process with preliminary plans being developed and modified a number of times as stakeholders discuss opportunities and options before reaching agreement about future embellishment of the site.

An agreed landscape master plan will provide a spatial framework for the site, showing uses and relationships between uses, circulation patterns, opportunities and constraints, aesthetic character and linkages. Additionally, the master landscape plan may identify formal entrances to the park which will link to pathways and pedestrian traffic routes from transport and other community facilities.

The plans will also outline a palette of colour, materials and plantings for each park to guide future development and on-going management. Detailed design work is then undertaken for the implementation of specific projects.

The master landscape planning process will involve a number of steps:

- 1 Research site background information such as existing facilities, natural and cultural history, physical factors, landscape and visual character, previous planning proposals and community demands etc.
- 2 Review of recommendations and direction outlined in other programs and strategies including the Open Space Strategy, Acquisition Strategy, capital works program and relevant Plans of Management.
- 3 Using research information prepare a site analysis/evaluation to generate a list of opportunities and constraints.
- 4 Generate display material and ideas boards.
- 5 Hold a workshop/open day (planning session) at the park, inviting all stakeholders to determine the preferred vision and future opportunities for the park. Stakeholders include local residents, sports clubs, bushcare groups, neighbouring groups such as Scout and Guide groups, service clubs, seniors and special needs groups and local businesses.
- 6 Formation of a working party, representing the key stakeholders who will participate in more detailed consultation and provide on-going feedback on the concept plans.
- 7 Preparation of preliminary landscape master plans and staging options relating to probable costs.
- 8 Public exhibition of the draft landscape master plans, and consultation with the local community.
- 9 Preparation of the final landscape master plans will be an on-going interactive process between all stakeholders until a final landscape master plan is agreed upon.
- 10 Utilise the final landscape master plan to generate design and construction plans staged in accordance with funds becoming available.
- 11 Landscape master plans will then be reviewed every 5 years to re-assess their relevance and monitor the progress of their implementation.

In addition to the current methods of communication (Council's advertising, exhibitions, newsletters, Out in the Open e-newsletter, email and letters), it is anticipated that Council's website will be utilised as the primary medium for updating the community and encouraging resident participation in the process. During the preliminary stages of consultation, residents will be invited to provide an email address, which will enable a reciprocal email notifying the addressee of a website update.

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It is anticipated that these initial consultation steps may, at some sites, create the opportunity for park care/park watch groups to be created. Open Space are currently piloting this project, along the lines of the successful Bushcare model at several locations.

The process outlined above can be commenced for 3 sites each year. Some of the smaller or already well developed sites will require confirmation of existing opportunities rather than the development of new opportunities and therefore will not require the same degree of detail in the development of the landscape master plans.

A number of issues influence the order of preparation of landscape master plans. Many of the sites listed have been identified for Section 94 funding, additionally, many of them are directly or indirectly related to the town centre plans which are currently being developed for St Ives and Turramurra and will be developed for Pymble, Gordon, Roseville and Lindfield over the coming year. Similarly, a number of the parks listed are locations which have been identified as sites which will have substantial projects undertaken as part of the Environmental Levy over the next 6 years. Further consideration has been given to other improvements and/or planning being scheduled for sportsgrounds or other areas in close proximity to the parks. If planning is considered simultaneously, the process can ensure the range of opportunities available at the 2 locations compliment each other, thus offering a more integrated outcome.

The following time frame for the preparation of the landscape master plans is proposed:-

2005/2006	St Ives Village Green Kissing Point Village Green (incorporating Sir David Martin Reserve, the adjacent bushland covered by Draft LEP 201 to be rezoned Open Space, the leash free area, playground and baseball fields) Swain Gardens
2006/2007	Turramurra Park Pymble Park Hassell Park
2007/2008	Lindfield Park Wahroonga Park Gordon Recreation Area
2008/2009	Roseville Park The Glade Golden Jubilee
2009/2010	Killara Park Queen Elizabeth Reserve Regimental Park

CONSULTATION

The process and development of this report was discussed at the September 2005 meeting of the Parks, Sport and Recreation Reference Group and a discussion paper prepared and distributed to the group. Comments were received from one member of the reference group. Additionally, the reference group have been advised that this report is listed on the business paper.

The preparation of Landscape Master Plans for District Parks will provide the opportunity for Council to undertake consultation specific to each park. The planning will apply a creative 'ideas' process with preliminary plans being developed and modified a number of times with stakeholders involved in discussing opportunities and options before reaching agreement about future embellishment of the site.

Existing methods of communication including Council's advertising, Out in the Open (e-newsletter), email and letters will be utilised to invite stakeholders to participate in the process. In addition it is anticipated that Council's website will be used as the primary medium for updating the community and encouraging resident participation in the process. During the preliminary stages of consultation, residents will be invited to provide an email address, which will enable a reciprocal email notifying the addressee of a website update.

FINANCIAL CONSIDERATIONS

There are no financial considerations relating to the landscape master planning process, as planning and consultation costs for 3 parks have been included in the 2005/2006 budget.

Once a landscape master plan has been developed for a park, embellishment can occur in stages and sections or projects can be undertaken independently of each other, as funding becomes available. Such projects will be in keeping with the long term vision for the park.

In addition to funds accrued to previous Section 94 plans, Council's current Section 94 plan identifies in the region of \$4,200,000 for park embellishment and approximately \$29,000,000 for open space acquisition and embellishment of those acquisitions. The Section 94 plan identifies 17 existing parks and outlines improvements required at those locations. Council has also identified \$670,000 per year for capital improvements in parks, playgrounds and sportsgrounds through the Capital Works Prioritisation process. All of the above will form sources of funding for future embellishment, in accordance with the landscape master plans.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

No consultation has occurred with other departments of Council in the preparation of this report.

SUMMARY

The preparation of the District Park Landscape Master Plan is identified as a key performance indicator in Council's 2005/2009 Management Plan. This report has identified the district parks and outlined the process which will be undertaken during the preparation of master plans for those areas including a time frame for the preparation of the plans over the next five years.

The preparation of landscape master plans for district parks offers Council the opportunity to plan and carry out improvements at each location in an integrated and effective way knowing that smaller projects are in keeping with and will contribute to a long term vision for the park. Furthermore, having the capability to carry out improvements in stages, as funding becomes available, assists Council in ensuring that Section 94 funds are utilised to the best effect for the local community within a reasonable timeframe of these contributions being received.

RECOMMENDATION

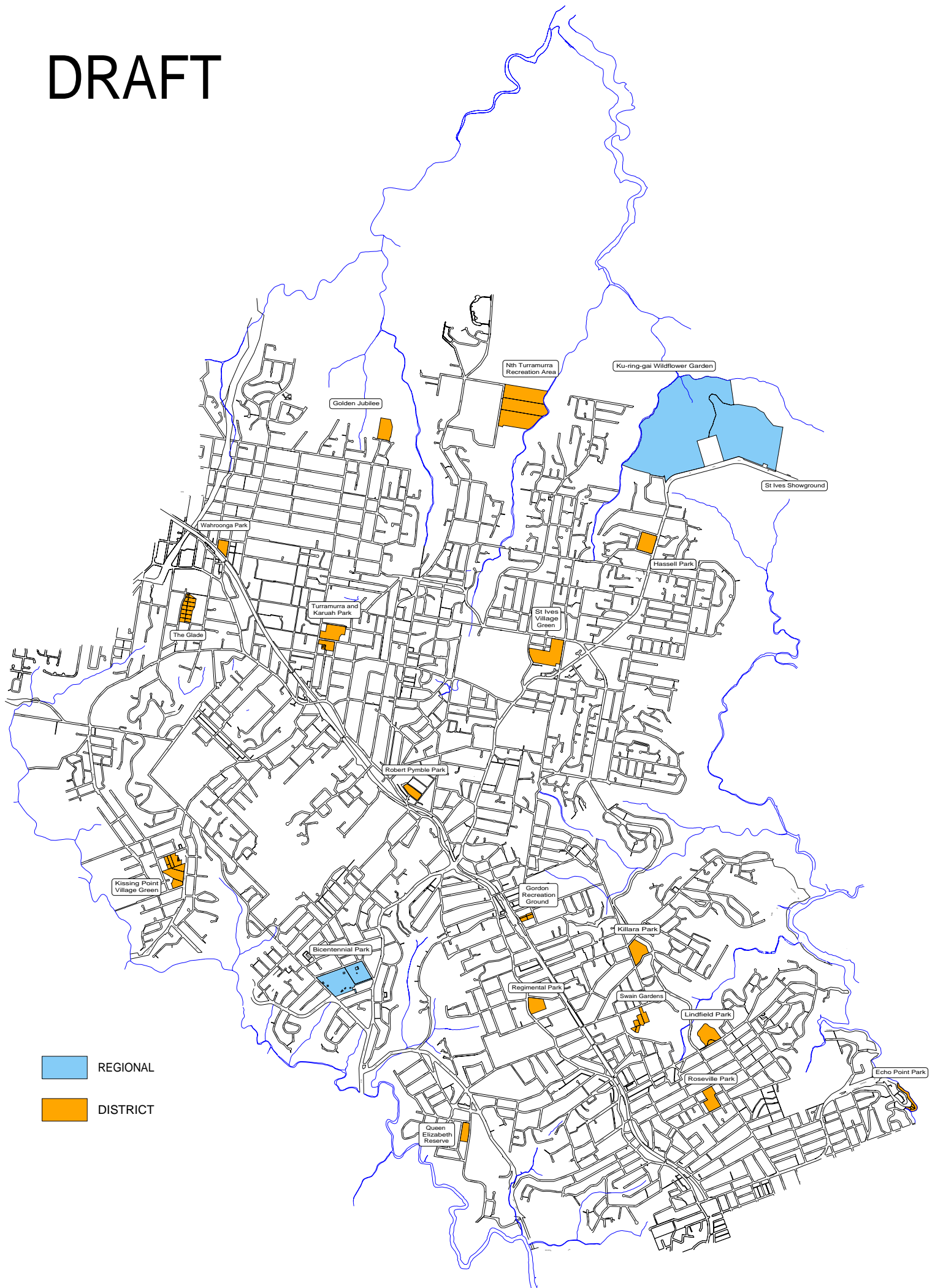
- A. That the District Park Landscape Master Planning process be commenced for St Ives Village Green, Kissing Point Village and Swain Garden during 2005/2006.
- B. That District Park Landscape Master Planning continue to be identified within Council's Management Plan.

Morven Cameron
Senior Projects Officer

Steven Head
Director Open Space & Planning

Attachments: Map of Ku-ring-gai showing the distribution of District and Regional Parks - 553104

DRAFT



BUSHWALKING TRACKS FOR SENIORS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To report to Council on the recreational opportunities in Council bushland for seniors.

BACKGROUND:

This report has been prepared in response to a motion carried by Council regarding the provision of bushwalking tracks for seniors.

COMMENTS:

As part of the review of recreational opportunities in bushland, a standardised classification of all Council maintained tracks has been developed. In addition, a series of guided walks have been developed, catering for a range of walking abilities and interests all with a view to promoting the use of Council's bushland reserves.

RECOMMENDATION:

That Council notes the report and endorses the track grade and management hierarchy.

PURPOSE OF REPORT

To report to Council on the recreational opportunities in Council bushland for seniors.

BACKGROUND

On 22 March 2005 Council resolved, *'That the Director Open Space, in conjunction with the Policy Committee, bring forward a report to Council on the provision of Bushwalking Tracks for seniors.'*

In addition to the terms of the resolution this report includes a proposed classification system for walking tracks to inform future construction and service standards and broader recreational and promotion opportunities and needs as identified in earlier resolutions of Council.

Recreation within Council bushland has a long history with the first comprehensive mapping of tracks within the Lane Cove Valley undertaken by STEP in the early 1980s. In addition to this map, Council has also promoted a number of specific walking tracks throughout the area through signs and brochures and in recent times through guided walks such as, 'Step into the Bush' and 'Habitat Ku-ring-gai'. STEP, Blue Gum High Forest Group and others have also conducted many guided walks through our bushland that have received strong interest from Ku-ring-gai residents and from further a field. Councils own Wildflower Garden facilities include a number of tracks suitable for a wide range of ages and mobilities.

Anecdotal evidence suggests recreation in bushland is well supported and valued activity by our residents. To quantify use, a survey on recreation use in bushland is planned for late 2005 through to early 2006, as identified as a need in the Open Space Strategy and the Management Plan 2005/07. This survey will be designed to enable a comparison with a 1992 survey that identified for 60 per cent of respondents, the first reason they visited bushland is for walking with over 33 per cent within the 40 to 54 age group.

COMMENTS

A key challenge involved in the management of bushland areas is to find the appropriate balance between access and conservation. Currently there are many hundreds of kilometres of tracks and trails through our bushland linking to adjacent National Parks and other council areas. Only a minority of which are formally recognised by the various land managers as 'official' and therefore maintained and promoted to any service standard.

In response draft guidelines have been developed that seek to address the following objectives:

1. To identify the range of uses for which recreational trails will be provided
2. To specify the key elements of an effective recreational trail management system

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3. To provide classification systems for tracks and trails used for walking, cycling, horse riding and multiple activities.
4. To provide a decision making process for the classification of recreational trails according to type of use (including multiple uses) and maintenance standard
5. To specify construction and maintenance standards for each type and class of trail
6. To provide users with more reliable information on what type of walk they can expect and the standard of track they expect to encounter.

It is proposed that Council adopt a new standard that seeks to provide five track gradings from easy path to hard route. These have followed an Australian Standard for walking tracks Part 1: Classification and signage (AS2156.1) and have incorporated the construction and planning requirements of a range of government agencies (Epacris 2005).

Table 1 outlines a walking track classification system, while Table 2 provides a description of each of the proposed classes and Attachment 1 determines elements of the track construction and maintenance (note: class 6 tracks are unmanaged routes and will not normally be promoted to the public, they have been included in this classification scheme given the many informal routes through our bushland).

The rationale for this grading is two-fold:

1. It will comply with an Australian Standard and therefore provide consistency with similarly recognised tracks across Australia; and
2. It can be used as a basis for defining service standards in terms of maintenance and construction. This in turn will enable detailed and accurate budgets and programmes to be developed.

As part of the development of a walking track system, similar classifications were also developed for horse riding and mountain bike riding. However finalisation of this scheme will need to be considered on analysis of supply and demand and as part of the user survey. This analysis will also draw on a recently completed study on mountain bikes in Ku-ring-gai (Hill 2005), following from work last undertaken in this area in the early 1990's (Cheshire 1993) and Councils adoption of various notices of motions addressing the provision of off road biking facilities within Ku-ring-gai refer to resolution of Ordinary Meeting of Council, the most recent being on 12 October 2004. It is anticipated that work to further develop appropriate off road biking facilities within Ku-ring-gai will be identified in Council's Draft Management Plan for 2006/2007.

Classification of the trail system will occur over the next 12 months. Priority will be given to formal and promoted tracks, with these expected to be graded by end of January 2006.

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Table 1 Walking track classification system






Element	AS 2156.1 ¹ Class					
	1	2	3	4	5	6
Track conditions	All access, broad, hard surfaced track. No intrusions.	<i>Modified or hardened surface. Well maintained with minimal intrusions</i>	<i>Generally a modified surface but no hardening. Kept mostly clear of intrusions and obstacles.</i>	<i>A distinct track with modified to unmodified surface. Some fallen debris and other obstacles.</i>	<i>Minimal modification to natural surface for drainage/erosion control only. May be indistinct with frequent obstacles.</i>	Unmarked and unmodified route or footpad. May have frequent obstacles.
Gradient	No steps. Suitable for wheelchairs	Some steps but gradient generally <1:10. Not suitable for wheelchairs	Gradient may exceed 1:10 for short sections. Steps may be common.	Not limited.	<i>Not limited.</i>	<i>Not limited.</i>
Signage	<i>Should have interpretive signs.</i>	<i>Directional track markers/signs at intersections. May have interpretive signs.</i>	Directional signs and track markers. <i>May have interpretive signs.</i>	<i>May have directional signs and track markers. May have interpretive signs.</i>	Minimal	Nil
<i>Safety intervention</i> ²	High	High	Moderate	Low to moderate	Minimal	Nil
Terrain	No experience required	No experience required	No bushwalking experience required. Some hazards.	Moderate bushwalking skills required.	High degree of bushwalking skills & self-reliance required.	High level bushwalking skills & self-reliance required.
Weather	Not applicable	Not applicable	Storms may affect navigation & safety	Storms & severe weather may affect navigation & safety	Storms & severe weather may affect navigation & safety	Storms & severe weather may affect navigation & safety
Inspections ³	Monthly	3 months	6 months	6 months	12 months	Nil

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Element	AS 2156.1 ¹ Class					
	1	2	3	4	5	6
Notes	¹ The descriptions here have been intentionally tightened in several instances from AS 2156.1, to provide improved rigour where appropriate. These refined descriptors are shown in <i>italics</i> . ² <i>Safety intervention</i> is a refinement of the 'Infrastructure' element of AS 2156.1 and refers to on-ground works to manage or treat identified risks to track walkers. ³ Inspection frequency is not an element for classification under AS 2156.1, but an item of 'guidance for managers'. Refer to AS 2156.1 for full details					

Table 2 Proposed grading systems for walking tracks in Ku-ring-gai

Grade	AS2156.1 Class	Description	Pictogram
Path: easy	1	All access, hard-surfaced track with no steps. Suitable for wheelchairs. High safety level. Suitable for all ages and fitness levels.	
Walk: easy	2	Well-surfaced track with some steps and few difficulties. Not suitable for wheelchairs. High safety level. Suitable for all ages, but take care with children.	
Track: moderate	3	A distinct track with steep and rough sections, steps and some difficulties. Moderate safety level. Suitable for people who walk occasionally.	
Track: hard	4	A distinct track with long steep and rough sections, many steps and stairs and/or frequent difficulties. Low to moderate safety level. Suitable for people who walk regularly. Visitors with heart or breathing difficulties should not attempt these tracks.	
Route: hard	5	Rough, unformed track. May be steep with frequent difficulties. Minimal signage and low safety level. Experienced bushwalkers only. Navigational skills and high level of fitness required.	

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Concurrent to the track grading system, a guided walk program has been developed that showcases some significant and hidden bushland areas across the local area. This has been developed in conjunction with Dr John Martyn, author of "A Field Guide to the Bushland of the Upper Lane Cove Valley" (1994) and coordinator and principle contributor of the Lane Cove and Middle Harbour walking map sheets prepared by STEP.

The Secret Walks of Ku-ring-gai program will commence in January 2006 and has been marketed within the Spring into Action program, specifically targeting senior residents. Attachment 2 provides a list of the planned walking programme for 2006. The walks are across the LGA and include a guide as well as a bush tucker morning tea with some also having an introduction to Eastern therapies such as Qi. Below is a list of the proposed secret walks:

January 2006 Wildflower Garden Length St Ives 1k walk, (Yabby's Galore), suitable for seniors.
February 2006 Campbell Drive (Browns Field), 1k walk, suitable for seniors.
March 2006 Stanley St, St Ives (The Coppins) 1/2k walk suitable for seniors.
April 2006 Warragul Rd (Bluegum Magic), 1k walk, suitable for seniors.
May 2006 Boundary Rd. (Shangri'la) 1k walk.
June 2006 Mitchell Cres. Turramurra (Twin Creeks) 1k walk, suitable for seniors.

Funding for the upgrade and maintenance of existing and construction of new tracks has been identified through a range of recent programmes including the Environmental Levy, section 94 contributions plan 2004 and opportunistically through government grants. Tracks identified for upgrade include:

Auluba Oval – Kissing Point Road, South Turramurra linking Auluba Oval to Sir David Martin Reserve

AGAL – Mona Vale Road, Pymble linking Ryde Road through to Suakin Street via the bullock track
Seven Little Australians – Slade Avenue, Lindfield. (Grant funding has been obtained to commence works at the Echo Point end of this walk. Work will commence early 2006).

Sheldon Forest – Warragul Road, Pymble linking Mimosa Oval and the Kate Street scout hall through Rofe Park to the Sheldon Forest walking track

Rothwell Road to The Comenarra providing a link to the dog off leash area and fire trail to Howson Oval

Paddy Pallin – off Highfield Road, Lindfield

Little Blue Gum – Grosvenor Road, Lindfield

Wildflower Garden – 420 Mona Vale Road, St Ives

Richmond Avenue to Craig Street, St Ives

The Glade (bridge and track) – off Koora Avenue, Wahroonga

CONSULTATION

The development of this report including the accompanying studies has been undertaken with a range of local and regional organisations including STEP, Department of Environment and Conservation (formally National Parks and Wildlife Service), Department of Planning (formally DIPNR), Hornsby Shire, Warringah and North Sydney Councils, Northern Sydney Health Promotions, Hillview Community Centre, Bike North, NSW Rural Fire Services and the Bushland, Catchment and Natural Areas Reference Group.

FINANCIAL CONSIDERATIONS

The Spring into Action walks programme for 2006 is a component of an ongoing program and as such will not have an additional impact on resources.

The implementation of the walking track classification and subsequent construction and maintenance standards will be subject to existing operational resources within the Natural Areas section or as appropriate and identified through other sources such as the Environmental Levy, Section 94 plans and grant funds. As information becomes available on the various lengths and condition of the five grades of walking tracks; the budgetary implications, if necessary will be considered in the preparation of future Management Plans and associated financial planning.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

The following department/sections were involved in the development of this report and programmes: Community Services, Open Space, Technical Services, Corporate Communication and Compliance.

SUMMARY

The track and trail classification system that has been developed, will allow Council to better allocate resources for maintenance schedules and future upgrades of the recreational trails network within the LGA and allow easier dissemination of appropriate bushwalking opportunities for all ages and levels of mobility.

Complementing this grading hierarchy, a series of guided walks, catering for a wide range of ability and brochures, detailing the best walks Ku-ring-gai has to offer, have also been developed. This information will be accessed on the Council website, brochures available at Council Chambers reception as well as mailouts.

RECOMMENDATION

That Council:

- A. Endorses the track grade and management hierarchy and
- B. Receives and notes the report.

Peter Davies	Steven Head
Manager Sustainability and Natural Environments	Director Open Space & Planning

Attachments:

- 1. Recreation Trail Guidelines - 557345**
- 2. Spring into Action Programme - 557052**

References:

Cheshire, C (1993) Mountain Bike Riding on Fire Trials in Ku-ring-gai: Feasibility Study
Epacris (2005) Ku-ring-gai Council Draft Recreational Trail Guidelines June 2005
Hill, B (2005) Mountain Bikes in Ku-ring-gai: On the right track? October 2005 Planning Honours dissertation as part of Graduate Diploma in Urban and Regional Planning University of New England.
Martyn, J (2000) Walking Tracks of the Lane Cove Valley, STEP (reference map sheets for Lane Cove and Middle Harbour).



Ku-ring-gai Council

RECREATIONAL TRAIL GUIDELINES

June 2005

Ian Brown and
Richard Delaney

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1 Introduction

1.1 Purpose and objectives of these guidelines

The purpose of these guidelines is to establish the strategic trail classification framework for identifying and managing a recreational trail system within Ku-ring-gai Council area.

These guidelines have the following specific objectives:

1. to identify the range of uses for which recreational trails will be provided;
2. to specify the key elements of an effective recreational trail management system;
3. to provide classification systems for trails used for walking, cycling, horse riding and multiple activities;
4. to provide a decision-making process for the classification of recreational trails according to type of use (including multiple uses) and maintenance standard;
5. to specify construction and maintenance standards for each type and class of trail.

1.2 Scope of these guidelines

These guidelines cover all tracks and trails within the Ku-ring-gai Council area that are formally identified as available for recreational use (excluding motor vehicles). These trails range from informal local footpads to formal walking and cycling tracks to management trails constructed for vehicle use and for hazard reduction purposes but now also used for a range of recreational activities.

These guidelines deal with the provision of trails for use by foot, bicycle, and horse only.

As a strategic-level document, these guidelines cover planning, classification, standards, and decision-making for trails but do not include overall policy or detailed specifications for construction and maintenance.

The following documents at the policy and specification level complement these guidelines:

- Recreation in Natural Areas Policy (KMC 2001)
- Bushland Walking Track Maintenance Standards (Interim Version III) (KMC 2001)
- Bushland Service Trail Maintenance Standards (KMC 1998)

1.3 Recreational trails within Ku-ring-gai Council area

Recreational trails within Ku-ring-gai Council area include a wide variety of tracks and trails used for access and recreational activities. They include informal pads that have developed through use, formally constructed trails for walking and cycling, access tracks originally developed for non-recreational activities such as infrastructure maintenance and transport, and sealed and unsealed vehicle trails constructed for fire management and other purposes (but which are closed to public motor vehicles).

Most trails traverse natural and semi-natural areas that make up the 1100 hectares of public bushland managed by Ku-ring-gai Council. A number of trails extend into or link with adjoining jurisdictions, including National Park and other local government areas.

The trails are used for a wide variety of activities and by the full spectrum of people in the community as well as visitors to the district. Modes of use include by wheelchair, on foot (running, walking, or crawling), bicycle, and horse. The purposes for which people use the tracks include access from one point to another (particularly as an alternative to roads), exercise, fitness and relaxation, navigational activities, sport, enjoyment of nature, education, technical challenge, dog-walking, study and many other reasons.

Some trails are local tracks used only by immediate neighbours and others are significant tourist tracks or long trails traversing the area. The level of use varies from very low to very high. Many tracks are

associated with landscape features such as shorelines, escarpments, lookouts, waterfalls and Aboriginal sites, and some have associated facilities such as picnic areas, car parks, and urban parks. A number of tracks are historic in themselves or include historic heritage fabric.

The network of trails traverses a varied landscape with an equally varied spectrum of trail conditions and capabilities. This landscape both provides a diversity of trails and requires a certain flexibility in management as this can influence the capability of trails.

The overall demand for recreational trails within the local government area is high. This high demand creates the potential for conflict between different trail uses and between trail management/capability and the expectations of trail users and the wider community.

2 The Need for a Recreational Trail Management System

2.1 Aim of trail management

The aim is to develop within Ku-ring-gai Council area a coherent system of recreational trails which:

- Caters for a range of uses;
- Provides a variety of community benefits;
- Minimises conflict between trail users; and
- Minimises impact on natural and cultural resources

Through:

- Seeking to promote the value and appreciation of bushland environments;
- Appropriate classification of trails to enable long term management options for their maintenance; and
- Providing appropriate forms of information for trail users.

2.2 Use of the trail system

An extensive network of trails exists but they have not been systematically reviewed or classified in terms of appropriate types of use, standard, and condition. The overall need for new trails is considered to be low, and the capacity to manage additional trails is limited. However, there may be potential for a small number of new trails to cater for specific uses.

Public use of the trail network has developed largely as a result of demand, with little planning oversight. Demand is strong and still growing. The greatest demand is for foot tracks. Cycling tracks, especially for mountain biking, are a secondary area of demand but growing more strongly. There is a smaller demand for horse tracks, and this tends to be localised in specific parts of the Council area.

As trail use has grown, the potential for conflict between different types of use has also grown. The classification of trails according to type of use and standard, coupled with a public communication program, can reduce trail conflicts and promote appropriate and responsible trail use.

2.3 Condition and capability of the trail system

Trails vary widely in condition and standard. Many trails are receiving types of use and a level of use that is inappropriate for their existing condition. Other trails have the potential to cater for more use or different use. It is important to minimise the impact of trails on their environment, and poorly managed or overused trails are likely to have a greater impact.

A variety of trail types and conditions are desirable, but the current diversity has developed in response to ad hoc use and in the absence of planning guidance. The management of each trail should ideally match its identified role in the trail system. Classification of trails can provide direction on

how a particular track is to be managed: the type and level of use to be provided for and the trail's intended standard and condition. Available management resources can then be distributed on an orderly, priority basis across the whole trail system.

In the absence of a planning framework and clearly identified priorities, there will be a tendency to continue to upgrade trail conditions in response to community pressure. However, for some tracks an appropriate management aim may be to hold the tracks to a relatively low standard.

The biophysical characteristics of the Ku-ring-gai environment place some limitations on trail capability. The sandstone soils and steep slopes of much of the bushland create drainage and erosion issues that cannot be entirely eliminated by even the best trail management. As it is not possible to apply high levels of construction and maintenance across the whole trail system, it will be necessary to classify some trails for a limited range of uses and/or low levels of use.

Detailed consideration needs to be given to the development and use of fire management trails. It should be expected that any trail in the current network has the potential to be used as a control line during bushfire management. New control lines are occasionally 'put in' with the primary consideration of 'protection of life and property' during wildfires. It is important to evaluate these lines immediately following such events and make a strategic decision on whether these should be rehabilitated or maintained. If this decision is delayed then they will, by default, become a part of (and require management inclusion in) the recreational trail network.

2.4 Linkages beyond Ku-ring-gai

The management of individual trails will ideally be consistent across jurisdictions. A formal trail management system will facilitate this outcome by clearly identifying management standards.

2.5 Public communication

An effective trail management system requires community support. Two key processes for generating such support will be community involvement in development of the system and communicating the outcomes to the public. A specific need will be to inform trail users of the classification and intended management of particular trails.

3 Recreational Uses of Trails

3.1 Uses to be accommodated

The recreational trail system will cater for use by foot, bicycle, and horse. Other uses (eg. In-line skating) are minor at this stage and do not require special consideration. This situation may change in the future.

3.2 Type of use vs. purpose of use

The type (mode) of use is distinct from the purpose for which people are using trails. Purposes and motivations vary across a very wide spectrum (see 1.3 above), but most are internalised and have little or no outward impact on other trail users or the trail environment. Some examples of purpose of use which may give rise to user conflicts or increased environmental impact (and which therefore have management implications) include jogging, birdwatching, dog walking, and mountain biking for technical challenge (compared to touring).

In general, purposes that have implications for management should be considered as part of the decision-making process. Other purposes with no outward manifestation generally do not need to be considered. Value-based judgements on trail user motivations are to be avoided.

Different types of use (foot, bicycle, horse) have differing trail needs. Trail treatments and other management mechanisms may also differ.

3.3 Shared use of trails

Although types of use differ in their trail needs and treatment, there can be considerable overlap. Some trails can provide for more than one type of use whilst including appropriate protection for the environment and public safety. Other trails are unsuitable for some types of use because of practical (eg. terrain), safety, and/or environmental reasons.

Types of trail use can be considered in a hierarchy based on the limitations of each mode in using a certain form of trail. Walkers can use almost any form of track, including those provided for cyclists, horse riders, and vehicles. Cyclists can use any horse or vehicle trail but only some walking tracks. Horses are the most limited and can use only vehicle and some walking and cycling tracks.

Practicality of use, however, is only one consideration. Just because a walker, mountain biker, or horse rider *can* use a track, does not mean it meets their preferences – they may not *want* to use it. Decisions for shared use need to consider:

- trail capability;
- environmental protection;
- safety issues;
- the quality of trail experiences; and
- user expectations and preferences.

Current shared use of trails in Ku-ring-gai is the result of demand rather than design. If new trails were to be constructed then there would be the opportunity to build these trails with the design ideal of shared use.

Instead, the challenge is to consider the current network of trails and make decisions about which are appropriate for shared use. Currently the demand for use is limited to vehicle, horse riding, cycling, and walking.

3.3.1 Safety issues

In considering the possible combinations of users on shared use trails the probable safety concerns occur between:

- Horse riders and mountain bikers (eg Horse scared)
- Horse riders and walkers with dogs (eg Horse scared)
- Walkers and mountain bikers (eg direct collision)

If these concerns are valid and not manageable then such combinations of shared use cannot be supported. In determining this ‘manageability’, it is important to consider an extensive range of options, which may include:

- Single direction (or one way) use of loop trails
- Improved lines of sight
- Allocated times for specific use...

3.3.2 Potential for conflict between users

Wherever users encounter other users on trails there is the potential for conflict – regardless of the mode of travel. Common perception is that this is most likely to occur (with the likely complainer listed first) between:

- Walkers and mountain bikers
- Horse riders and mountain bikers
- Horse riders and dog walkers
- Any of the above groups and motorised vehicles

Moore (1994) stresses that ‘recognising conflict as goal interference’ is one of the most important principles for minimising conflict on shared use trails. Walkers often reasonably complain about mountain bikers on trails when they were not expecting to see, or rather be surprised by, cyclists. As a result, providing the opportunity to clarify expectations through appropriate signage at the beginning of any shared use trail can significantly reduce the potential for conflict.

Cressford (2002) addresses an apparent discrepancy between the perception and reality of such conflict and notes that a large percentage of those walkers who claim conflict with mountain bikers have never actually encountered one on the trail. Interestingly Cressford has also failed to find a single instance of a walker being injured by a cyclist on a shared use trail.

3.3.3 Environmental and Maintenance issues

Where a trail has been managed for a particular use and other uses develop, new issues will appear. Examples of this are:

- A walking track being used by mountain bikes: stairways bypassed, high speed on long straights resulting in erosion in braking zones, individual step ‘risers’ moving downhill with braking
- Mountain bike track being used by walkers: shortcuts appear across the ‘neck’ of larger radius switchbacks

As a result, active management of shared use trails will require an understanding of these issues and either modification of the physical environment or devising an alternative to remove the issue.

3.3.4 Management issues

The manager of the shared trail network will have to bear all of the above in mind and be prepared to deal with each of these issues and consider carefully how to classify, manage, and publicise the trails. It may be that the nature of the shared use has to change with unseen variables such as weather, breeding seasons, or fire.

This extra ‘layer’ of management to facilitate shared use is complex but far easier and more cost-effective than providing separate trails for each user group.

4 Trail Classifications and Standards

The following sections are a discussion of the various standards that apply to the classification and construction of the possible different types of recreational trails in the Ku-ring-gai area. The standards presented generally refer to each type of trail as if it is single use – there are no standards yet written that apply specifically to shared use trails so this is discussed in the final section.

4.1 Vehicle trails

The network of unsealed fire and management vehicle trails in the Ku-ring-gai area needs to be classified and managed in accordance with the requirements of the NSW Rural Fire Service (RFS). The guiding document for consideration is the RFS Bushfire Coordinating Committee *Policy No. 1/03 'Fire Trails'* and its accompanying *'Guidelines for the Classification of Fire Trails'*. This Policy specifically refers to *'Guidelines for the Planning, Construction and Maintenance of tracks'* (DLWC, 1994) as a minimum practical standard.

4.1.1 Recommendations

- Unpaved fire and management trails are to be constructed, maintained, and classified in accordance with RFS Bushfire Coordinating Committee *Policy No 1/03 'Fire Trails'*.
- While adhering to this Policy, practices that introduce unnecessary barriers to recreation are to be avoided

4.2 Walking tracks¹

A track classification system provides a hierarchy of track standards that allows for a wide variety of terrain, a spectrum of different experiences for track walkers and different levels of construction (and therefore resource commitment).

The track classification forms the basis for other components of a walking track management program. It provides a consistent way of describing construction standards, safety intervention, signage, maintenance levels, and other parameters.

Australian Standard 2156.1 *Walking Tracks Part 1: Classification and signage* (Standards Australia, 2001) (AS 2156.1) is comprehensive, detailed, and therefore well suited to providing direction to track managers. However, these same features mean it is less useful for communicating track conditions to the walking public.

Walkers look for simple and straightforward information to enable them to make informed decisions. The information needs to be easily recognisable, clear, concise, and consistent. Extra detail will only make sound decisions more difficult and poor decisions more likely—with negative consequences for public enjoyment and safety.

4.2.1 Walking track classification

For management

The management track classification system should retain all the detail of AS 2156.1, and not diverge from the standard. In the local context, it is useful to move the other way a little and tighten the range for some track elements for several classes of track.

¹ The material in this section is adapted from a track classification report prepared for the combined track management agencies in the Blue Mountains - Brown & Associates, 2005. The development of that classification involved a detailed review of Australian Standards, other Australasian classifications and local conditions. Although on a smaller scale, the landscape, environment, and track conditions in Ku-ring-gai are similar to the Blue Mountains.

Element	AS 2156.1 Class ¹					
	1	2	3	4	5	6
Track conditions	All access, broad, hard surfaced track. No intrusions.	<i>Modified or hardened surface.</i> Well maintained with minimal intrusions	<i>Generally a modified surface but no hardening.</i> Kept mostly clear of intrusions and obstacles.	<i>A distinct track with modified to unmodified surface.</i> Some fallen debris and other obstacles.	<i>Minimal modification to natural surface for drainage/erosion control only.</i> May be indistinct with frequent obstacles.	Unmarked and unmodified route or footpad. May have frequent obstacles.
Gradient	No steps. Suitable for wheelchairs	Some steps but gradient generally < 1:10. Not suitable for wheelchairs..	Gradient may exceed 1:10 for short sections. Steps may be common.	Not limited.	<i>Not limited.</i>	<i>Not limited.</i>
Signage	<i>Should have interpretive signs.</i>	<i>Directional track markers/signs at intersections.</i> May have interpretive signs.	Directional signs and track markers. May have interpretive signs.	<i>May have directional signs and track markers.</i> May have interpretive signs.	Minimal	Nil
Safety intervention²	High	High	Moderate	Low to moderate	Minimal	Nil
Terrain	No experience required	No experience required	No bushwalking experience required. Some hazards.	Moderate bushwalking skills required.	High degree of bushwalking skills & self-reliance required.	High level bushwalking skills & self-reliance required.
Weather	Not applicable	Not applicable	Storms may affect navigation & safety	Storms & severe weather may affect navigation & safety	Storms & severe weather may affect navigation & safety	Storms & severe weather may affect navigation & safety
Inspections³	Monthly	3 months	6 months	6 months	12 months	Nil
Notes	¹ The descriptions here have been intentionally tightened in several instances from AS 2156.1, to provide improved rigour where appropriate. These refined descriptors are shown in <i>italics</i> . ² <i>Safety intervention</i> is a refinement of the 'Infrastructure' element of AS 2156.1 and refers to on-ground works to manage or treat identified risks to track walkers. ³ Inspection frequency is not an element for classification under AS 2156.1, but an item of 'guidance for managers'. Refer to AS 2156.1 for full details					

Table 1: Walking track classification system (for managers)

Resolving a single classification for a track is of limited value for management purposes. It is more useful to classify each track, or section of track, specifically against each individual element.

If a single classification is required, then in addition to the guidance provided by AS 2156.1, other considerations to take into account in classifying a track include the overall purpose of classification, the expected/desired number and class of walkers and the recreational opportunities to be provided.

Many informal tracks are simply created through use (also called ‘pads’). Class 6 is intended to accommodate such tracks where they are not actively managed on the ground. Where such tracks are managed to a limited extent, they are more properly placed in class 5. In either case, management accepts the existence of the tracks.

For the public

A public walking track classification system should ensure the following parameters are communicated:

- difficulty;
- walking conditions;
- level of safety intervention.

The following track classification integrates two parallel streams of description. The first (the primary classification) identifies both the walking conditions and safety standards and is based upon AS 2156.1. The second (the difficulty grading) conveys the overall difficulty of walking the track. The two streams are combined into one system of six track categories, each with a two-dimensional descriptor and detailed explanation.

Track length and duration are independent parameters that are not included in the difficulty grading.






Grade	AS2156.1 Class	Description	Pictogram
Path: easy	1	All access, hard-surfaced track with no steps. Suitable for wheelchairs. High safety level. Suitable for all ages and fitness levels.	
Walk: easy	2	Well-surfaced track with some steps and few difficulties. Not suitable for wheelchairs. High safety level. Suitable for all ages, but take care with children.	
Track: moderate	3	A distinct track with steep and rough sections, steps and some difficulties. Moderate safety level. Suitable for people who walk occasionally.	
Track: hard	4	A distinct track with long steep and rough sections, many steps and stairs and/or frequent difficulties. Low to moderate safety level. Suitable for people who walk regularly. Visitors with heart or breathing difficulties should not attempt these tracks.	
Route: hard	5	Rough, unformed track. May be steep with frequent difficulties. Minimal signage and low safety level. Experienced bushwalkers only. Navigational skills and high level of fitness required.	
Notes	Class 6 tracks (unmanaged routes) will not normally be promoted to the public		

Table 2: Walking track grading system (for the public)

4.2.2 Recommendations

- AS 2156.1 will be used as the walking track classification system for management purposes in Ku-ring-gai.

- A linked but simplified and more readily understandable system will be used for public information.
- The public walking track classification system will use a limited range of easily understood verbal descriptors with pictograms, attached to accurate and concise verbal definitions.
- AS 2156.1 class numbers (1 to 6) will not be used in public information, but may be used as a shorthand reference by track managers.

4.3 Bicycle trails

Firstly, it is important to draw the distinction between various styles of bicycle riding and the trail features each style will seek. Note that further to this there will be a range of skill within each style and as riders become more 'advanced' the difference will become more pronounced.

4.3.1 Road cycling

Refers to the riding of traditional lighter weight bicycles on paved surfaces. These bicycles have limited ability to absorb 'bumps' so road cyclists generally stay on formed roads and purpose built paved cycle paths

4.3.2 Mountain biking – Cross country

The majority of mountain bikers would fall into this category. Mountain bikes have much 'fatter' tyres than road bikes, are generally of heavier duty construction and may have no, front only, or dual suspension systems.

The majority of mountain bike owners would like to identify with the popular perceptions of high speed, 'big air', technical riding but reality would see only a small percentage actually seeking and riding technically challenging trails. The majority will be satisfied with a range of 'easier' fire trails with the occasional bit of 'single track' and the odd technical challenge to stimulate ambition.

A smaller section of the mountain biking community makes up the strong intermediate to advanced riders. Though fewer in number, the kilometres ridden and the challenges sought (often through more environmentally sensitive terrain) makes this group significant in any trail management system. This group is well aware of the potential to have areas 'closed' and are normally keen to portray a positive image for their sport and will readily engage in volunteer track workdays.

4.3.3 Mountain biking – Specialists: Downhill, Freeriding and Trials

These specialists make up the smallest section of mountain bikers and seek often purpose-built terrain to challenge their often extremely high degree of skill. Downhill bikes have many 'inches' of travel in both front and rear suspension systems, are of very heavy duty construction, and are often so heavy that riders will not use their machines for anything but riding downhill. Freeriding and trials riders are similarly focused on specific areas that offer a series of very technical (and normally very low speed) challenges.

Such riders are often very motivated and prepared to put massive effort into deliberately modifying or constructing areas for their use.

4.3.4 Bicycle trail classification

As there is no Australian Standard dealing with these trails, many Australian agencies and other groups are currently considering how best to classify trails for use by bicycles. The two most common systems in use are:

- The International Mountain Bicycling Association's (IMBA) Trail Difficulty Rating System (using similar symbols to those used at downhill ski resorts) and

- A numerical grading system grading trails 1 (easiest) through 5 (most difficult)

There has been general consensus that such systems should only give an indication of technical difficulty and that other measures, such as trail length, are listed separately.






	Easiest White Circle 	Easy Green Circle 	More Difficult Blue Square 	Very Difficult Black Diamond 	Extremely Difficult Dbl Blk Diamond 
Trail Width	1.8m or more	0.9m or more	0.6m or more	0.3m or more	0.15m or more
Tread Surface	Hardened or surfaced (paved)	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
Average Trail Grade	Less than 5%	5% or less	10% or less	15% or less	20% or more
Maximum Trail Grade	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
Natural Obstacles and Technical Trail Features (TTF)	None	Unavoidable obstacles 50mm tall or less Avoidable obstacles may be present Unavoidable bridges 0.9m or wider	Unavoidable obstacles 200mm tall or less Avoidable obstacles may be present Unavoidable bridges 0.6m or wider TFF's 0.6m high or less, width of deck is greater than ½ the height	Unavoidable obstacles 400mm tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 0.6m or wider TFF's 1.2m high or less, width of deck is less than ½ the height Short sections may exceed criteria	Unavoidable obstacles 400mm tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 0.6m or narrower TFF's 1.2m high or less, width of deck is unpredictable Many sections may exceed criteria

Table 3: IMBA Trail Difficulty Rating System

Of these two systems, land managers are favouring the former while enthusiasts publishing their own informal trail guides have tended to use the later. The IMBA system is more appropriate for land managers as it has a series of objective, measurable criteria that will aid in both determining difficulty and in design/maintenance of the trail.

While intermediate and advanced riders may have informal ways of communicating the relative merits of various trails, the system seen by the general public (who will more likely be towards the beginner end of the skill spectrum) will prefer a simple, obvious, and consistent graphical system. Note also that the IMBA system includes a category that can be applied to paved cycle paths.

The Australian Road Rules (Australian Transport Council 1999) has a section referring specifically to signs for bicycle paths (and lanes on roads) but these signs only depict whether bicycle riders are

allowed on a particular surface and with whom they may expect to share that surface – and have no indication of difficulty.







					
No bicycles	Bicycle path	Bicycle lane	Separated path	Shared path	End no bicycles

Table 4: Australian Transport Council signs

4.3.5 Recommendations

- The IMBA Trail Difficulty Rating System is to be used as the bicycle trail classification system for management and public information purposes in Ku-ring-gai.
- The public bicycle trail classification system will use a limited range of easily understood verbal descriptors with IMBA symbols, attached to accurate and concise verbal definitions.
- The potential for identifying dedicated bicycle trails and shared use bicycle trails will be explored where warranted by local demand.
- Potential bicycle trails will be assessed in relation to environmental, safety, user conflict, and suitability issues.
- Bicycle riding will generally be accommodated on selected vehicle trails.
- Identified bicycle trails will be managed to eliminate barriers.

4.4 Horse trails

Horse trail standards and classifications are poorly developed, especially in Australia. The classification below (5.4.) has been adapted primarily from the South Australian classification (SA Trails Co-ordinating Committee 2005), as well as from the wider literature on trails and trail horse riding (eg. Roberts 2005, US National Parks Service 2005). This literature also enables some of the desirable features of horse trails to be identified.

4.4.1 Desirable features of horse trails

Environment

Horse riders prefer natural, semi-natural, and rural settings, and natural trail surfaces.

Length

A range of ride lengths is sought, from less than an hour to multi-day.

Route, grade and surface

Horse trails ideally follow the same guidelines for construction as all other trails, in relation to maximum grade, appropriate location in the landscape and adequate drainage. Most riders will be satisfied with gentle grades, while an advanced minority may seek the challenge of steeper sections. Surfaces of hard rock and loose sand, gravel or rock are undesirable, especially on a slope. Research suggests that horses have a greater impact on trails than either walkers or cyclists.

Clearance and trail width

A horse and rider require a minimum clearance both vertically and horizontally. On a popular trail, the horizontal clearance should allow horses to pass safely. For aesthetic reasons, the minimum necessary trail width and clearance is desirable.

Barriers

Horse barriers should be excluded. This relates to the physical and behavioural limitations of horses as well as safety. Barriers include fences, narrow gateways, cross-drains, vertical drops, large rocks, logs, and other ground obstacles. Horses can generally step over obstacles up to 350mm high, any higher becomes a hazard. Most flights of steps constitute a barrier, although horses may be able to manage single steps or multiple steps if far enough apart. Bridges and similar structures need to be two metres wide, of solid construction (no visible gaps) and sturdy (no movement).

Other users

Safety conflicts on shared use trails may arise where there is not enough room for walkers and cyclists to pass without risk of ‘spooking’ the horse (or frightening the other user). Surprises from behind (eg. a fast and silent bike) are a particular risk. Horizontal clearance, sight lines, and user behaviour are all factors in this issue. For these reasons, horse riders (like other recreationists) will be happier on an exclusive trail, and shared trails require certain characteristics. Horse faeces are another potential source of conflict.

4.4.2 Horse trails in the Ku-ring-gai environment

Taking into account their desirable features, the following limitations on the provision of horse trails are identified for the Ku-ring-gai Council area:

- only shorter trails are possible;
- only unladen horses need to be accommodated;
- horse faeces and trail stability need to be carefully managed;
- shared use with walking is more viable than with cycling;
- most walking tracks will be too steep, too narrow and/or with too many barriers to be effective or safe to share with horse riding without major re-design;
- shared use horse trails will generally only be viable on vehicle tracks because of clearance and safety issues;
- there may be potential for purpose-designed and designated horse trails (either horse only or shared use).

4.4.3 Horse trail classification

The SA horse trail classification has not been adopted any more widely and is certainly not ‘industry standard’. It uses the AS 2156.1 format for walking tracks as a starting point. The adapted version of the SA classification presented here is an interim classification only for Ku-ring-gai.

4.4.4 Recommendations

- The interim horse trail classification (4.4.3) will be applied and progressively improved.
- The potential for identifying dedicated horse trails and shared use horse trails will be explored where warranted by local demand.
- Potential horse trails will be assessed in relation to environmental, safety, user conflict, and suitability issues.
- Horse riding will generally be accommodated on selected vehicle trails.
- Identified horse trails will be managed to eliminate barriers.




	Easy (Class1) Green Circle 	Intermediate (Class 2) Purple square 	Advanced (Class 3) Black Diamond 
Overview	<p>Most suitable for novices.</p> <p>Most likely to be fire trails or wide single tracks with a gentle grade (not >10%) and a relatively obstacle-free, hardened surface.</p> <p>Likely to be multi-use. Frequent encounters with other users can be expected, including cyclists, walkers and runners.</p>	<p>Most suitable for riders with a moderate level of skill and fitness.</p> <p>Most likely to be a combination single trail and/or fire road with obstacles, variable surface, and a moderate slope.</p> <p>Likely to be multi-use. Encounters with other users can be expected, including cyclists, walkers and runners.</p>	<p>Challenging trails suitable for riders with a high level of skill, fitness, and basic navigation skills.</p> <p>Most likely to be a challenging single trail and/or fire road with many obstacles, variable surface, and steep sections.</p> <p>Possibly multi-use. Encounters with other users should be expected.</p>
Corridor	Min. 3m wide, 3.7m high	Min. 3m wide, 3.7m high	Min. 1.5m wide, 2.5m high
Tread Width	1.5m (short sections of narrower tread to 0.6m are acceptable at ground level but 1.5m is required at stirrup level)	1.5m (short sections of narrower tread to 0.6m are acceptable at ground level but 1.5m is required at stirrup level)	Min. 0.3m (1.5m recommended at stirrup height)
Surface	Generally natural and firm	Generally natural, and may include sections of rocky ground, sand, clay or gravel. Obstacles requiring dismounting such as rocks, logs and gates are likely.	Usually variable with sections of rock, sand, clay, gravel, etc. Obstacles may include challenging rocks, logs, creek fords.
Gradient	0-10% preferred Max. 10%	Max. 15% Max. sustained pitch 10% Max. outslope 4%	Max. 20% Max. sustained pitch 10%
Skill level	Novices with a basic level of skill and fitness, coupled with a trained, experienced horse	Intermediate riding skill & fitness, and a horse with some trail experience and training is recommended.	Higher level of skill & fitness. Significant riding experience essential.

Table 5: South Australian Horse Trail Classification System

5 A process for classifying trails for recreational uses (including shared uses)

5.1 Shared use classification guidelines

5.1.1 Observations

1. Vehicle trails are capable of sustaining all other uses. This point is qualified in section 4 where vehicle trails sit somewhere in the lower (or easier) trail classifications for other uses. Vehicle trails will more readily satisfy cyclists and horse riders at the novice to intermediate end of the ability spectrum (which is the majority of these users).












2. Regardless of the mode of use, the demand for more technical trails increases with the skill level of the user. It follows, owing to the specific nature of the technical ‘challenges’, that higher (or more difficult) classifications of trail within each use are less likely to be appropriate for shared use. For example, class 4 and 5 walking tracks will generally not be viable for horse riding or cycling. There will always be a small number of individuals who will attempt to use ‘inappropriate’ trails in the pursuit of ‘challenge’ but this number will remain small – particularly where there is an adequate supply of other trails to satisfy this demand.

5.1.2 Similarities













A study of the individual use classification systems shows that there are common features in varying levels of difficulty. This commonality is useful to bear in mind when classifying shared use trails. The following sections compare the technical aspects of each system and show the possible cross uses of trails.

It must be noted that this cross-classification does not consider the ‘desirability’ of such combinations – from the previous discussions it is probably best to keep the more difficult trails as single use. The problem resulting from this recommendation is that, where a trail network has developed from walking tracks, opportunities for advanced riders (cycle and horse) will have to be constructed specifically for such use. Note also at this point the sensibility on avoiding the use of trail length in determining difficulty – a 15km trail would be a long day for most walkers but less than two hours on a bike.











5.1.3 Cross-classification of Walking Tracks

Walk					
Cycle				Not appropriate	Not appropriate
Horse				Not appropriate	Not appropriate

5.1.4 Cross-classification of Bicycle Trails

Cycle					
Walk					
Horse				Not appropriate	Not appropriate

5.1.5 Cross-classification of Horse Trails

Horse			
Walk			 or 
Cycle			

5.1.6 Recommendations for shared use

- Only walking tracks of Class 1, 2, and 3 (AS 2156.1) and identified fire and management vehicle trails will be considered for bicycle use.
- Only walking tracks of Class 2 and Class 3 (AS 2156.1) and identified fire and management vehicle trails will be considered for horse use.
- Shared use will be considered on a trail-by-trail basis in relation to safety and conflict issues.

5.2 Shared use trail information and signage

Where trails are deemed appropriate for shared use, it is important to consider the information that will be both published and displayed at the trailhead. As discussed in section 3.3.2, one of the most important aspects of avoiding conflict is to provide all users with information about what other users they are likely to encounter.

It is also important to use a standard system so that users recognise and understand the information presented. For shared use trails, it is likely that the grading will vary between uses and this information must be unambiguous. The classification systems presented so far for walking, bicycle riding, and horse riding have varying degrees of 'standardisation' but need some modification for shared use trail signage. The simplest way to achieve this separation is to include a pictogram representing each activity within the grade symbol. The following sample sign demonstrates this distinction.

Blue Pool Track

Shared use – Walking, Bicycle, Horse



Easy Walk: 5km loop, 2 hours return



Easy Ride: 5km loop, 30 minutes return



Easy Ride: 5km loop, 1 hour return

Sample shared use trail sign

5.2.1 Recommendations for trail signage

- All trails will be graded, according to use, against the systems presented in section 4
- Published trail information will use the symbols presented in section 4, but modified to with appropriate pictograms to provide a activity specific context.

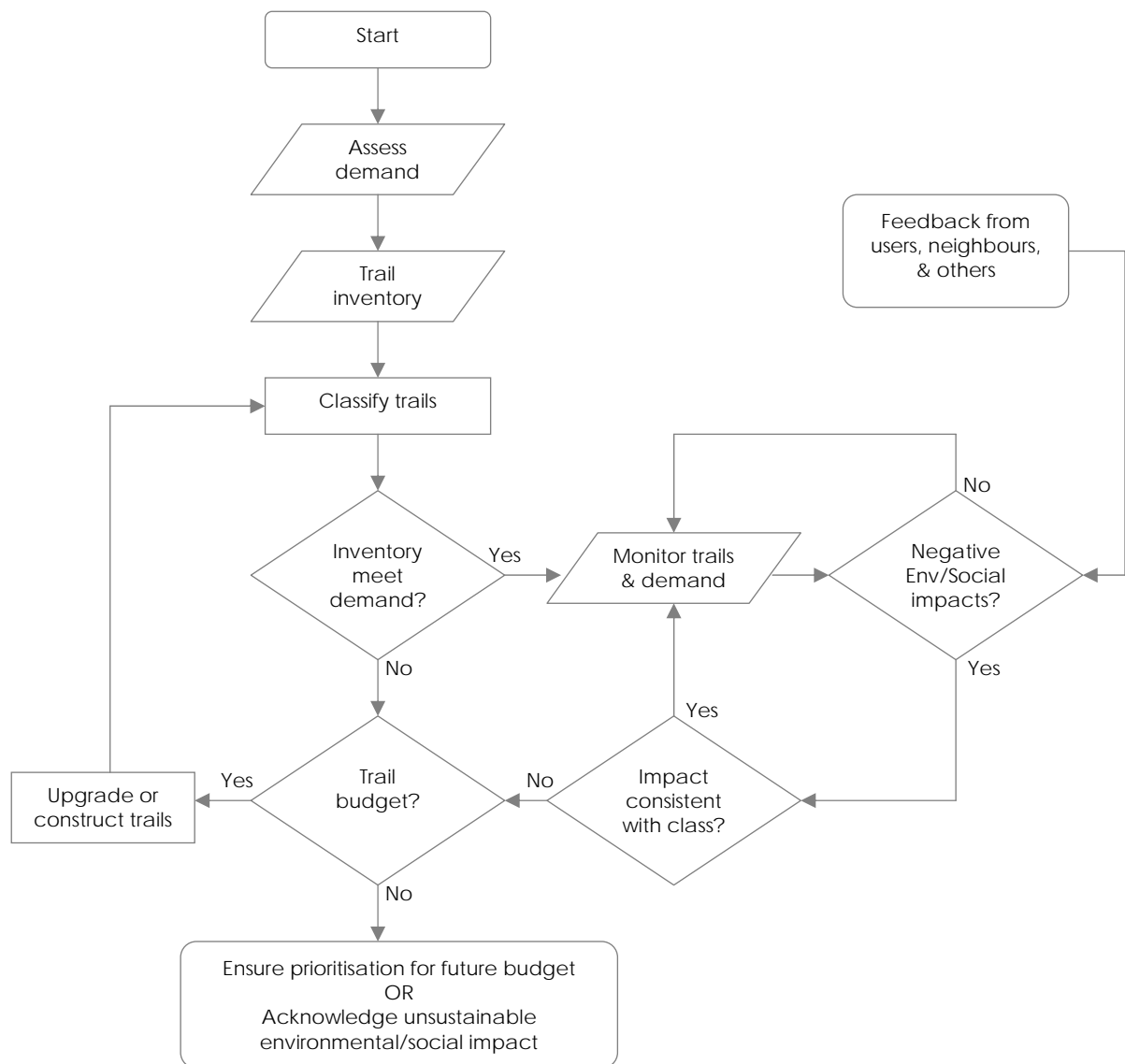
5.3 Summarised classification process

The following steps can be followed in deciding whether a specific trail should be designated for walking, cycling, horse riding, or a shared use combination:

1. Consider current usage and any safety or environmental issues arising.
2. Assess the trail's current construction and condition and the physical and financial capacity for ongoing maintenance, and improvement or re-design (i.e. what activities can the trail be successfully managed for?).
3. Identify trail capability in relation to the limitations and impacts of potential uses (i.e. is the trail both suited to an activity and capable of handling the activity?).
4. Classify the track according to the standards for applicable uses: walking track and/or mountain bike track and/or horse trail.
5. Take into account wider issues of supply and demand across the Council area and beyond.
6. Consider shared use issues of safety and conflict.
7. Decide what use or range of uses is appropriate.
8. Determine the desired future trail classification/standard for those uses.
9. Identify any resultant management requirements (i.e. increased maintenance, improved construction, removal/addition of barriers, signage, and enforcement).

(Note that this sequence does not include public consultation, but this is an important requirement for any process or decision relating to trail use or changed use. Public consultation should be incorporated at the appropriate stage or stages.)

5.4 Recreational trail management system



6 Relevant legislation

The following is a minimum list of legislation that may apply to any construction or maintenance work conducted in Ku-ring-gai council natural areas:

- Ku-ring-gai Planning Scheme Ordinance
- State Environmental Planning Policies
- Native Vegetation Conservation Act, 1995
- Threatened Species Conservation Act, 1997
- Environment Protection and Biodiversity Conservation Act, 1999
- National Parks and Wildlife Act, 1974
- Rivers and Foreshores Improvement Act, 1948
- Fisheries Management Act, 1994
- Soil Conservation Act, 1938
- Protection of the Environment Operations Act, 1997

7 References

Australian Transport Council (1999) *Australian Road Rules* National Road Transport Commission.
http://www.rta.nsw.gov.au/rulesregulations/downloads/roadraustr_dl1.html

Brown, I. & Associates (2005) *Draft Blue Mountains Walking Track Management Strategy: Walking Track Classification*. Elanus Word & Image, unpub. report for Blue Mountains City Council, NSW National Parks and Wildlife Service (Dept of Environment and Conservation) and Department of Lands.

Cressford, G.R. (2002), *Perception and Reality of Conflict: Walkers and Mountain Bikes on the Queen Charlotte Track in New Zealand* pp: 102-108 in: Arnberger, A; Brandenburg, C. and Muhar, A. (eds.). *Monitoring and Management of Visitor Flows in Recreational and Protected Areas*. Proceedings of the Conference held at Bodenkultur University Vienna, Austria, January 30 – February 02, 2002. Institute for Landscape Architecture and Landscape Management, Bodenkultur University, Vienna. <http://www.imba.com/resources/science/cessford.pdf>

IMBA (2004) *Trail Solutions: IMBA's Guide to Building Sweet Singletrack*, International Mountain Bicycling Association, Boulder, USA

NSW DLWC (1994), *Guidelines for the Planning, Construction and Maintenance of tracks*, NSW Department of Land and Water Conservation.
www.dlwc.nsw.gov.au/care/soil/soil_pubs/pdfs/guidelines_tracks.pdf

Moore, R (1994), *Conflicts on Multiple-use Trails*, US Department of Transportation Federal Highway Administration. http://www.imba.com/resources/bike_management/conflictsfull.html

NSW RFS (2003) Bushfire Coordinating Committee - Policy No. 1/03 Fire Trails. NSW Rural Fire Service, Homebush Bay NSW.
<http://www.rfs.nsw.gov.au/index.cfm?cid=97&CFID=1233541&CFTOKEN=54515369#>

Roberts, C. (2005) *Bicentennial National Trail: Draft guidelines for construction and maintenance*. Bicentennial Trail Co-ordinator.

South Australian Trails Co-ordinating Committee (2005) *Horse Trail Classifications*

Standards Australia (2001) *AS 2156.1-2001 Walking tracks – Classification and signage*.

United States National Parks Service (2005) *Big South Fork Final General Management Plan and Environmental Impact Statement: Road and trail classifications and standards*
<http://www.nps.gov/biso/gmp/rtstds.pdf>

**Spring into Action 2005-2006:
Secret Spots of Ku-ring-gai**

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Introduction

Ku-ring-gai Council is offering a range of walks and activities to unveil some of the little known natural secrets of Ku-ring-gai. These walks are of varying difficulty but will all be accompanied by a qualified Guide followed by a bush tucker morning tea. Each walk costs \$5.50 per person and is payable when booking the walk.

Yabby's galore

In a pond known but to a few intrepid souls lives a population of hardy Yabbies. These cunning crustaceans will be coaxed out of their watery home, inspected and returned by the people fortunate enough to participate in this activity. Relive childhood memories while enjoying a walk through bushland whilst marvelling that this adventure takes place in the midst of Australia's premier city

Difficulty:	Walk: Easy
Date:	Monday 30 January 2006
Time:	10am-11.30am
Meeting place:	Visitor Centre at the Ku-ring-gai Wildflower Garden
Cost:	\$5.50
Inclusions:	Morning tea, tour
Bookings Close:	Friday 27 January 2006

Browns Field

Millions of years ago Campbell Drive was the scene of a volcanic extrusion. This violent geological event has an unusual legacy, the only genuine piece of rainforest in the Ku-ring-gai local government area. Walk amongst the primeval Cabbage tree palms and the giant Sassafras with a trained guide who will attempt to convey the majesty of this location without using the words magnificent, stupendous, or spectacular.

After exploring this unique rainforest there will be an introduction to the esoteric art of Qi. While underneath the soaring canopy of rainforest giants you will get the opportunity to experience the wonders of this ancient therapy, in a fusion of East meets downunder.

Difficulty:	Track: Moderate
Date:	Wed 22 February 2006
Time:	10.00am – 11.30am
Meeting place:	Browns Field Oval off Campbell Drive
Cost:	\$5.50
Inclusions:	Morning tea, Qi, tour
Bookings Close:	Thursday 23 February 2006

The Coppins

Step into a time machine and travel back to the magnificent Turpentine Forest that grew from St Ives to the Lane Cove River. Visit a very special fragment of this once menacing and magnificent forest that is hidden away for all but a few lucky St Ives residents.

After exploring this forest there will be an introduction to the esoteric art of Qi. While enveloped by gnarled forest giants you will have the opportunity to experience the wonders of this ancient therapy, in a fusion of East meets downunder.

Difficulty:	Walk: Easy
Date:	Wednesday 22 March 2006
Time:	10am-11.30am
Meeting place:	Stanley Street and Gillot Way St Ives
Cost:	\$5.50
Inclusions:	Morning tea, Qi, tour
Bookings Close:	Monday 20 March 2006

Bluegum Magic

30m timber obelisks in one of the rarest plant communities in Australia. This walk through one of Ku-ring-gai's last stands of Bluegums is an experience that will feed the soul and give you an appreciation of the ecology of the area.

After the walk a local exponent of Aikido will demonstrate to the group the power of this little known art and release the inner Steven Segal. This is a guaranteed gentle introduction to this powerful martial art and is recommended for the curious or the potential student.

Difficulty:	Track: Moderate
Date:	Friday 28 April 2006
Time:	10.00am – 11.30am
Meeting place:	Warragul Rd Scout hall
Cost:	\$5.50
Inclusions:	Morning tea, Aikido, tour
Bookings Close:	Tuesday 26 April 2006

Shangri'la

A lost waterfall reminiscent of the one featured in the Last of the Mohicans, a natural refuge that will excite the imagination, is our target for this walk. Scramble down a steep embankment and walk through Coral fern before arriving at our secret destination. This walk through Hawkesbury Sandstone country will remind us of the natural beauty of Sydney bushland as well as the secrets that still can surprise and excite.

Difficulty	Track: Hard
Date:	Tuesday 30 May 2006
Time:	10.00am-11.30am
Meeting place:	Boundary and Lister Sts Wahroonga
Cost:	\$5.50
Inclusions:	Morning tea, tour
Bookings Close:	Friday 26 May 2006

Twin Creeks

In the middle of Turrumurra lies an oasis of wildflowers easily experienced via a track between Howson Oval and Mitchell Cres. Not only will you experience the magic of the native bush but Ku-ring-gai's outspoken gardener Peter Clarke, (a columnist who wrote for the *'Ku-ring-gai Observer'* for 6 years) will give invaluable tips on how to recreate this floral magic in your own garden.

This walk is perfect for the gardening enthusiast who wants to learn in the greatest classroom Ku-ring-gai has to offer – the Hawkesbury sandstone lecture room.

After the walk there will be an introduction to an fascinating Eastern discipline that will liberate the Qi within.

Difficulty:	Walk: Easy
Date:	Monday 26 June 2006
Time:	10am-11.30am
Meeting place:	Mitchell Cres adjacent to the oval
Cost:	\$5.50
Inclusions:	Morning tea, Qi, tour
Bookings Close:	Friday 23 June 2006

Habitat Ku-ring-gai Seniors Walks Program

Ku-ring-gai Council's Open Space Department is offering a new walks program, *Habitat Ku-ring-gai* for Seniors at the Ku-ring-gai Wildflower Garden in St Ives.

Bushland Education Centre staff at the Garden are offering leisurely paced bush walks. Walks are up to an hour in duration and are offered in the morning or afternoon. The walks are ranger lead and will focus on the beauty and diversity of our local natural heritage. The program will be an opportunity for elderly residents to have some outdoor exercise and gain additional knowledge of our native flora and fauna.

An optional morning or afternoon tea can also be provided to finish a relaxing visit to the Garden.

Difficulty:	Walk: Easy
Date:	All year
Time	Variable, mornings and afternoons
Meeting place:	Visitor Centre at the Ku-ring-gai Wildflower Garden
Cost:	\$5.50 with morning or afternoon tea \$4.50 without
Inclusions:	Optional morning tea, tour
Bookings Close:	Please ring 9440 8609 for bookings






Grandparents, Grandchildren and School Holidays!

Looking for something to do locally with your grandchildren during the school holidays? The *People in Parks* program at the Ku-ring-gai Wildflower Garden in St Ives, involves a variety of nature based activities for children age 4 to 12 years. This is a great way to keep active grandchildren amused, (.....psst and take the sting out of them) while spending 'quality' time with the little ones.

Activities are 1.5 to 2 hours in duration and usually involve a bushwalk, environmental games and a bush craft activity. The activities are designed to educate participants about our local natural heritage in a fun, hands-on and positive manner.

Difficulty:	Walk Easy to Track Moderate
Date:	All school holidays
Time:	Variable
Meeting place:	Visitor Centre at the Ku-ring-gai Wildflower Garden
Cost:	\$4.50
Inclusions:	Tour
Bookings Close:	Please ring 9440 8552 for bookings

Walking Track Classification System

Grade	AS2156.1 Class	Description	Pictogram
Path: easy	1	All access, hard-surfaced track with no steps. Suitable for wheelchairs. High safety level. Suitable for all ages and fitness levels.	
Walk: easy	2	Well-surfaced track with some steps and few difficulties. Not suitable for wheelchairs. High safety level. Suitable for all ages, but take care with children.	
Track: moderate	3	A distinct track with steep and rough sections, steps and some difficulties. Moderate safety level. Suitable for people who walk occasionally.	
Track: hard	4	A distinct track with long steep and rough sections, many steps and stairs and/or frequent difficulties. Low to moderate safety level. Suitable for people who walk regularly. Visitors with heart or breathing difficulties should not attempt these tracks.	
Route: hard	5	Rough, unformed track. May be steep with frequent difficulties. Minimal signage and low safety level. Experienced bushwalkers only. Navigational skills and high level of fitness required.	

Please wear sensible shoes and a hat.

Please care for the environment and bring your own cup/s however cups will be provided for those participants who are unable to supply their own. Morning tea will consist of tea (including Lemon Myrtle) or coffee as well as bush tucker cake.

Children over 5 may attend walks that are designated Easy to Medium, however they must be under parental supervision.

Council accepts no responsibility for any accidents or injuries that may occur.

For bookings and in the event of heavy rain, please ring 9424 0933 to check whether the activity is still on. In case of a cancellation you will receive a refund or you can book into an alternate activity.

APPLICATION FOR REZONING 3 TO 5 WATER STREET (PROUILLE SCHOOL), 33 TO 41 BILLYARD AVENUE (HOLY NAME CHURCH) AND 39 CHILTON PARADE, WAHROONGA (CONVENT)

EXECUTIVE SUMMARY

PURPOSE OF REPORT:	To inform Council of further information provided and to consider the preparation of a Draft Local Environmental Plan for the rezoning of Church / School / Convent lands at 3 to 5 Water Street (Prouille School), 33 to 41 Billyard Avenue (Holy Name Church and Seminary) and 39 Chilton Parade, Wahroonga (Convent).
BACKGROUND:	On 14 June 2005 Council considered the planning report dated 24 May 2005 – (copy attached). This recommended that Council prepare a Draft Local Environmental Plan to initiate the rezoning of the subject lands to Residential 2(c). Council resolved to defer the matter pending a site inspection of the site being undertaken by Councillors. The site was inspected on 30 July 2005. At this time some further additional information was requested by Councillors which has now been received and is discussed in this report.
COMMENTS:	The information provided responds to the matters raised by Council. It is not considered that any matters arise which change the recommendation from that presented in the planning report of 24 May 2005. The preparation of a Draft Local Environmental Plan can be supported.
RECOMMENDATION:	That Council resolve to prepare a Draft Local Environmental Plan to rezone the subject lands to Residential 2(c) and place it on public exhibition in accordance with statutory requirements.

PURPOSE OF REPORT

To inform Council of further information provided and to consider the preparation of a Draft Local Environmental Plan for the rezoning of Church / School / Convent lands at 3 to 5 Water Street (Prouille School), 33 to 41 Billyard Avenue (Holy Name Church and Seminary) and 39 Chilton Parade, Wahroonga (Convent).

BACKGROUND

1. Council on 14 June 2005 gave consideration to the planning report which addressed the proposed rezoning of the subject lands to Residential 2(c). The application sought to:

Rezone 39 Chilton Parade (Convent) to Residential 2(c) to permit a school use to accommodate the relocation of Prouille School; rezone the "Church" zoned lands at 33-41 Billyard Avenue to Residential 2(c) to permit use for school and church purposes (allowing school use of the church car park areas etc.); rezone part of the "Church" land and all "Seminary" zoned land at 33-41 Billyard Avenue to Residential 2(c) to permit residential subdivision (conceptual proposal for 7 allotments); rezone Prouille School lands from Special Uses A "School" to permit future residential development under a 2(c) zone.

2. Council resolved to defer the matter to a site inspection. This was held on 30 July 2005. At the site inspection certain additional information was requested by Councillors. This included:
 - a. Provision of information identifying the heritage items on the lands adjacent to the subject lands.
 - b. Information on the size of properties surrounding both the Prouille School and Billyard Avenue / Chilton Parade sites.
 - c. Requested that trees on the Prouille School site be surveyed and plotted on a site plan.
 - d. Requested advice as to the width of the battleaxe handle east of No 35 Chilton Parade which accesses the "seminary" land.
 - e. Requested advice as to the width of the battleaxe handle to Billyard Avenue at the eastern end of the "church" zoned land.
 - f. Heritage status of the Water Street old school building.

COMMENTS

Site Inspection

The on-site inspection was undertaken over a period of 1½ hours. Both the Water Street site (Prouille School) and Billyard Avenue / Chilton Parade site (church / convent) were inspected. The inspection was attended by Councillors, staff, school / church representatives, school parents and residents. (Attachment G is a summary note of the site inspection.)

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At the inspection Councillors raised issues and requested certain information as previously listed. In respect of these requests the following comments are made.

- a. It would be possible for future subdivision of Prouille School to achieve allotments conforming to Ku-ring-gai Planning Scheme Ordinance provisions. It would be a question of design as to how many allotments would be achieved.
- b. The heritage items located on lands adjacent to the application have been mapped and are provided for information (see **Attachment A**).
- c. Information on the size of surrounding properties has also been provided in Attachment A. Adjoining allotments and those in close proximity to the subject lands, have their site areas illustrated for Councillors information.
- d. The applicant has surveyed the Prouille School site. The survey plan locates all buildings and trees and can be viewed on Council's file. (The Church / convent site was previously surveyed and information submitted with the application.)
- e. The width of the battleaxe handle east of No 35 Chilton Parade which accesses the "seminary" land is 6.1 metres. (There are 5 smaller trees standing on the eastern boundary of the handle.)
- f. The width of the battleaxe handle to Billyard Avenue at the eastern end of the "church" zoned land is 12.185 metres. (There are 2 large trees at the western boundary of the handle.)
- g. The old Prouille School building at 5 Water Street is not a gazetted heritage item. The applicant undertook to investigate the heritage standing of the building. A heritage assessment has been provided (see **Attachment B**).

There was some discussion by residents at the site inspection. Particular observations and concerns were raised including:

- Future traffic concerns in Chilton Parade.
- The narrow width of Chilton Parade.
- Pedestrian conflicts in Chilton Parade when used by Knox Grammar students and general lack of footpath.
- Existing and potential future stormwater issues including boundary creek lines.
- Questioned whether there was a zoning specifically for residential use which excluded schools. (It was explained that there was no such specific zone and that DIPNR is requiring broader based zones in LEPs.)

Consultants Reports

Since the site inspection the applicant has provided additional information relevant to the rezoning application as follows:

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1. Site survey and plotting of trees on Prouille School site (3-5 Water Street) (see **Attachment F**).
2. Heritage assessment of Prouille School administration building at 5 Water Street (see **Attachment B**).
3. Vehicle and pedestrian traffic survey of Chilton Parade (see **Attachment C**).

Planning Comments

The additional information provided does not otherwise impact on the original planning assessment of the application or recommendation as previously considered by Council.

The survey information provided does not give rise to any concern as to the acceptability of 2(c) rezoning.

The heritage assessment acknowledges the heritage values of the school administration building. This does not argue that its rezoning is inappropriate. Council's Heritage Conservation Officer in his comments (separately included) concurs with this conclusion.

The existing vehicle and pedestrian movements are demonstrated by the pedestrian / traffic survey as very low in Chilton Parade.

CONSULTATION

Prior to the site inspection Council wrote to 157 adjoining and adjacent owners/residents advising of the rezoning application and of Council's proposed inspection. It is to be noted this was not a statutory notification/consultation requirement.

Public Submissions

- Following the site inspection Council received 14 submissions in response to the rezoning application. Of these submissions 10 were in support of the rezoning proposal. Reasons for support included that the rezoning would allow for future new Prouille School development whilst one submission recognised the need for removal of the old zoning to allow for new development (not necessarily a school).
- The 4 submissions of objection were focussed on the potential for new school development. Traffic and amenity issues were raised including the narrowness of Chilton Parade. One objection included reference to a lack of footpaths and runoff/stormwater issues.

A further objection was made on behalf of the "Billyard and Chilton Residents Action Group". This objection expressed the view that a school development should be first demonstrated as suited to the site before rezoning.

Note: Submissions are included in **Attachment H**.

Comments on Submissions

- The grounds for support so as to permit consideration for new school development can be understood. However the merits of a school development for the site are not under assessment. Other uses of a special nature are also permissible (eg. churches, convents, hospitals etc) as well as dwelling houses which are the most common use.
- The grounds for objection which are based on the unsuitability of the site for a school relate to this singular purpose. It is for the future development application assessment process to determine whether a particular proposed use is appropriate for the site. This would be considered at the time in the light of detailed plans and full information on the proposal. The proposed zoning will not restrict the site use to that of a school. Residential development (dwelling houses) is the common development form for the zoning in the area. There has been no fundamental objection to the rezoning other than that it would permit school development. The purpose of any rezoning from Councils perspective should be to facilitate replacement of obsolete zonings with a zone which is in keeping with the area.

Notification of Council Meeting

The adjoining and adjacent owners / residents originally notified of the site inspection (and those who made submissions) have been informed of Council's meeting of 6 December 2005 to consider the rezoning application.

FINANCIAL CONSIDERATIONS

The financial considerations specific to the matter to date have been the use of staff resources. The preparation of any proposed draft Local Environmental Plan and its processing would involve the costs of:

1. Staff resources.
2. Advertising.

These costs are compensated for by the rezoning fees.

There are potentially future Section 94 contribution issues associated with the rezoning in the event of future residential subdivision and the creation of new allotments.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Council's Heritage Conservation Officer has reviewed the applicant's heritage assessment of the Prouille School administration building (5 Water Street) and provided the following comment.

"The "assessment" is not done to any accepted standard. The author is not included on the Heritage Office list of recognised heritage consultants.

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Despite the above, there is some useful information in the report that establishes the building has significance. The conclusion is that it has local heritage significance and I agree with that conclusion.

It appears that institutional use is a major part of its history however the architectural significance will be retained if conserved. Rezoning is not a problem. Returning it to residential use may be positive if future renovation/conservation occurred. The obvious problem is that the land is very valuable and future owners may not wish to retain it.

Council should include the property in its consideration when the 154 properties currently being reviewed is included in a draft LEP. The curtilage would need to be carefully considered."

SUMMARY

Council has had the opportunity to inspect the subject lands and view them within the context of the surrounds. Matters arising from the site inspection concerning further information and comments have been discussed within this report. There is nothing that has arisen which is considered to warrant any change in the recommendation of the original planning report of 24 May 2005 to prepare and exhibit a Draft LEP.

The situation remains that the convent and seminary uses and their respective zonings are no longer necessary. These sites remain largely undeveloped. The Prouille School does not operate satisfactorily on its site and is disadvantaged by its age of facilities and site configuration. Therefore the need for rationalisation of the use of these lands can be recognised. A rezoning of all lands to Residential 2(c) as sought by the application is consistent with the zoning of the lands of the residential surrounds.

Technical assessment of the application raises issues with some aspects of the proposed uses discussed in the rezoning application. This includes the proposal for a school on the "convent" site in combination with the adjacent church. It has not been demonstrated that a school is necessarily an appropriate future development for the site. Support for the rezoning application, however, does not depend on the suitability of a proposed school. The primary use under a 2(c) zoning is for detached dwelling-house development. A school is one of a range of special uses which are permissible under a 2(c) zoning. The 2(c) zoning is the zoning which is consistent with the locality.

This rezoning would remove the obsolete and restricted special uses zones applying to the subject lands and provide alternatives for their residential development which is consistent with the locality. Any proposal for a non residential use, such as a school, would have to be considered on its merits with a development application.

The preparation of a Draft Local Environmental Plan to rezone the subject lands to Residential 2(c) is recommended.

RECOMMENDATION

- A. That a Draft Local Environmental Plan for Church lands at 3-5 Water Street, 33-41 Billyard Avenue and 39 Chilton Parade, Wahroonga to rezone the lands 2(c) be prepared.
- B. That the Department of Planning be advised of Council's decision to prepare a Draft Local Environmental Plan in accordance with Section 54 of the Environmental Planning and Assessment Act 1979.
- C. That when prepared, the Draft Local Environmental Plan be placed on public exhibition in accordance with statutory requirements for public comment.
- D. That a report be brought back to Council at the end of the exhibition period for Council's consideration of submissions.
- E. That the original school administration building at 5 Water Street, Wahroonga be included in the heritage review of identified sites now being undertaken by consultants for Council.

Rod Starr
Senior Urban Planner

Antony Fabbro
Manager Urban Planning

Steven Head
Director Open Space &
Planning

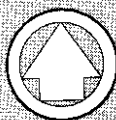
Attachments:

- Attachment A - Map showing heritage items, plus allotment sizes of lands adjacent to subject site - 549868**
- Attachment B - Heritage Assessment of 5 Water Street, Wahroonga - 549858**
- Attachment C - Vehicle and pedestrian traffic survey of Chilton Parade - 549858**
- Attachment D - Original Planning Report dated 24 May 2005 - 502894**
- Attachment E - Original attachments to report dated 24 May 2005 - 502897**
- Attachment F - Survey of Prouille School Site - 552227**
- Attachment G - Site Inspection Summary Note - 517831**
- Attachment H - Public submissions - 556890.**

LOCATION SKETCH

ATTACHMENT A

ILLUSTRATING HERITAGE ITEMS AND ADJACENT LOT SIZES



Scale : 1:4000

01-11-2005



SUBJECT LAND



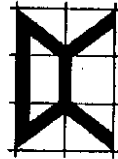
HERITAGE ITEMS

2500

SITE AREA IN SQ METRES



DESIGNS CONCORDANT P/L



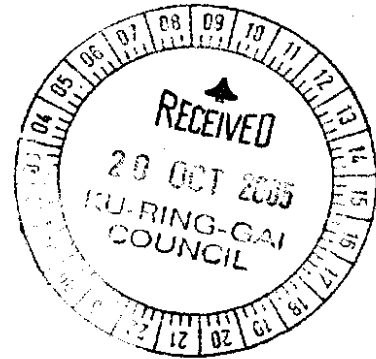
ARCHITECTURE + COLOUR SCHEMES

A.B.N. 20 003 096 026

LOT 2593 BUNDALEER STREET

BELROSE 2085 TEL & FAX 9486 3373

Donal Carr B.Arch FRAIA Director Reg.No. # 2385



HERITAGE ASSESSMENT

Federation bungalow

Now the administration building in the grounds of
Prouille Primary School
5 Water Street, Wahroonga

Trustees Catholic Church Diocese of Broken Bay

September 2005

HERITAGE ASSESSMENT

A single storey Federation bungalow, now the Administration Building in the grounds of Prouille Primary School, 5 Water Street, Wairoa.

Former known names: 'Dinorah', 'The Whare' and 'Birnam'.

Report prepared for the owner: Trustees Catholic Church Diocese of Broken Bay.

1. THE ITEM

a) Brief Architectural Description (Photos E – H)

- Low non original brick fence
- House – steep pitched roof, lichen covered terracotta tiles, with reduced pitch over verandas. Painted banded brick on a sandstone base. Timber double hung windows and verandas on north, east and west facades.
- External alterations – West veranda enclosed, western addition, end of south wing shortened and chimneys missing.
- Internal alterations – later timber and glass partition walls and some suspended grid ceilings. Joinery painted.
- Landscaping – A fringe of trees and shrubs on the street frontage, a chest high hedge in front of north veranda and cropped shrubs and a deciduous tree on east side. Driveway in front with two entrances with parking and lawn on east side.

b) Setting (Photos A – D)

Water Street is a picturesque street fringed by 20 metre high deciduous trees spaced seven metres apart, which arch over the roadway. Large trees behind the street boundary reinforce the shadows. The earliest residences date from the early 1890's on wide, deep blocks. In 1903 there were only six houses in the whole street, with this number doubling by 1909. The street boasts picket fences behind which grow mature hedges and flowering shrubs.

c) Historical Outline

Title reference Vol.1090, fol 131.

Subdivision: Vanceville Estate Sec.2 DP 2914 Lot 1

- | | |
|----------|---|
| 1893 | Original purchase – Horace M. Cullen ¹ |
| c.1896 | Construction of residence for J.A Bennett ¹ |
| 1902 -06 | Treleaven Walter MA BSc Preparatory School "Dinorah" ² |

(1906 Two storied "Wairoa" constructed for Keith G. Johnson, no.3 (to the west) ²
(1910 Timber classroom building already in place to east of "Dinorah.") Photo.

- | | |
|-------------|--|
| 1906 – 1916 | Wairoa College Walter Treleaven Principal ² |
| 1916 - 1924 | Robinson, Harry F. "The Whare" ² ('Whare' = "a Maori hut.") ⁴ |
| 1925 - 1926 | Edwards, A. T. "The Whare" ² |
| 1927 | Edwards, Adrian Tollemache Solicitor "Birnam" £2500. ⁵ |
| 1927 – 1931 | Edwards, A. T. "Birnam" ² |
| 1940 | Edwards, Adrian T. Solicitor 3R 30P 127' x 336' Improved value £2500. "Birnam". ⁵ |

(1950 Dominican Sisters founded a new convent community in a large two storied residence and former school at 23 Cleveland Street on 6 January, immediately opening a school with 26 pupils, including 3 boarders. This residence appears to have been constructed prior to 1902)³

- 1950 Water Street site, purchased by the Dominican Sisters in July, for school use.³ (23 Cleveland Street, adjoins the rear of this property)
- (1956 "Wairoa" at 3 Water Street, purchased by the school for extra accommodation)⁵
 (1959 New school building constructed on rear of adjoining 23 Cleveland Street site, provided a small hall and boarding facilities.)³
 (1962 Further classrooms added. School now includes a Junior secondary section.)³
 (1964 Wyndham Scheme alters requirements and the Junior Secondary section and the boarding section is closed.)³
 (1965 Status of school changed from a private school to a Parish school of the Holy Name Parish, Wairoa.)
 (1973 Additional classrooms constructed on the site).³
- c1973 "Dinorah" use changed to School Administration and staff use.
 1989 The Dominican Sisters administration of the school ends.
- (c1990 No. 3 Water Street demolished with this area now a grassed playground.)⁷
 (1997 Portable classrooms erected on the east boundary at rear of site).⁹
- 2005 Plans by the Parish Prouille Community and the Broken Bay Diocese to relocate the school to land adjacent to the Holy Name Church in Billyard Avenue.

The current zoning is Special Uses – School.

d) Changes to the bungalow

Exterior major

Removal of the three tall rough cast plaster and brick chimneys.
 Brick and tile addition to the present day staffroom (west elevation). (Photo G)
 Enclosure, lengthening and deepening of west veranda (Photo G)
 Brickwork painted. Tuck pointing noted in two joints within brick band. (Photo I)
 South wing foreshortened with loss of end room (washing room?) (Photo G)

Exterior minor

Room added at south end of east veranda
 North and east veranda balustrade replaced.
 Shutters missing from front gable windows. Most hinges still present. (Photo I)

Interior major

Staff room extension as above.
 Ceilings covered by lower suspended ceilings in Bedroom No.1 (Principal's office), hallways and part staffroom. Original ceilings believed to be present above. (Photo N)
 Some new wall openings.
 Later brick splay fireplace in Drawing Room (office). (Photo L)
 Recent cornice in Eating Room (Reception)

Interior minor

Miscellaneous timber and glass office partitions.
 Shower room annexed from old kitchen.
 Fireplace covered in Reception.
 Joinery painted (formerly stained). (Photo N)

e) Dilapidations

No evidence of cracking was noted in the brickwork or in internal plaster finishes. All in all, the former residence appears to be structurally sound, although some rooms could do with some freshening up.

f) Landscaping

The need to provide open space and later on- site parking for the school has meant that the some original garden areas and lawn have had to give way to hard surfaces. Note that as early as 1910, the site had been cleared on the east side for a timber classroom building and lawn. Similarly the original backdrop of natural vegetation has been removed over the years to make way for classroom blocks. Fortunately the gardens and trees close to the street and on the curtilage of the site have been retained. (Photo C)

2. THE DESIGN

a) Attributed Architect

Seven residences in Water Street are attributed to Howard Joseland including no. 5, according to Zeny Edwards in her book Six of the Best:

- | | |
|-----------------|--|
| #1 Water Street | c.1894 "Westholme," built for J.A. Bennett |
| #5 | 1896 "Dinorah," built for J. A. Bennett and occupied by Walter Treleaven, Principal. |
| #2 | c.1904 St. Andrew's Anglican Church and Rectory. |
| #3 | 1906 "Wairoa," built for J. A. Bennett and leased by Keith G. Johnson. (Old print) |
| #7 | 1907 "Carnasie," built for Mrs. F. Icely. (Photo A) |
| #35 | c1898 "Rippon Grange" (alts. 1905) built for F. G. Sargood. |
| #36 | Residence |
- (Note: Some dates have been changed to reflect Sands information)

Richard George Howard Joseland was born on 14th January 1860 in England. Educated at private schools, he chose architecture as his field of study. In late 1886, when Joseland's health deteriorated through overwork, he was advised by his doctor to leave England and live in a drier, warmer climate. He migrated to Australia via New Zealand, arriving in Sydney in August 1888 at the height of the centenary celebrations.⁶

In February 1889, Joseland met Walter Vernon, who was already a well respected and prominent Architect. Together they submitted a design for a model suburb, to be called Kensington, which won first prize. Publicity from this and other competitions boosted his reputation as a talented architect. In 1890, when Vernon was appointed Government Architect, he bequeathed to Joseland his clients and private commissions.⁶

On Monday 8th August 1892, he read a paper on Domestic Architecture before the Sydney Architectural Association, which was fully transcribed in the August 13, 1892 issue of Australasian Builder & Contractors' News. In the paper, he exhibits a masterful understanding of the development of Australian architecture. His most frequent quote from this paper, refers to the period of architecture that followed the Georgian and Gothic Revivalist period, in boom times, when -

"the bounds of Art in building were overstepped in the craze to produce new wonders..... As an outcome of all this, we see hideous sketches of terraces and wildernesses of villas in painted brick or cement, decked up with meaningless ironwork and atrocious ornaments."⁷

The paper continues to describe the failings of current domestic architecture and expounds at length his philosophy in regard to room juxtaposition, design and colour.

Joseland strongly recommends the use of external brick cavity walls.....(which) "enables the natural color of the bricks to be seen, which is far preferable to disfiguring them with paint, as has hitherto been the custom." He deplores the use of "meaningless plaster ornaments and incised work, flabby carving and other abominations", (so that more attention is) "paid to the essentials of building." ⁷

In 1903, Joseland took Hugh Vernon into the partnership, which lasted eleven years. During this time the firm of Joseland and Vernon were responsible for the design and construction of over thirty large residences, and other commissions including Peapes Store in George Street and St. Andrews Church on the corner of Water and Cleveland Streets, Wahroonga. ⁶

Joseland's practice relied significantly on designs for domestic buildings. His architecture predominated on the North Shore where he became popular among the well heeled residents. He himself lived for 22 years at 41 Burns Road, Wahroonga. Joseland helped found the Sydney Architectural Association in 1891 and was elected its President in 1893. ⁶

At the end of 1919, Joseland took into partnership Frederick Glynn Gilling, a newcomer from England, who reminded him of himself when he started out.

Joseland retired in 1929, selling out to Gilling and died at Darlinghurst in 1930. ⁶

b) Compelling pointers to Howard Joseland as architect

Without the certainty of clear documentary evidence, that the design of "Dinorah" was from the drawing office of Howard Joseland, one needs to look to the design of the bungalow and the philosophy of the attributed architect and determine if there is agreement or contradiction;

- i) The bungalow has a Federation form with very restrained decoration. A c1960 photo taken prior to the painting of the brickwork, shows that a darker brick was used for a three course band at sill level, the sill bricks, the curved arch bricks above the windows and for a string course above the windows and the basket weave coursing above that on the front gable end. The brick quoins were also the darker brick. The sills are expressed but with almost no projections. Two tuck pointed joints separate the band of dark bricks
Two shaped timber brackets, support the extended wall plates, which support the gable rafters. The veranda posts have a pair of routed grooves high up.

(1960 photo, original at Gordon Library and photos I & K)

This palate of decoration very much aligns with Joseland's philosophy that:

"The whole basis of good taste in architecture is that everything should have a reason for its existence..... Ornamentation stuck on for the sake of itself and not adorn some feature... columns strong enough to carry six stories do nothing..... All those errors and many others are in bad taste because there is no reason for them." ⁸

- ii) Joseland's own home "Malvern" at 41 Burns Road is in the next street. Though larger in scale, the street elevation has some close similarities to "Dinorah": The front gable and the verandas on both sides. The use of basket weave brickwork on the gable end, the window design and proportion; the use of window shutters, the timber support for wall plate extensions and the chimneys all have a close resemblance. (Refer 'Malvern' elevation and Photo F)
- iii) The plan of 'Malvern' especially in the north west quadrant is almost identical to "Dinorah" especially if one deletes the box room. Compare the location of the front door, bedroom no1 and its fireplace, the dressing room with its two doors

and window as they relate to the west veranda and bathroom. Compare the location of the Drawing room with its bay window and fireplace, the Eating room and west bedroom. These planning similarities are particularly compelling. (Refer 'Malvern' ground floor plan -- esp. bottom right and "Dinorah" plan)

Conclusion: It is my belief that "Dinorah" has all the hallmarks of a of Howard Joseland design.

3. ASSESSMENT OF SIGNIFICANCE

a) Ku-ring- gai Council Viewpoint

No. 5 Water Street ("Dinorah") was identified in 2000 as a Potential Heritage Item during a limited review carried out in conjunction with the Residential Strategy. A consultant has been commissioned to review about 150 of the 450 potential items. Items owned by schools and churches are thought not to be part of the current review. (Paul Dignam)

b) The Nature of Significance

i) Aesthetic Significance

"Dinorah" stands out as a scarce example of early restrained Federation architecture. Apparently built to be leased, the bungalow is almost devoid of meaningless timber decoration. Early photos, prior to painting, show brickwork decoration through the use of colour rather than texture or projections. The bungalow is one of a group of six early works attributed to architect Howard Joseland, who set up his drawing office in Sydney in 1888.

ii) Social Significance

"Dinorah" was built in 1896 for J.A. Bennett and occupied by Walter Treleaven, Principal. The school of the same name opened there in 1902 and after 1905 continued as Wahroonga College until 1916. In 1950, "Dinorah" was purchased by the Dominican Sisters and opened the school there that has continued to this day. Wahroonga is quite unusual due to the number of parochial schools, convents and churches located there.

c) Statement of Significance

"Dinorah" is a comparative intact example of an early Federation bungalow that displays unusual restraint in detailing and decoration. It has been identified with school education from its early years and in its later years. It appears to be an early work of the notable architect Howard Joseland and is part of a group of five bungalows and a church, attributed to him.

4. ENDVIEW

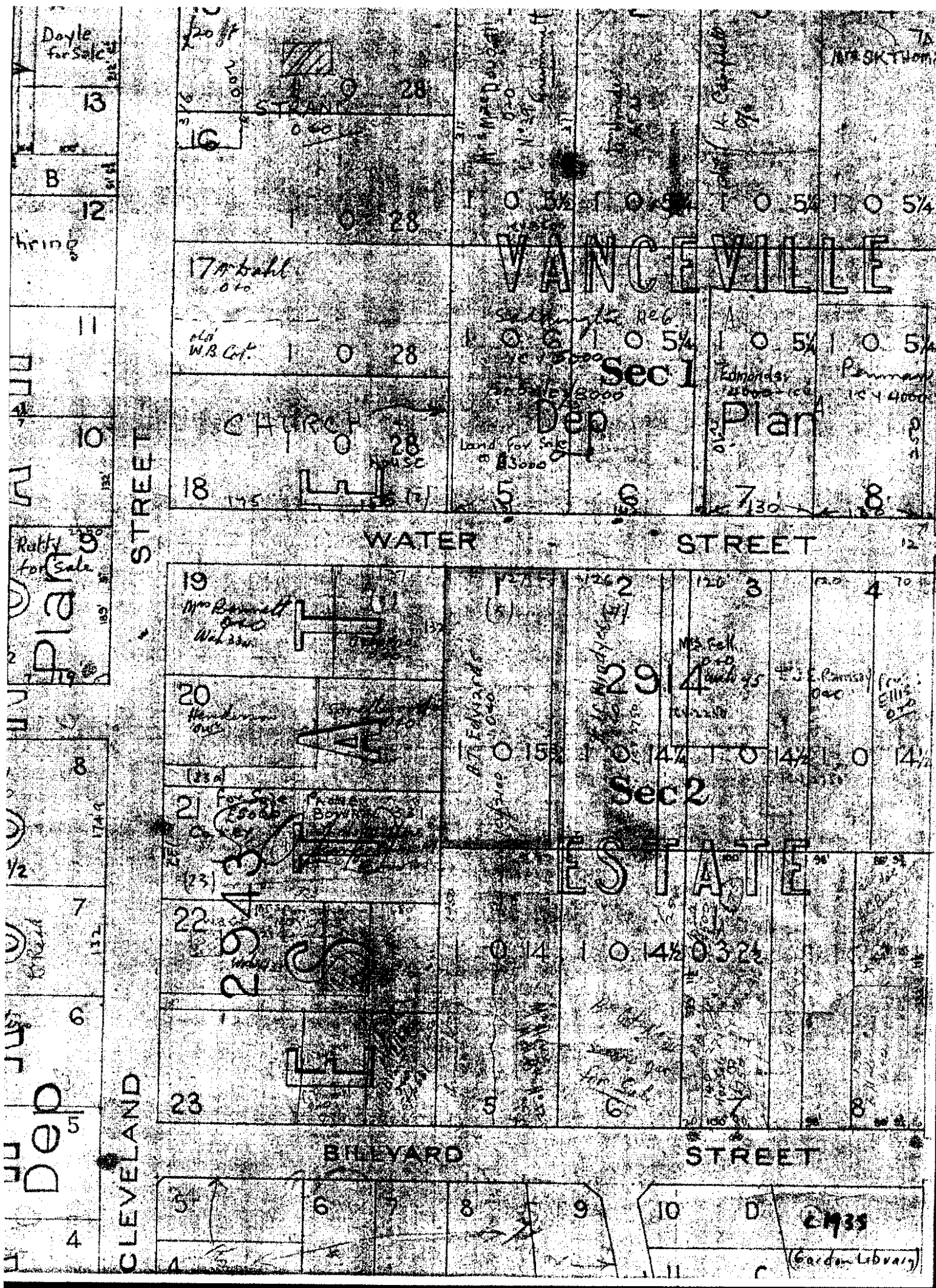
The proposed rezoning of the site poses no immediate threat to the bungalow. However, future development plans may do so.

Having undertaken the above research and assessment, it is my opinion that the bungalow originally known as "Dinorah" and which is currently the Administration building at Prouille Primary School, has a significance befitting a local heritage item.



Donal Carr Registered Architect #2385

September 2005



VANCEVILLE

Sec 1

Plan

WATER

STREET

Sec 2

ESTATE

BILLEYARD

STREET

CLEVELAND

1935

(Garden Library)



Photo A No. 7 Water St. "Carnegie" 1907

Photo B No. 5 Water St. Prouille Primary School "Dinorah" at right



Photo C No. 5 Water St. "Dinorah" now Admin. Building c. 1896



Photo D No. 3 Water Street. Site of Wairoa 1906

WATER STREET, WAHROONGA #7-#3 SOUTH SIDE



Look left
(the Railway came to Wahroonga)



Wahroonga College, showing school main, 1910

(Town & Country Journal, 5 L.)

(Cook, Kerim
The Railway came to Ku-ring-gai 1901)

"DINDORAH"
1910 & 2005



Wahroonga College, 5 Water Street, Wahroonga, 1910

(Town & Country Journal, 5 L.)

(Cook, Kerim
The Railway came to Ku-ring-gai 1901)



Photo E. ↑
Photo G. +

Sept. 2005
Note:
missing chimneys
painted brick
shutters missing
small tile missing

Sept. 2005
Note:
veranda close in left
downing when lawn
near balustrade



Photo F. ↑
Photo H. ↓



South wing
cut off +
veranda now closed
Scrub modern left

West facade
note:
enclosed veranda
new addition in
front of gable
South end cut off



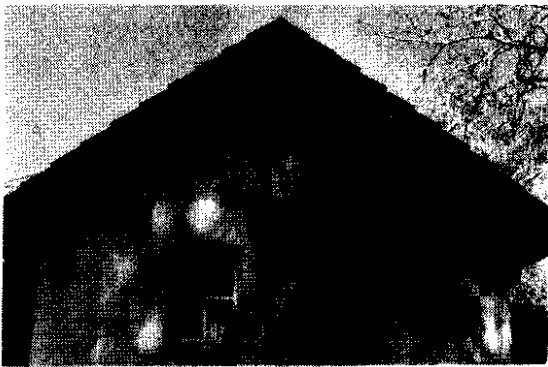


Photo I
Gable. Basket weave brick,
wall plate brackets, eaves,
shutter hinges
'DINORAH'
DETAILS



Photo L
Later fireplace in
Drawing Room

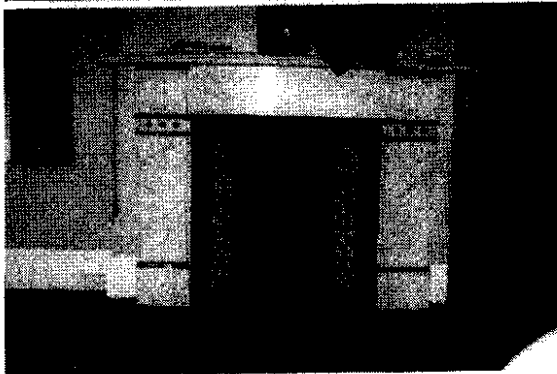


Photo C Fireplace in Bedroom No. 1

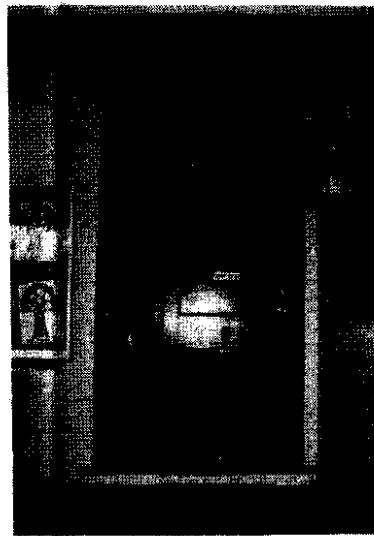


Photo J Front door



Photo K
North veranda -
simple posts, unlined
ceiling

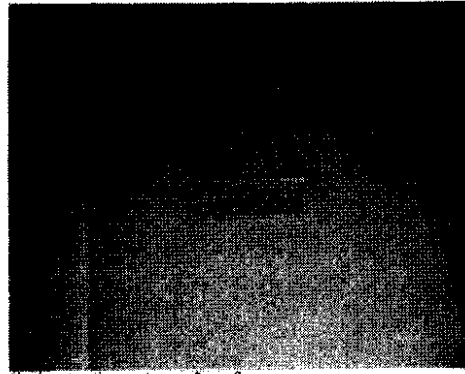


Photo M Air vent in Box Room

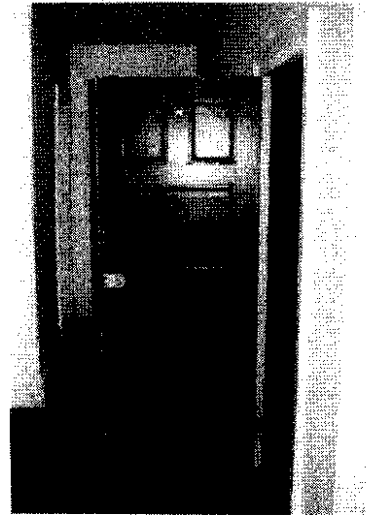


Photo N Stained door



PROJECT PLANNING ASSOCIATES

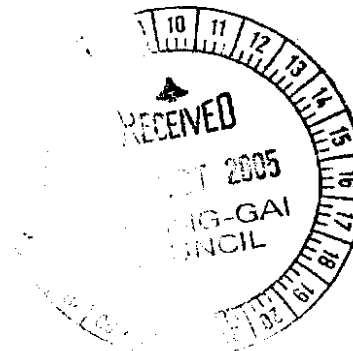
Town Planning, Environmental and Transportation Consultants

Suite 401, 10-12 Clarke Street, Crows Nest 2065 • Po Box 1725 Crows Nest 1585
Ph: (02) 9460 9899 Fax (02) 9460 9513 • Email: projplan@tig.com.au

27 September 2005
Ref 04004V

Quinn O'Hanlon Architects
60 Gladesville Road
HUNTERS HILL NSW 2110

Attn: Mr Jason Webster
Fax: 9816 4179
Email: qoh@qoh.net.au



Dear Jason

CHILTON PARADE TRAFFIC SURVEYS

Please find attached the results of traffic surveys recently undertaken in Chilton Parade, Warrawee.

The surveys identified the level of both vehicular and pedestrian traffic in Chilton Parade near the subject site during both the morning and afternoon peak periods. The surveys reveal that:

- two-way traffic flows in Chilton Parade were minimal, typically in the order of 30-40 vehicles per hour
- pedestrian activity in Chilton Parade was also minimal, with less than 20 pedestrians recorded during both the morning and afternoon surveys, as summarised in the table below.

Chilton Parade - Number of Pedestrians		
	Students	Adults
7:30am - 8:30am	5	14
8:30am - 9:30am	0	4
2:20pm - 3:30pm	4	0
3:30pm - 4:30pm	1	4

It should be noted that all the students identified in the survey were from Knox Grammar.

Please do not hesitate to contact me on telephone 9460 9899 should you wish to discuss any aspect of the above.

Yours sincerely

Robert Varga
Director/Project Planning Associates

APPLICATION FOR REZONING 3 TO 5 WATER STREET (PROUILLE SCHOOL), 33 TO 41 BILLYARD AVENUE (HOLY NAME CHURCH) AND 39 CHILTON PARADE, WAHROONGA (CONVENT)

EXECUTIVE SUMMARY

PURPOSE OF REPORT:	To consider an application for the rezoning of Church/School/Convent lands at 3 to 5 Water Street (Prouille School), 33 to 41 Billyard Avenue (Holy Name Church and seminary) and 39 Chilton Parade, Wahroonga (Convent).
BACKGROUND:	The Catholic Church is rationalising the use of its lands by; rezoning 39 Chilton Parade (Convent) to Residential 2(c) to permit a school use to accommodate the relocation of Prouille School; rezoning the "Church" zoned lands at 33-41 Billyard Avenue to Residential 2(c) to permit use for school and church purposes (allowing school use of the church car park areas etc.); rezoning part of the "Church" land and all "Seminary" zoned land at 33-41 Billyard Avenue to Residential 2(c) to permit residential subdivision (conceptual proposal for 7 allotments); rezoning of Prouille School lands from Special Uses A "School" to permit future residential development under a 2(c) zone.
COMMENTS:	It is recognised that the zonings of the Church lands are largely obsolete. A rationalisation of zonings to permit appropriate future development is warranted. Council's preparation and exhibition of an appropriate Draft Local Environmental Plan can be supported. Any Plan prepared should not be purpose driven to permit a particular development proposal but needs to be sufficiently broad so as to permit an appropriate range of uses which are suited to the land and locality.
RECOMMENDATION:	That Council resolve to prepare an appropriate Draft Local Environmental Plan as set out in "A" of the recommendation and place it on public exhibition in accordance with the statutory requirements.

PURPOSE OF REPORT

To consider an application for the rezoning of Church / School / Convent lands at 3-5 Water Street (Prouille School), 33-41 Billyard Avenue (Holy Name Church and seminary) and 39 Chilton Parade, Wahroonga (Convent).

BACKGROUND

1. The Catholic Church is desirous of rebuilding Prouille School on a new site. The existing school infrastructure is old and in need of upgrading whilst the site is restricted. The Church is seeking to utilise lands it owns in the vicinity for this purpose and to also rationalise the zoning of other lands in the process. Some of these lands are proposed to be sold apparently to fund the process.
2. The applicant outlines the application in the following terms:

“The rezoning proposes the closure of the existing Prouille School at No. 5 Water Street, Wahroonga and its relocation to No. 39 Chilton Parade, Wahroonga – a parcel of land which is surplus to the needs of the Trustee of the Sisters of St Dominic. The relocation of this parish school will also permit it to operate on a site immediately adjacent to Holy Name Church, which is the administrative and pastoral core of Holy Name Parish. The surplus lands located adjacent to Holy Name Church at Nos. 35-41 Billyard Avenue, Wahroonga are also requested to be rezoned to permit residential subdivision in conformity with the immediate area. The existing site of Prouille School at No. 5 Water Street, Wahroonga is also requested to be rezoned to permit residential use, given that this land will be surplus to the educational needs of the Parish.”
3. This rezoning process as originally submitted proposed:
 - Rezoning 39 Chilton Parade zoned Special Uses “Convent” to Special Uses “School” to accommodate the relocation of Prouille School.
 - Rezoning the Special Uses “Church” zoned lands at 33-41 Billyard Avenue to Residential 2(c) to permit use for “Church and School” (allowing school use of the church car park areas etc.).
 - Rezoning part of the Special Uses “Church” land and all “Seminary” zoned land at 33-41 Billyard Avenue to Residential 2(c) to permit residential subdivision (conceptual proposal for 7 allotments).
 - Rezoning of Prouille School lands at 3-5 Water Street, Wahroonga from Special Uses “School” to Residential 2(c) to permit future residential development consistent with the surrounds.
4. The applicant has now formally amended the application so that all lands are sought to be rezoned to Residential 2(c). The intended future uses for the lands have not changed as a result of this amendment and are all permissible under the 2(c) zoning.

COMMENTS

Zones

It is accepted that the zonings of the Church lands are now largely obsolete. This is particularly the case with the Special Use “Convent” and Special Use “Seminary” zonings. A rationalisation of the zoning of these lands is warranted to permit their appropriate future development. These lands are now underdeveloped being (for the most part) vacant.

The rezoning application seeks to rezone 39 Chilton Parade so that the Prouille School may be relocated to it. Facilities at the adjoining Holy Family Church at 33-41 Billyard Avenue are also to be used in conjunction with the relocated School. Appropriate rezoning of the Church lands is needed to facilitate this. The application therefore proposes that the land be rezoned Residential 2(c) as this permits educational establishments and Churches (as well as dwelling houses) as permitted forms of development. This is a zoning preferred by Planning staff. The special use zonings originally sought are presumptive of the suitability of the lands for school development. The broader 2(c) zoning is to be preferred in that it will accommodate future residential dwelling-house development as occurs on neighbouring land.

Prouille School Relocation

The applicant has identified the perceived benefits of relocating Prouille School to be as follows:

- *Proximity of parish facilities.*
- *Improved child safety.*
- *Formation of a parish community.*
- *More parking.*
- *Reduction of traffic impacts.*
- *Opportunity to incorporate ESD principles in the design.*
- *Increased potential enrolments (based on previous Council limits not being implemented at Water Street).*
- *Enhanced educational facilities.*
- *More open space.*
- *Better school management.*
- *Reduced maintenance costs.*
- *Lower capital development cost for equal outcomes.*
- *Reduced privacy and noise impacts for neighbours.*

The social and environmental benefits are real and the reduced capital and maintenance costs are achievable. Further the costs of the redevelopment of the existing site whilst occupied by the school in both economic and social terms are significant. Most schools do not have the option of relocation and whilst the process is protracted, the benefits are significant and tangible.”

Consultants Reports

The rezoning application is supported by the following consultants reports:

- Traffic and Parking Assessment Reports prepared by Project Planning Associates.
- Hydraulic Services Master Planning Reports prepared by Whipps Wood Consulting.
- Preliminary Contamination Report prepared by Douglas Partners.
- Heritage Impact Statement (Demolition) prepared by Rappoport Heritage Consultants.
- Statement of Heritage Impact (New Works) prepared by Rappoport Heritage Consultants.
- Flora and Fauna Impact Assessment prepared by Ecotone Ecological.
- Statement of Design Criteria and Schematic Plans prepared by Quinn O'Hanlon Architects.

These reports together with the overall application have been considered by Council staff. This is discussed in that part of the report addressing Consultation with Other Departments.

Analysis of Application measured against Rezoning Assessment Criteria

In determining the merit of each rezoning application, the proposal is measured against criteria outlined in the information brochure Council provides to the community. State Government requirements / guidelines on rezonings are relatively minimalist when compared to those for development applications. The Ku-ring-gai rezoning information kit seeks to make Council's requirements on the topic more explicit. Each of the Criteria for this proposal are addressed below.

The Environmental Planning & Assessment Act (Section 5)

The Environmental Planning & Assessment Act (EP&A Act) and its objects set the framework within which town planning is carried out at the local level. It is appropriate to therefore measure this proposal against the relevant aims contained in Section 5 of the Act.

Section 5(ii) – this section requires “the promotion and co-ordination of the orderly and economic use and development of the land”.

It is considered that appropriately located residential land (2(c) zoning) which is accessible to services and transport constitutes a proper management and development of land which is obsolete for its zoned purpose. Development in a 2(c) zone for non residential future uses (eg. special uses) are able to be considered on merit with any development application.

Section 5(iv) – this section requires “the provision of land for public purposes”.

If the rezoning is to go ahead, the amount of land available for public purposes remains unchanged. Any future residential development would provide Section 94 contributions which would go to the provision of public facilities, open space, etc.

Section 5(vi) – this section requires “the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats”.

The rezoning proposal does not impact on threatened species.

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It is observed that the Special Use zoned lands subject to the rezoning application are small and fragmented. Any rezoning does not therefore result in a loss of quality special use zoned land.

Section 79(c) of the EP&A Act

Whilst this section of the Act applies to the assessment of development applications, it serves as a useful tool in analysing rezonings (which eventually result in development applications). The pertinent subsections – as outlined in the Department of Infrastructure Planning & Natural Resources (DIPNR) Guide to Section 79(c) – are discussed below.

- **Context and Setting**

Single residential development (ie. 2(c) zoning) would be consistent with the predominant land use surrounding the subject areas. Any non residential use in the 2(c) zone would be assessed on its merits in the development application process.

- **Access, Transport and Traffic**

There are particular considerations for traffic and access related to the development of 39 Chilton Parade for school purposes. This is the subject of comment in the comments of Council's Traffic Engineering Division elsewhere in this report. Such traffic considerations are not necessarily specific to the proposed Residential 2(c) rezoning but rather to the future school use that might be proposed. Residential development for detached dwellings is not raised as a traffic issue.

- **Public Domain Impacts**

In the context of this proposal, public domain impacts might be seen as the way in which the rezoning application would impact on natural surrounds. A 2(c) rezoning would permit future residential development that is consistent with the residential character of the adjacent domain.

Development for any school purpose would be located on existing church / institution lands. Account for its effect on adjoining residential properties would need to be considered.

Any development will have an effect on trees and the natural areas of the sites proposed for development. This is unavoidable and it is the past underdevelopment of the land which has allowed much of it to remain in a natural state. This potential impact is associated with any development and is not specific to the rezoning.

- **Heritage**

The site does not comprise any existing heritage item. The applicant's heritage report concerning 39 Chilton Parade is not considered well founded nor conclusive. Nevertheless this is not an issue to preclude its rezoning to Residential 2(c) and would be a consideration at a future development application. This is similarly the case with the premises at 5 Water Street. This is discussed elsewhere in the Council's Heritage Advisor's comments.

- **Flora and Fauna**

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Flora and fauna are not considered to be matters of major environmental concern. There are no threatened species issues associated with the land. It is recognised that there will be some considerations concerning the impact of future development on existing trees. This is able to be addressed at development application stage.

- **Waste**

Waste is a matter for consideration at the development application stage.

- **Energy**

Energy is a matter for consideration at the development application stage.

- **Noise and Vibration**

There would be future noise associated with construction and development works with any future site works or building construction.

- **Natural Hazards**

Based on the information submitted by the applicant, there are no identified natural hazards associated with the lands.

- **Technological Hazards**

The applicant has not identified any technological hazards associated with the lands.

- **Safety, Security and Crime Prevention**

It is not anticipated that the rezoning will negatively impact on crime prevention.

- **Social Impact**

The rezoning would facilitate future residential or school development on the lands as being sought by the applicant.

These forms of development already occur in the area. It will however be for the development application process to determine the form and type of future development which is acceptable for the land.

- **Economic Impact in the Locality**

It is not considered that the rezoning would have any negative economic impact on the locality. The proposed new zoning is the same as that for the residential surrounds.

- **Site Design and Internal Design**

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The rezoning application provides an indicative plan for school construction at 39 Chilton Parade and indicative 7 lot residential subdivision at 35-41 Billyard Avenue.

At this stage, no conclusions have been made as to whether the form of the school proposal is appropriate or that a school is suited for the site. It is however considered that an appropriate form of residential subdivision is possible on both 39 Chilton Parade and 35-41 Billyard Avenue. It is also considered that acceptable residential subdivision could be realised on the old Prouille School site (3-5 Water Street) in the future.

- **Construction**

Construction for residential purposes would occur in accordance with DCP38 (The Residential Design Manual) and its provisions. In the event of school development it would be assessed against Council's School Code.

- **Precedent and Consequent Cumulative Impacts**

It is not seen that the rezoning proposal represents an undesirable precedent. It represents an opportunity to remove obsolete special use zonings and replace them with the same residential zoning as predominates in the area. It is therefore not introducing a form of zoning which is uncharacteristic of the locality.

- **Does the Proposal Fit in the Locality?**

The Residential 2(c) rezoning, if realised, will establish a zoning permitting a range of uses which is the same as that of the existing Residential 2(c) surrounds. In this respect it is entirely consistent with the locality. Future proposals for development within the range of uses permissible by the zoning will be considered on their merits. The removal of obsolete special use zones which are not being utilised can be supported.

- **The Public Interest**

The rezoning proposal has not been publicly notified. If Council resolves to prepare a Draft Local Environmental Plan this will then be placed on public exhibition in accordance with statutory requirements. Public submissions will be considered in this process before Council determines whether to proceed with the Plan.

State or Regional Environmental Policies, Circulars or Ministerial Directions

Two State Environmental Planning Policies are relevant to the rezoning application and consequent future development. These are:

- **SEPP1 – Development Standards:**
This allows for the departure from development standards provided by a deemed environmental planning instrument such as the Ku-ring-gai Planning Scheme Ordinance. This departure needs to be justified.

- SEPP53 – Metropolitan Residential Development:
SEPP53 applies to the majority of lands within the Ku-ring-gai local government area. This permits a variety of housing types, including multi unit housing in the form of dual occupancies.

Ku-ring-gai Planning Scheme Ordinance

1. Schedule 9 of the KPSO outlines “Aims and Objectives for Residential Zones”. An analysis of the rezoning application measured against these relevant objectives is outlined below:-

“1.(a) The maintenance and where appropriate improvement of the existing amenity and environmental character of residential zones.”

The proposed 2(c) rezoning would allow residential development consistent with existing residential amenity of adjacent residential zones.

“1.(b) New residential development only where it is compatible with the character of the locality and has a sympathetic and harmonious relationship with adjoining development.”

Residential development permitted under the proposed rezoning is consistent with the scale and density of residential development in the locality.

“2.(d) Any building or development work on a site avoids total or near total site utilisation by maintaining a reasonable proportion of the site as soft landscaping area”.

Future development of the site will be constrained by Clause 60C of the Ordinance which limits maximum built-upon area, as well as the considerations of Council’s DCP38.

2. Clause 43(3) indicates that to erect a dwelling-house on land zoned 2(c) the lot size must be at least 929m². Similarly, Clause 58B(3) requires that for subdivision of land in a 2(c) zone the lot size must be at least 929m² (or 1300m² for a battleaxe lot). The conceptual subdivision plan submitted for 33-41 Billyard Avenue for 7 battleaxe allotments is consistent with these requirements.

Ku-ring-gai Residential Development Strategy

The subject land does not fall within those lands identified in Council’s Residential Development Strategy for medium density development. It is therefore unaffected by the Strategy.

CONSULTATION

Should Council resolve that a Draft Local Environmental Plan be prepared, consultation will be undertaken with the appropriate statutory authorities during its preparation. The Draft Plan will then be placed on exhibition for public comment.

FINANCIAL CONSIDERATIONS

The financial considerations specific to the matter to date have been the use of staff resources. The preparation of any proposed Draft Local Environmental Plan and its processing would involve the costs of:-

1. Staff resources.
2. Advertising.

These costs are compensated for by the rezoning application fees.

There are potentially future Section 94 contribution issues associated with the rezoning in the event of future residential subdivision and the creation of new allotments.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

DEPARTMENT OF DEVELOPMENT & REGULATION

Development Engineer

The Development Engineer advises that no objections or requirements are raised in relation to the proposed rezoning. (Full engineering comments are attached to this report.)

Landscape Development Officer

No inherent objection is raised to the rezoning proposal. There are a range of matters for consideration in association with future development applications. (Full comments are attached to this report.)

Heritage Advisor

The Heritage Advisor states there to be no heritage issues to prevent rezoning. Such issues are able to be addressed with future applications. (Full comments are appended to this report.)

DEPARTMENT OF TECHNICAL SERVICES

Manager Traffic & Transport

No objection has been raised in respect of the rezoning proposal. It has however been identified that there are traffic related issues associated with the relocation of a school to the 39 Chilton Parade site. These would need to be dealt with in considering any future development application for school use. (Full comments are attached to this report.)

Design / Projects Engineer

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No objection is raised to the rezoning with relevant issues being able to be dealt with at development application stage. (Full comments are attached to this report.)

DEPARTMENT OF PLANNING & ENVIRONMENT

Environmental Planning & Project Officer

No rezoning objection is raised. (Full comments are attached to this report.)

SUMMARY

The rezoning application by the Diocese of Broken Bay applies to Church lands in Wahroonga currently zoned for Special Uses 5(a).

These special uses are for “school” (Prouille School – 3-5 Water Street), “church” (Holy Family Church – 33 Billyard Avenue), “seminary” (35-41 Billyard Avenue) and “convent” (39 Chilton Parade).

The purpose of the application is to allow for the future relocation of the Prouille School to the “convent” site and also utilise some “church” lands in this process. Vacant areas of the “church” land, together with the “seminary” zoned land, are proposed to accommodate a 7 lot residential subdivision. All lands, including the vacated Prouille School site, are proposed to be rezoned Residential 2(c).

The convent and seminary uses and their respective zonings are no longer necessary. These sites remain largely undeveloped. The Prouille School does not operate satisfactorily on its site and is disadvantaged by its age of facilities and site configuration. Therefore the need for rationalisation of the use of these lands can be recognised. A rezoning of all lands to Residential 2(c) as sought by the application is consistent with the zoning of the lands of the residential surrounds.

Technical assessment of the application raises issues with some aspects of the proposed uses discussed in the rezoning application. This includes the Churches proposal for a school on the “convent” site in combination with the adjacent church. It has not demonstrated that a school is necessarily an appropriate future development for the site. Support for the rezoning application, however, does not depend on the suitability of a proposed school. The primary use under a 2(c) zone is for detached dwelling-house development. A school is one of a range of special uses which are permissible under a 2(c) zoning. The 2(c) zoning is one which is consistent with the locality.

This rezoning would remove the obsolete and restricted special use zones applying to the subject lands and provide alternatives for their residential development which is consistent with the locality. Any proposal for a non residential use, such as a school, would have to be considered on its merits with a development application.

Council’s Departments each raise no objection to the rezoning application. Some issues have been raised concerning future non-residential development proposals. These are appropriately able to be dealt with in the future development application assessment process.

RECOMMENDATION

- A. That the Director Planning & Environment prepare a Draft Local Environmental Plan for Church lands at 3-5 Water Street, 33-41 Billyard Avenue and 39 Chilton Parade, Wahroonga to rezone the lands 2(c).
- B. That the Department of Infrastructure Planning and Natural Resources be advised of Council's decision to prepare a Draft Local Environmental Plan in accordance with Section 54 of the Environmental Planning and Assessment Act.
- C. That when prepared, the Draft Local Environmental Plan be placed on public exhibition in accordance with statutory requirements for public comment.
- D. That a report be brought back to Council at the end of the exhibition period for Council's consideration of submissions.

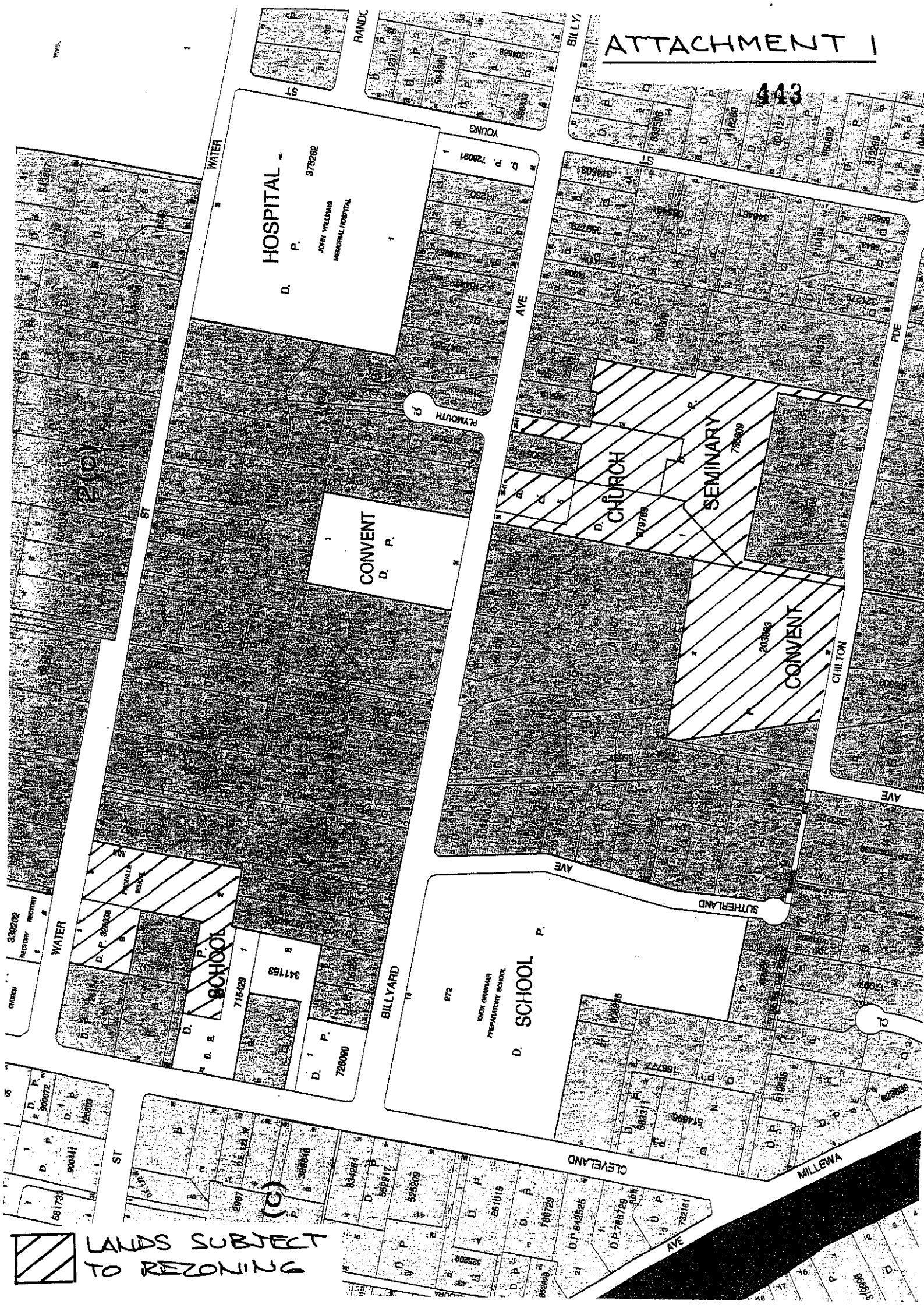
Rod Starr
Senior Urban Planner

Leta Webb
Director Planning & Environment

Attachments:

- Attachment 1 - Map showing lands subject of rezoning application.**
- Attachment 2 - Indicative plan for proposed subdivision of church lands at 33-41 Billyard Avenue, Wahroonga.**
- Attachment 3 - Indicative plan for proposed school development at 39 Chilton Parade, Wahroonga.**
- Attachment 4 - Compilation of the comments in full from Council's Departments.**
- Attachment 5 - Preliminary Draft Local Environmental Plan.**

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HOSPITAL

D. P. 375262
JOHN WILLIAMS
MEMORIAL HOSPITAL

CONVENT

CHURCH

SEMINARY

CONVENT

SCHOOL

SCHOOL

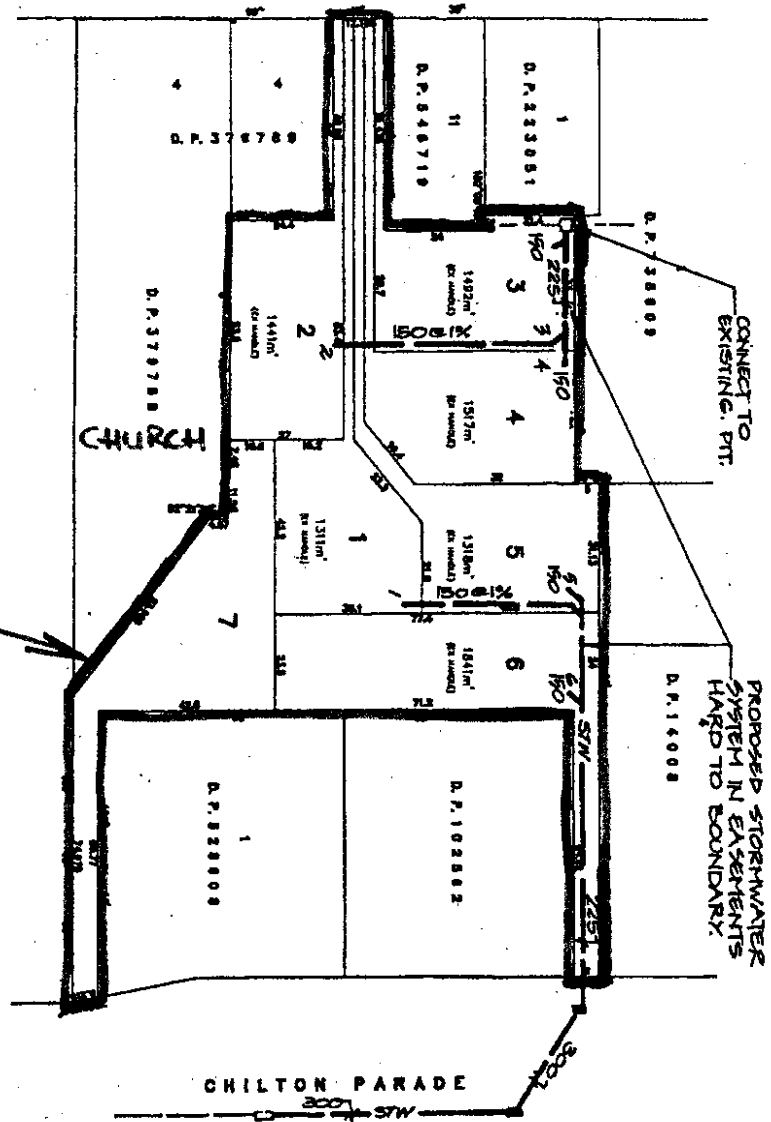
INDO CAROLUS
PREPARATORY SCHOOL

LANDS SUBJECT TO REZONING

444

BILLYARD AVENUE

7 PROPOSED
RESIDENTIAL
ALLOTMENTS



BILLYARD AVENUE

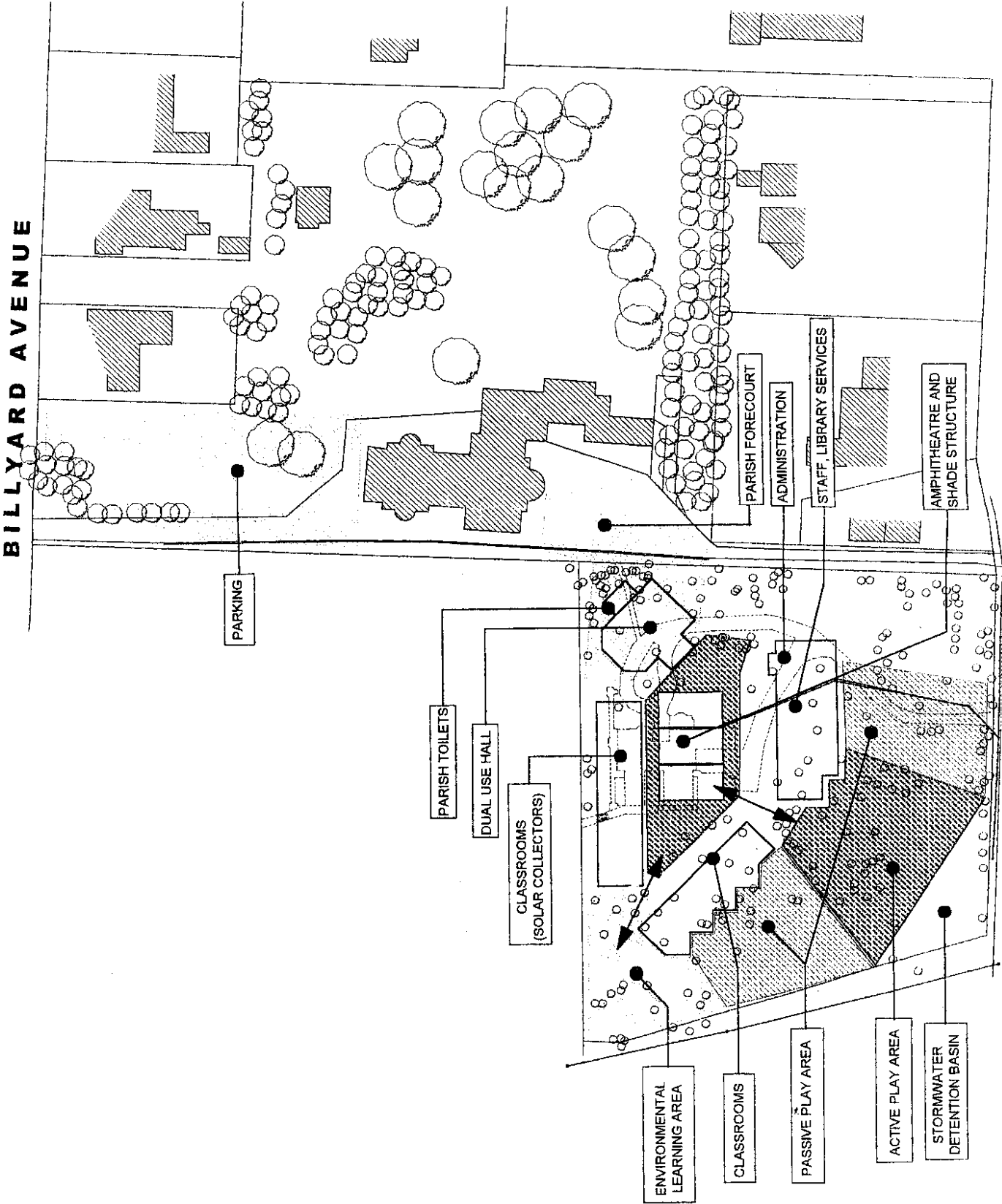
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ATTACHMENT 3



FUNCTIONAL AREAS

CHILTON PARADE

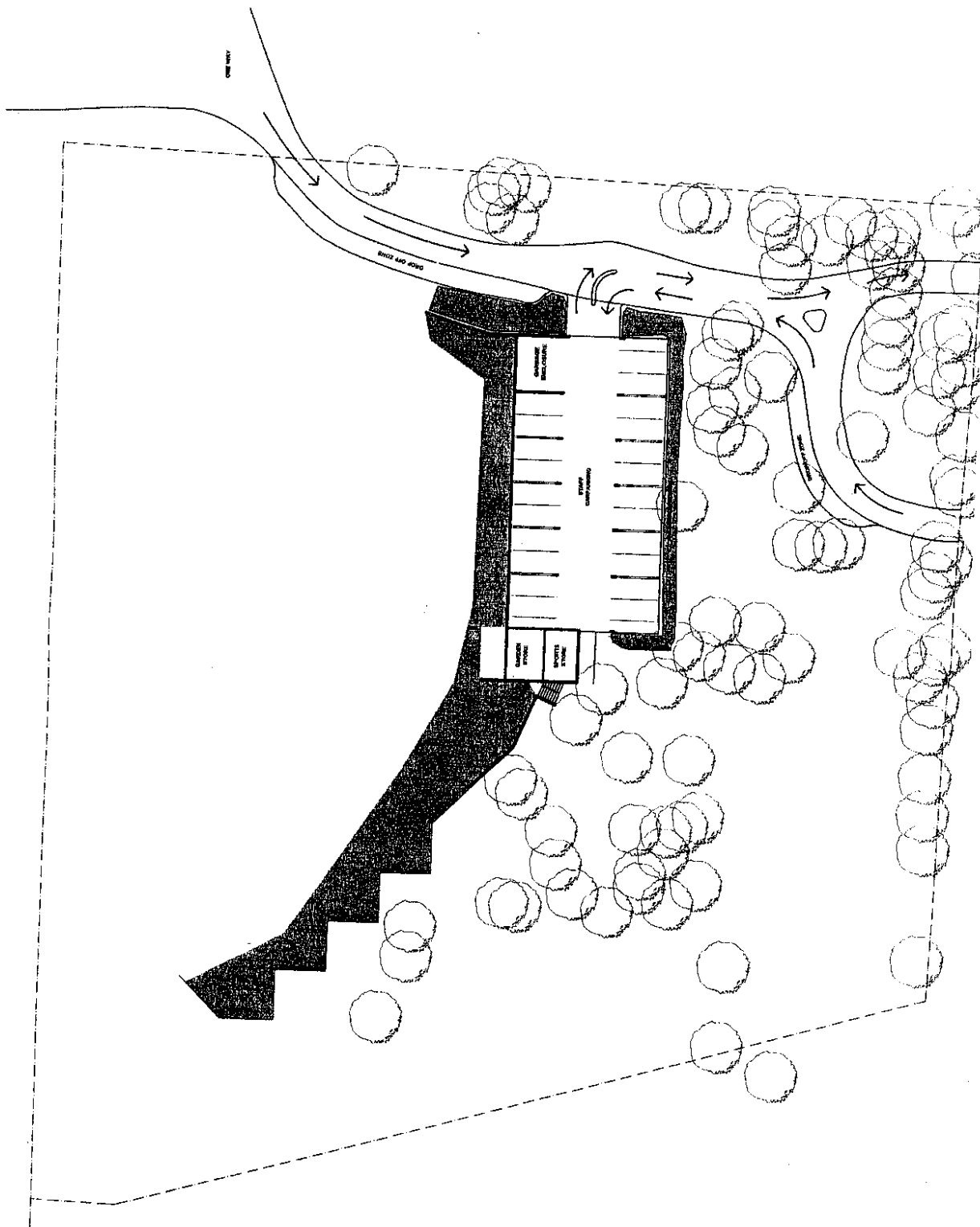


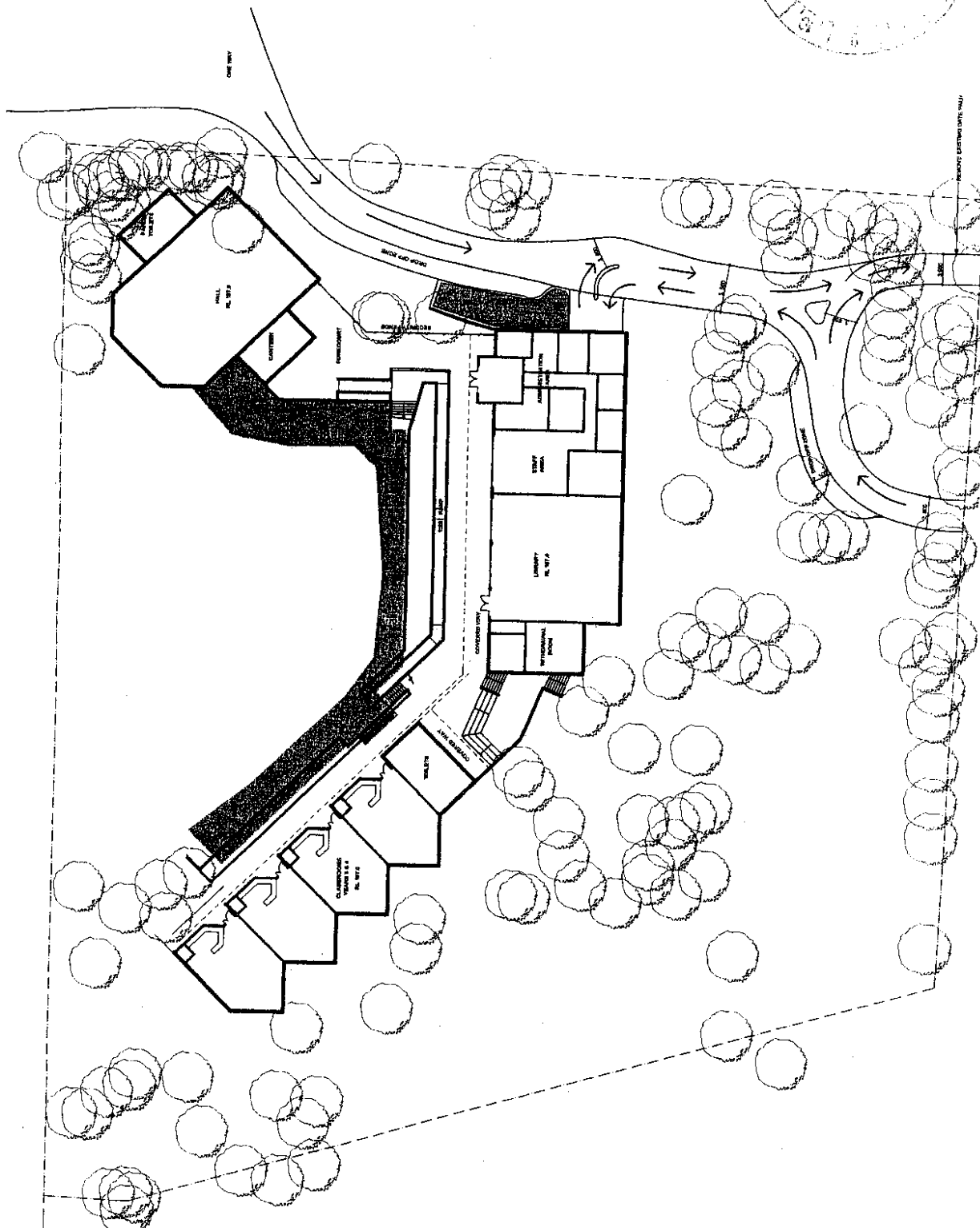
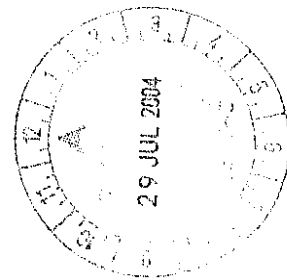
PROJECT TITLE	0330	-RZ04-	D
PROJECT NO.	0330	1:1000	DC
DATE	JUL 2004	ISSUE DATE	JUL 2004
ISSUE NO.	1	ISSUE DATE	JUL 2004



Prouille Primary School
Chilton Parade, WAHRONGA

QUINN O'HANLON Pty Limited
ARCHITECTS & PLANNERS
80 Crowsley Road, Hurstville NSW 2110
Tel: 9516 9311 Fax: 9516 1175 e-mail: qoh@qoh.com.au





QUINN O'HANLON Pty Limited
ARCHITECTS & PLANNERS
 60 Gladstone Road - Hunters Hill, NSW 2115
 Tel: 9616 1011 Fax: 9616 4179 e-mail: ooh@ooh.net.au

Proville Primary School
Chilton Parade, WAHROONGA

0 10 30
 SCALE (m)

0 10 30
 SCALE (m)

REZONING APPLICATION
 DRAWING TITLE: GROUND FLOOR
 DRAWING NUMBER: 0330 -RZ02-
 DATE: 29 JUL 2004
 DRAWN BY: DC
 CHECKED BY: DC

0330 -RZ02-
 DATE: 29 JUL 2004
 DRAWN BY: DC
 CHECKED BY: DC

DEPARTMENT OF DEVELOPMENT & REGULATION

Development Engineer:

I refer to documentation regarding proposed rezoning of Catholic Church lands at Wahroonga. Traffic comments have been provided separately, so Development Engineers' comments are mainly applicable to the management and disposal of stormwater.

39 Chilton Parade:

This property has fall to Chilton Parade and there is an open watercourse along the western boundary.

I had a preliminary meeting with Jim Allen of Whipps Wood in January 2004 regarding this site. At that time, Council's DCP 47 Water Management had not been adopted, however we discussed the likely stormwater management measures which would be required for a new school at the site in the light of the new DCP. DCP 47 came into force for applications lodged after 7 April 2004.

Generally, the site location is A, and there is access to underground Council drainage pits for connection of runoff from the site. The proposed school would most likely be assessed as Type 9 (Any other development) under DCP 47 and therefore retention and re-use requirements would be assessed on merit. The applicant's consulting engineer would need to prepare a stormwater management plan which addressed the likely demands for retained roofwater for use inside the buildings ie toilet flushing and laundry if applicable, and for retained stormwater for irrigation. The optimum storage volumes for retention would then be balanced against the requirement to detain stormwater to relieve pressure on the downstream drainage system to determine the respective storage volumes required.

The hydraulic services report submitted, Whipps Wood Report Issue B dated 16th April 2004, refers to an existing on site detention basin in the south western corner of the site. It also contains calculations for on site detention storage and permissible site discharges using Council's factors. This data will still be useful for the ultimate design work to be carried out using DCP 47. However, the detention storage is by means of a timber wall which is likely to no longer be watertight, so if the existing system is to be used, it will need upgrading.

Given the likely setback of the school buildings from the watercourse, it is likely that a preliminary check of flows in the system will show that the buildings will have sufficient freeboard above the standard flood as required by Chapter 7 of DCP 47.

Depending on the ages of the pupils, safety fencing or other measures may be required between the school and the watercourse. These measures will have to be compatible with the requirements of DIPNR in relation to the riparian zone.

Stormwater quality control measures will be required, as described in Chapter 8 of DCP 47. The site will have ample open space for retention trenches, swales etc if required.

All of the above matters are expected to be able to be addressed during the preparation of DA documentation. Development Engineers do not have any objections or requirements in relation to the proposed rezoning.

35-41 Billyard Avenue

The survey plan submitted, Degotardi Smith Drawing 29986A02.DWG/A does not show the handle to the newly created 27 Billyard Avenue, so the proximity of the dwelling at No. 25 to the development site is exaggerated.

The Hydraulic Services Report, Whipps Wood Issue B, dated 1st June 2004, shows a proposed interallotment drainage system within the development providing gravity drainage to Chilton Parade for Lots 1, 5 and 6. Lots 2, 3 and 4 are shown as connecting into a pit discharging through No. 51 Billyard Avenue. A drainage easement would need to be created over the proposed line. The best time for these negotiations to be undertaken is prior to the lodgment of any DA. Otherwise the lack of legal stormwater drainage through the downstream property(ies) can delay assessment of the DA and/or operation of a subsequent consent.

Once again the report includes on site detention but not retention. Both will have to be addressed at some stage of development, detention in conjunction with the proposed access driveway to the subdivision, and both in conjunction with the development of individual dwellings.

The report proposes the construction of new street drainage in Chilton Parade to serve Lots 1, 5 and 6. If underground drainage is required, then the minimum requirement for street drainage is 375mm diameter reinforced concrete pipe.

Other water management measures complying with DCP 47 and/or BASIX will be required in conjunction with residential development of these lots. These will be addressed at DA stage or by conditions.

Development Engineers do not have any objections or requirements in relation to the proposed rezoning.

3-5 Water Street

It is not clear exactly which lots are proposed to be rezoned.

No Hydraulic services report was submitted in relation to this property. Gravity drainage to Cleveland Street appears to be possible for the entire school property.

Future development applications would be required to address the requirements of BASIX and DCP 47, or appropriate Council policy applicable to stormwater management at the time.

Development Engineers do not have any objections or requirements in relation to the proposed rezoning.

Landscape Development Officer:

Relocation of Prouille School from 3-5 Water Street to a larger site at 39 Chilton Parade, which is occupied by the Dominican Sisters Convent and currently zoned Special Uses "Convent" is the driving force for the rezoning application. In order to provide adequate vehicle access and circulation, part of the Holy Name Church and parish building car park at 33-41 Billyard Avenue needs to be used, hence the application to rezone this area from Special Uses "Church" to Special Uses "Church and School". The remaining land at 33-41 Billyard Ave, including the parish building, and, the redundant Water St site are proposed to be rezoned for residential development, therefore changing Billyard Ave from Special Uses "Church" and "seminary" and Water St from Special Uses "School" to Residential 2(c).

A concept plan has been submitted showing the possible layout of the new school at 39 Chilton Parade and a subdivision plan for 33-41 Billyard Ave. Both of these sites support large old trees, many of which are indigenous trees, in varying condition. A flora and fauna impact assessment, prepared by Ecotone Ecological Consultants Pty Ltd, has been submitted for both sites. Unfortunately, because of this ecological approach, trees have been given a High Conservation Value only. Some of the non indigenous trees are significant due to their size, condition and aesthetic appearance but this has not been considered. While I do not disagree with the trees considered to be of high conservation value I believe that there are also other trees which should be retained because they are significant for other reasons, also some of the high conservation value trees are in poor condition and depending on their location may require removal for safety reasons. An arborist should have assessed the trees.

39 Chilton Parade – Proposed School

I have identified 19 individual trees which I consider to be significant on the Chilton Parade site, as well as, a group of Eucalyptus saligna (Sydney Blue Gum) along the creek in the north western corner of the site. They include:

Tree 136 – Eucalyptus saligna (Sydney Blue Gum), adjacent to Chilton Parade;

Trees 142 & 143 – Eucalyptus paniculata (Grey Ironbark), adjacent to Chilton Parade;

Tree 319 – Eucalyptus microcorys (Tallowood), on the leveled area below the convent building;

Tree 316 – Eucalyptus saligna (Sydney Blue Gum), adjacent to the level lawn area;

Trees 342 & 345 – Lophostemon confertus (Brushbox), below and south west of the convent;

Tree 423 – Eucalyptus saligna (Sydney Blue Gum), adjacent to the northern boundary west of the convent;

Tree 388 – Eucalyptus paniculata (Grey Ironbark) adjacent to the driveway to the garage;

*Tree 161 – Eucalyptus saligna (Sydney Blue Gum), adjacent to the eastern boundary;
2 x Eucalyptus saligna (Sydney Blue Gum) not shown on the survey plan located within the access driveway to the Church from Chilton Parade and close to the tree above;*

Trees 366 & 365 – Eucalyptus saligna (Sydney Blue Gum), near the eastern boundary;

Tree 510 – Eucalyptus saligna (Sydney Blue Gum), adjacent to the carport;

Tree 511 – Eucalyptus paniculata (Grey Ironbark), adjacent to the pathway to the Church;

Tree 527 – Eucalyptus saligna (Sydney Blue Gum), on the eastern boundary;

Tree 531 – Eucalyptus saligna (Sydney Blue Gum), in the north east corner of the site;

Tree 536 – Eucalyptus paniculata (Grey Ironbark), in the north east corner of the site.

Many of the trees dotted over the site are young trees which have been planted and consist of Blue Gum, Rough barked Apple, Silky Oak, Tallowood and Brushbox. The significant trees include some of the high conservation value trees but not all of them due to their poor condition. Of these 19 trees, the proposed school and driveways would require the removal of 8 of these trees and severely impact another 5 which would most likely lead to their removal as well. Therefore more than half of the individual trees identified as significant would be removed. Normally we would endeavour to retain all trees identified as being significant, therefore the removal of this many trees is unacceptable.

Some minor reworking of the buildings and driveway would ensure the retention of a number of trees as follows:

- *Deletion of the parish toilet from behind the dual use hall and moving the building away from the north east corner of the site would enable the retention of Trees 511, 531 and 536. Tree 527 could be retained if the driveway is realigned, however, this is complicated by the narrowness of the driveway to Chilton Parade, the change of level between the school site and the church site, and, the new lot to be created where the parish building is located, which also requires a separate driveway. The removal of Tree 373, a storm damaged Eucalyptus saligna (Sydney Blue Gum) to provide the driveway to the school is acceptable.*
- *The driveway near the administration building can be relocated away from Trees 365 and 366 reducing the negative impact on those two trees, however, this may disrupt proposed pedestrian flow;*
- *It may be possible to relocate the eastern most driveway at Chilton Parade to retain Tree 135, however, this would probably require the removal of Trees 133 and 134, both Eucalyptus saligna (Sydney Blue Gum), which have been badly storm damaged. The location of the driveway would also have to consider Tree 143 already noted above.*
- *The Kindergarten – Year 2 classrooms may be able to be relocated to allow the retention of Tree 423*

Two trees which cannot be saved by some simple reworking are Tree 388, a very large old Eucalyptus paniculata (Grey Ironbark), just north of the proposed car park and administration building, and Tree 342 a substantial Lophostemon confertus (Brushbox) just outside the proposed Year 5 and 6 classroom block. Retention of these trees would require the redesign of these buildings and this should be attempted because they are beautiful trees.

The circulation plan showing proposed pedestrian and vehicle circulation notes "remove height of retaining wall to allow pedestrian access". I am not sure exactly what this means, however, any change to the retaining wall is likely to impact on other indigenous trees located close to the boundary, therefore, I do not think that this is feasible.

*Finally, the detention basin in the front south west corner of the site near the watercourse is a very unattractive structure and redesign of this in any proposal for the site would be desirable. If widening of Chilton Parade is considered essential the two *Eucalyptus paniculata* (Grey Ironbark) (Trees 142 and 143) must be retained, therefore an arborist should be consulted when this is being investigated.*

33 -41 Billyard Ave – Proposed Subdivision

It is proposed to retain the church and its car park with vehicle access from Billyard Ave and subdivide the remaining land, including the parish building into 7 residential allotments. Proposed Lot 7 contains the parish building and would gain access from Chilton Parade, next to the proposed school site. As noted earlier, in order to retain Tree 527 the proposed driveway to the school needs to be relocated which effects the location of the driveway to Lot 7. I think that this can be resolved but will require the relocation of the southern end of the angled subdivision line to accommodate the school driveway.

*Lot 6 gains vehicular access from Chilton Parade via an access handle between 29 and 35 Chilton Parade. The access handle is 6 metres wide but is constrained by the presence of a row of *Jacaranda mimosifolia* (Jacaranda) in good condition and the low spreading canopies of 3 *Cedrus deodara* (Himalayan Cedar) located within No 35. Removal of the Jacarandas and the pruning of the Cedar canopies would be undesirable, however, an arborist may be able to suggest an alignment which manages to minimize impacts on both of these.*

*The remaining lots all gain vehicular access from Billyard Ave between No 43 and 45. There are two *Eucalyptus saligna* (Sydney Blue Gum) located at each end of the access handle but as the access handle is 12 metres wide, one shared driveway should be able to be accommodated leaving room to keep both trees. An arborist needs to be consulted with regard to the location and design of the driveway as the ground drops away at the Billyard Ave end into the site.*

*There are a number of trees which are considered to be significant at the site and again not just high conservation value trees. Most of these trees are located near proposed subdivision boundaries making it easier to retain them in any future development, however, the driveway to Lot 1 - 5 would run right through the middle of a stand of vegetation which contains mostly *Angophora floribunda* (Rough barked Apple), as well as, considerable weed growth. Some of this vegetation also spills into Lot 2 and 3. Unfortunately a lot of these trees are only in fair to poor condition so that when a house is to be built at the site they are likely to be removed due to their condition, however, this is not a reason to not support the application as other trees can be planted as part of the DA process. A number of trees would be identified at subdivision stage for preservation when future development occurs.*

Conclusion

While there are a number of issues raised above which need to be resolved, 39 Chilton Parade would appear to be large enough to accommodate a school and retain more of the significant trees than proposed at present. The Billyard Ave site could accommodate a 7 lot subdivision, although, there may be some tree issues to be resolved at subdivision and then DA stage. The driveways to all the lots, as well as, the school need to be carefully considered and must include the input of an arborist at the earliest opportunity. An arborist should also be consulted when redesigning the school layout.

Heritage Advisor:

This memo considers the implications of rezoning three properties in the Wahroonga / Warrawee area that are currently owned or operated by various religious groups and zoned special uses School, special uses Church, special uses Convent and special uses Seminary. It is concluded that:

- *The heritage issues would not prevent rezoning but should be addressed in future applications.*
- *There would be little adverse impact on the National Trust UCA No 27 resulting from the proposed rezoning.*
- *Returning the sites to residential zoning would be consistent with the predominant character of the area and UCA. It should be noted that educational and religious institutions have contributed to the historical development and character of Wahroonga and Warrawee.*
- *There may be some impacts on the "extended curtilage" and setting of existing heritage items in Chilton Parade and Billyard Avenue if future subdivision or development occurs.*
- *Archaeological relics are contained within the site of 3 Water Street and archaeological investigation may be required prior to disturbance.*
- *Consideration should be given to further heritage assessment of the building at No 5 Water Street, Wahroonga if demolition/development is proposed.*
- *Consideration should be given to further heritage assessment of the building at 39 Chilton Parade, Warrawee if demolition/development is proposed.*

HERITAGE IMPACT STATEMENT – 39 CHILTON PARADE WARRAWEE

I have reviewed the report prepared by Rappoport Heritage Consultants. The rezoning application looked in detail at the sites and two heritage reports were prepared. The following is a brief assessment of the report on 39 Chilton Parade Warrawee:

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The author states that the report was prepared to determine whether future demolition of the Convent would have any impact on the Wahroonga UCA. While demolition may be a future activity, it is a relevant issue for Council to consider in the proposed rezoning. It should be clear to the applicant that if Council agrees to rezone the land that demolition is not approved and that a separate application would be required.

The report has some useful information and has identified some heritage significance in the existing building and recommended that if demolition occurs, archival recording of relevant fabric is appropriate. The report has not assessed the landscape, vegetation or other elements of the site. Council would need to carefully consider the impact on any future application for a school on the site. It is considered that the heritage issues associated with this site would not prevent rezoning.

The heritage impact assessment in the report states:

- a) The existing building is not currently recognized for any heritage significance per Schedule 7 of the KPSO 2003.*
- b) Its fabric does not correlate with the identified significance of UCA 27 – being buildings predominantly of the Federation period.*
- c) The surrounding buildings comprising the church and associated structures are themselves not heritage listed and therefore cannot be construed to contain any special significance.*

The heritage impact statement in the report is:

On the strengths of the foregoing, it is our opinion that the proposed demolition of 39 Chilton parade, Warrawee will not have a negative impact of the Wahroonga UCA 27 or the Wahroonga Holy Name Parish church establishment. Ku-ring-gai Council does not list the existing building as containing any significant heritage attributes befitting the architectural style and context of the UCA 27. We do however recommend archival recording of relevant fabric...

Comment

- The main conclusion in the above heritage impact statement seems to be based on the fact that the site is not a listed heritage item. The assessment only considers 'the building' and does not assess the cultural landscape value of the site.*
- To avoid potential conflicts over the heritage value of the site, it would be appropriate for Council to undertake a further assessment and if warranted consider listing it as a heritage item.*
- The report incorrectly states that UCA 27 was gazetted in 2002. That is incorrect, a draft LEP has not been prepared by Council. However, the area is included in the National Trust UCA No 27.*

- *The history in the report is helpful, but is not comprehensive. It does not mention that the site of 39 Chilton Parade was formerly part of "Berith Park" at 19 Billyard Avenue, which adjoins the northern boundary of the site. The original land holding was broken up many years ago into its existing configuration.*
- *The history correctly notes that institutional building based on large residential houses is a characteristic and important phase in the historical development of Ku-ring-gai.*
- *The plan of the building shown in the appendix illustrates the existing layout of the building. Comparing that with the 1938 plan it is apparent that the majority of the early building is intact but the garage and common room on the lower floor and the terrace, two bedrooms and a bathroom on the upper level were later additions.*
- *The description in the report claims that the front entry and Chapel are the areas of greatest architectural interest due to the exposed ceiling beams.*

STATEMENT OF HERITAGE IMPACT - PROPOSED DEVELOPMENT PROUILLE PRIMARY SCHOOL

I have reviewed the above report prepared by Rappoport Heritage Consultants. The report was prepared to advise the applicant whether demolition of 39 Chilton Parade, Warrawee and the construction of a new primary school on the land and whether rezoning and subdivision of land currently owned by the Dominican Priory into six separate lots would have either a negative, neutral or positive effect on the National Trust Urban Conservation Area (UCA 27).

The report concludes that the proposed demolition of the existing building at 39 Chilton Parade, Warrawee and proposed development of that site for a new primary school will not have a negative impact upon the Wahroonga Urban Conservation Area (UCA 27) nor would it have a negative impact upon the neighboring heritage item – "Berith Park" at 19 Billyard Avenue, Wahroonga because:

- *No 39 Chilton Parade, Warrawee is not a listed item, thus demolition is permissible.*
- *The significance of the heritage item Berith Park is reduced by the recent subdivision and is now limited to the original fabric of the house, and the gates.*
- *The proposed school site is located on land which is lower and screened by an existing embankment.*
- *The fabric of 39 Chilton Parade does not correlate with the identified significance of UCA 27.*
- *The nearby Church building is not heritage listed and can not be construed to contain any special significance.*
- *Other nearby heritage items at No 30 & 34 Billyard Avenue, Wahroonga are too far away to be affected by the proposed subdivision.*
- *The boundary with the heritage item at 35 Chilton Parade, Warrawee is separated by a row of mature trees which would screen future building works.*

Comment

- *It is difficult to provide comments on the above conclusions as the application before Council is simply to rezone the land. Demolition and possible subdivision may occur in the future and should be subject to new applications and those issues can be carefully considered if such applications are lodged.*
- *The primary concern with rezoning the Seminary site at 35-41 Billyard Avenue is the potential loss of setting that the site provides to the adjoining heritage items, particularly 19 Billyard Avenue and 35 Chilton Parade. The existing site provides a treed backdrop to the adjoining heritage items and is considered to be part of their "extended curtilage" and setting. It is considered that "extended curtilage" or "setting" can be protected in subdivision/development applications and that it should be an issue to consider if applications for subdivision/development are lodged.*
- *An issue associated with the site at 35 - 41 Billyard Avenue demonstrated the concept of "extended curtilage". The recent Court approved subdivision of 19 Billyard Avenue placed a condition that allowed for a viewing corridor from the eastern terrace of Berith Park across the subdivided lots to 35 - 41 Billyard Avenue so that views to the bushland could be retained as they were considered to be part of the historical setting of Berith Park.*
- *Wahroonga still contains a number of large sites in some form of institutional use. These large sites have cultural landscape values which have not been addressed in the report.*
- *Physical evidence related to the historic development phase in Ku-ring-gai when institutions such as Convents, Seminaries, Schools and Hospitals acquired large residential sites for their use is rapidly disappearing.*
- *It is considered that heritage issues would not prevent rezoning but should be addressed in future applications.*

PROUILLE SCHOOL – HERITAGE ISSUES**3 Water Street**

The site at No 3 Water Street was a heritage item, but the building was demolished over 10 years ago. The heritage listing has been removed however the site contains footings and archaeological evidence of the demolished building. The Heritage Act provides automatic protection to any subsurface deposits or relics more than 50 years old. An archaeological assessment of the site and excavation permit may be required before future development could occur on the site. However, rezoning would not disturb deposits or relics contained within the site.

No 5 Water Street

This property is not listed as a heritage item, but is an early house and may have some heritage value. To avoid potential conflicts over the heritage value of the site if demolition/development applications are received, it would be appropriate for Council to undertake a further assessment and if warranted consider listing it as a heritage item.

School buildings

The existing purpose built classrooms and school buildings on the Prouille School site are not identified as having any significant heritage values. They may have some limited heritage significance to the existing community. Further assessment of the buildings may be required if an application for demolition/redevelopment is made.

Comment

Returning this site to residential use would be consistent with the predominant character of the area and the National Trust UCA. There are some minor heritage issues associated with the site at 3 Water Street and the site at 5 Water Street which should be assessed in any future demolition application. It is considered that heritage issues would not prevent rezoning but should be addressed in future applications.

DEPARTMENT OF TECHNICAL SERVICES**Manager Traffic & Transport:**

The Traffic and Parking Assessment Report dated 12 July 2004, prepared by Project Planning Associates for the proposed relocation of Prouille School to Chilton Parade has been perused. It is intended that the proposed rezoning will be referred to the Traffic Generating Developments Committee for consideration. However, before this can occur, it is considered that a number of issues should be addressed or clarified:

1. *The site at 39 Chilton Parade is considered to have significant traffic related constraints for use as a school for over 400 infant and primary school aged students. Some of these constraints are not addressed in the Project Planning Associate's traffic report.*

For example, the road pavement and footpath width in Chilton Parade adjacent to the site is narrow and the road geometry restricts visibility, when exiting the property. Any vehicles parked near the driveway would restrict visibility further. It is considered that the existing pavement width would not permit significant numbers of vehicles to park on street adjacent to the site. Consideration should be given to appropriate road widening on the school frontage.

While 21% of students at the existing school site use buses, neither Billyard Avenue nor Chilton Parade are approved for use by buses and Chilton Parade is not considered suitable for bus use because of its narrow width and tight radius at the curve at Warrawee Avenue.

The application relies on parking relatively remotely from the site, near Billyard Avenue, for dropping off and picking up younger children. The access road connecting the proposed parking near Billyard Avenue to the school campus, is relatively narrow between the church building and retaining wall. This access is not considered to be suitable for two way traffic or for pedestrian movement while that access is in use by vehicles. There could be safety issues with access to the church during weekdays, when school traffic uses this access.

2. *More specifically, the Project Planning Associates' report refers to 92 parking spaces being available for the proposed school. However, it is noted that this parking provision consists of 45 spaces being available near Billyard Avenue, 17 at the rear of the church are for the use of the church only, 22 in a new staff parking area and 8 in pick-up and set-down facilities. It is questioned whether the parking area near Billyard Avenue would be used by parents and carers of younger children who would need to park their vehicles and walk up to 200 metres to the school when dropping off and picking up children. It is also questioned why 17 spaces located at the rear of the church are for the use of the church only, are included in the calculations for parking provisions.*

The traffic report states that the internal road link between Billyard Avenue and Chilton Parade would be retained, but would be closed during school hours to prevent through movement between the two frontages. On the other hand, the Traffic Assignment diagram (Figure 6), shows traffic entering the site from Billyard Avenue and exiting from Chilton Parade. It might be assumed that the through link would be active during set down and pick up periods.

3. *It is considered that some parents and carers would seek parking in Chilton Parade rather than park near Billyard Avenue. The report refers to the possible widening of Chilton Parade, but does not adequately address this issue. It is likely that No Stopping restrictions, together with widening, would be required in Chilton Parade to prevent setting down and picking up students from the street or to make it safe. Restrictions would, however, impact on residents in the area.*
4. *The report does not refer to students catching buses to and from the proposed development, as required by DCP 43, and no provision appears to have been made for buses. The calculations for vehicles accessing the school site have not been adjusted for the fact that bus transport may not be available to the new site and that additional students are therefore likely to be transported by vehicles.*
5. *The report contains inaccuracies including claiming that Bangalla Street and Millewa Avenue are Regional roads and that Billyard Avenue is a Collector route.*
6. *There are concerns with visibility from the proposed driveway in Chilton Parade even though the report suggests that adequate site distances would be available. These calculations should be checked.*
7. *Significant increases in traffic volumes and congestion could be expected to increase with the relocation of the school, including;*

- (a) *At the intersection of Cleveland Street and Billyard Avenue, particularly during peak school times. There are also heavy pedestrian movements across the two pedestrian crossings at the intersection during these periods. The proposal would result in increased traffic volumes through the intersection at peak school periods.*
 - (b) *There would be significant increases in traffic volumes in Chilton Parade/Warrawee Avenue (Bangalla Street to Young Street), from about 55 vph to 150 vph, during peak school times. This increase would be noticeable to residents.*
 - (c) *There would also be significant increases in traffic volumes in Young Street (Billyard Avenue to Chilton Parade, from about 110 vph to up to 180 vph.*
 - (d) *Traffic volumes could be expected to increase in other streets near the proposed campus, including Billyard Avenue, part of Cleveland Street Bangalla Street and Millewa Avenue.*
8. *The Project Planning Associates' report relies on a traffic and parking survey undertaken on Friday 8 December 2000. There is a question whether a survey undertaken on a Friday near the conclusion of the school year, nearly 4 years ago, is still relevant. It is suggested that for a proposal as significant as this rezoning, current surveys should be undertaken. The vehicle parking demand survey should identify the maximum numbers of vehicles parking, rather than numbers on the quarter hour (Tables 4.1 and 4.2).*

The Project Planning Associate's Traffic and Parking Assessment Report submitted is not considered to have properly considered all relevant issues and addressed them. It is requested that the report be reviewed addressing deficiencies, including issues raised above.

Design / Projects Engineer:

After reviewing the submitted information, the issues raised by the proposal in terms of the affect on the public roads and drainage would be able to be dealt with by conditions at the DA stage.

The Road and Trunk Drainage issues that would need addressing in the design include:

1. *Drop off and Pick up from private vehicles being limited to the zones inside the school as generally shown on the drawings.*
2. *School bus access will require local widening of Chilton Parade to maintain 2 way traffic flow. The widening would be limited to the frontage of 39 Chilton Parade and adjacent access to 35-41 Billyard Ave*
3. *No stopping on Chilton Parade near the school during school peak times, to improve safety for pedestrians in the area, to maintain traffic flow in the street and vehicular access to school.*

4. *Removal of the existing 'Wombat' crossing in Water Street outside the existing Prouille School. (Note, the existing marked crossing in Water Street.)*
5. *Due to the narrow width of Chilton Parade and Warrawee Ave, construction access will be via Billyard Ave and Cleveland Street for the Chilton Ave and Billyard Ave sites. Due to the narrow width of the eastern section of Water Street, construction access will be via Water Street and Cleveland Street for the Water Street site.*
6. *Additional road and trunk drainage works may be required following the assessment of any DA submitted.*
7. *This assessment does not include traffic issues associated with the proposal, there is a separate report for these.*

DEPARTMENT OF PLANNING & ENVIRONMENT

Environmental Planning & Project Officer:

I have read the report titled, Report on Preliminary Contamination Assessment – 35 Billyard Avenue, Wahroonga dated July 2004.

I agree with the findings that after taking into consideration the testing results and search of historical land uses the site in question is suitable for residential development with accessible soils.

It should be noted that only 35 Billyard Avenue was the site for this testing report and did not include the actual site of the current church building. Looking at your attached memo dated 27 September 2004, the diagram indicates some surrounding blocks are also included in the proposed rezoning application. In particular, 39 Chilton Parade or the current school located at 3-5 Water Street were not part of the testing strategy.

From a cursory look of Council's land information system, the results from the report and a site visit, the likelihood of these other blocks attached to 35 Billyard Avenue of being contaminated would seem to be minimal if at all.

Information should be sort from the applicant as to why these other sites were not tested at the same time.

(Preliminary) Draft Ku-ring-gai Local Environmental Plan No ..

Under the
Environmental Planning and Assessment Act 1979

1 Name of plan

This plan is *Ku-ring-gai Local Environmental Plan No*

2 Aims of plan

This plan aims to rezone obsolete Special Use 5(a) zoned land to Zone No 2(c) under the "*Ku-ring-gai Planning Scheme Ordinance (the Ordinance)*" to allow for future development consistent with this zone.

3 Land to which plan applies

This plan applies to land fronting 3-5 Water Street, Wahroonga and 33-41 Billyard Avenue, Wahroonga and 39 Chilton Parade, Wahroonga, as shown coloured light scarlet, with dark red edging and lettered "2(c)" on the map marked "Ku-ring-gai Local Environmental Plan No ..." deposited in the office of Ku-ring-gai Council.

4 Amendment of Ku-ring-gai Planning Scheme Ordinance

The *Ku-ring-gai Planning Scheme Ordinance* is amended as set out in Schedule 1.

Schedule 1 Amendments**[1] Clause 4 Interpretation**

Insert in appropriate order in the definition of "Scheme map" in clause 4(1):

Ku-ring-gai Local Environmental Plan No ...

ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979

KU-RING-GAI MUNICIPAL COUNCIL 463

(PRELIMINARY) DRAFT LOCAL ENVIRONMENTAL PLAN



NORTH



2(c)

RESIDENTIAL 2(c)

DRAWN BY: COUNCIL'S CORPORATE MAPPING SYSTEM

PLANNING OFFICER: LETA WEBB

COUNCIL FILE NO.

DEPT. FILE NO.

CERTIFICATE ISSUED
UNDER SEC.65 E.P.A. ACT DATE

GOVT. GAZETTE NO. DATE

STATEMENT OF RELATIONSHIP WITH OTHER PLANS

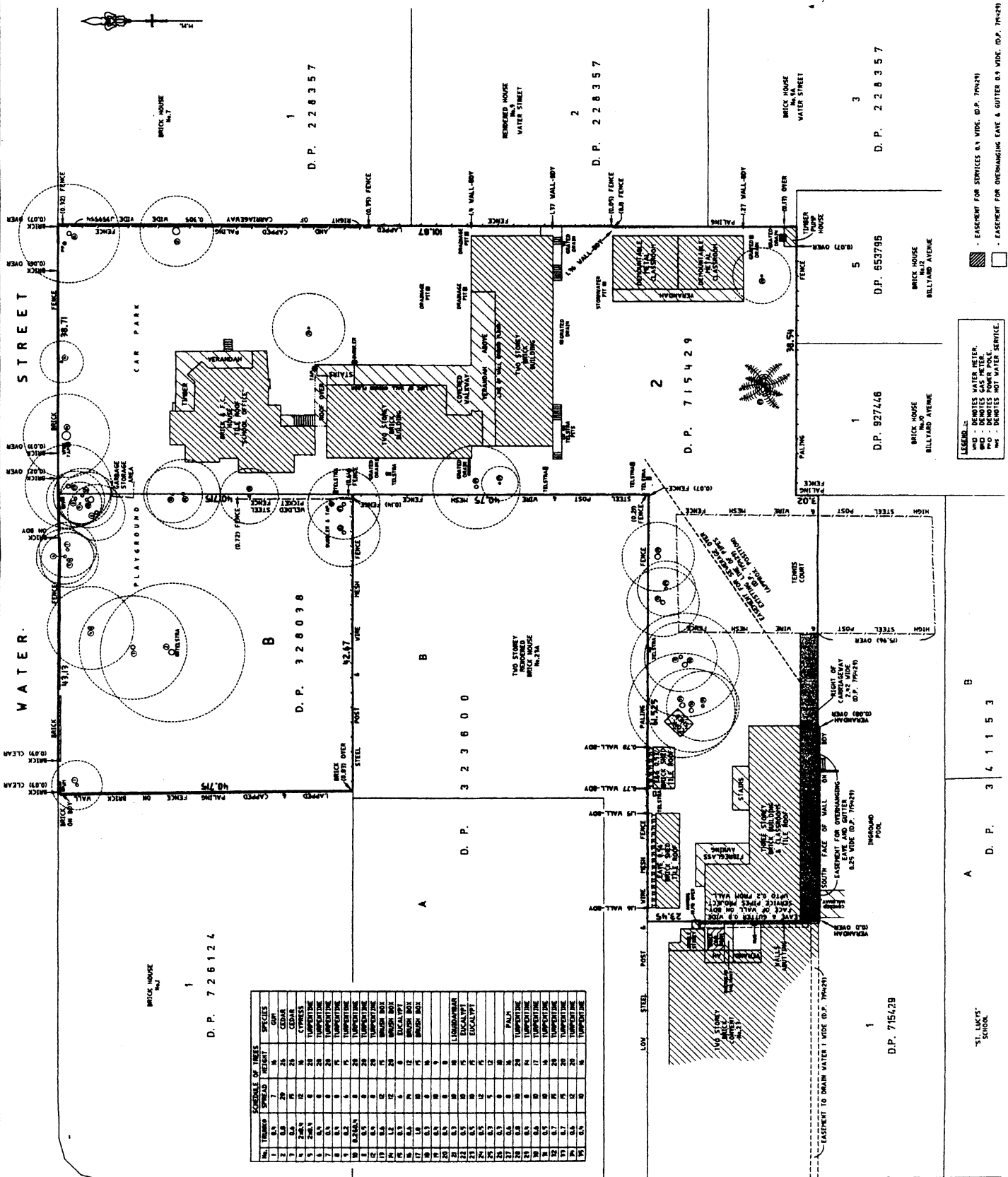
AMENDS THE KU-RING-GAI PLANNING SCHEME

CERTIFIED IN ACCORDANCE WITH THE ENVIRONMENTAL
PLANNING & ASSESSMENT ACT 1979, AND REGULATIONS.

GENERAL MANAGER

DATE

No.	SCHEDULE OF TREES		SPECIES
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LEGEND :-

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GMD	-	DENOTES	GAS METER.
PPO	-	DENOTES	POWER POLE.
NWS	-	DENOTES	HOT WATER SERV

- EASEMENT FOR SERVICES 0.4 WIDE. (D.P. 76929)
- EASEMENT FOR OVERHANGING EAVE & GUTTER 0.9

NOTES

[illegible]

HORIZONTAL DATUM:
CO-ORDINATE SYSTEM:
MARKS ADOPTED:

VERTICAL DATUM:
 DATUM:
 B.M. ADOPTED:
 R.L.
 SOURCE:

[illegible]

CLIENT: CATHOLIC DIOCESE OF BROKEN BAY
PO BOX 125 WAHROONGA 2076

PLAN

IDENTIFICATION SURVEY OF
PROULLE PRIMARY SCHOOL
BEING LOT 8 D.P. 328038
AND LOT 2 D.P. 718429
WATER STREET, WAHROONGA

d Degotardi, Smith & Partners

**11/19-23 Bridge Street
Pyrmont NSW 2073**
Telephone: (02) 9440 1100
Facsimile: (02) 8440 1055
Dr: 0720 Gordon
E-mail: survey@delgond.com.au

Winner : "Sir Thomas Mitchell Excellence in Surveying & Mapping Award 2004"

UNAPPROVED P.L.G.		DRAWING NUMBER		3050710.DWG	REV.	A
APPROVED P.L.G.		DATE				
SHEET 1 OF 1		SCALE				
		1:250				

Site Inspection
Saturday 30 July 2005
(3-5 Water Street, 33-41 Billyard Avenue
& 35 Chilton Parade, Wahroonga)

Meeting commenced on site at Prouille School 5 Water Street, Wahroonga at 9.05am with Deputy Mayor Nick Ebbeck officiating.

Councillors in attendance: Councillor Ebbeck Deputy Mayor (Chair)
 Councillor Malicki
 Councillor Bennett
 Councillor Lane
 Councillor Shelley
 Councillor Andrew

Apologies: Mayor Councillor Ryan
 Councillor Cross
 Councillor Hall
 Councillor Innes

Staff in attendance: Antony Fabbro (Manager Urban Planning)
 Rod Starr (Senior Urban Planner)

Applicants in attendance: Representatives for the applicant included
 professional staff and church/school
 representatives

1. The meeting was opened by Councillor Ebbeck who welcomed all present. An explanation of the application and rezoning process was given by staff. Questions were then invited from residents concerning the proposal and comments received.

School representatives gave a brief overview as to the future needs for Prouille School and how this led to the current rezoning application.

There was resident concern expressed at future redevelopment and its potential impact. It was explained that detailed consideration of any development proposal would be undertaken at the future development application stage. Whilst Council was considering a rezoning application it would nevertheless be mindful of potential future development issues.

Councillors then proceeded to inspect the Prouille School site noting its relationship to adjoining lands including St Lucys' School.

2. The inspection then moved to the Billyard Avenue/Chilton Parade site at approximately 9.50am where it reconvened.

An overview of the rezoning and the indicative future proposals for this site was given by staff. The composite site was then walked by Councillors noting the landform and usage of the convent/church/seminary lands.

3. Residents in expressing comment raised some particular concerns including:
 - future traffic concerns in Chilton Parade.
 - The narrow width of Chilton Parade.
 - Pedestrian conflicts in Chilton Parade when used by Knox Grammar students and general lack of footpath.
 - Existing and potential future stormwater issues including boundary creek lines.
 - questioned whether there was a zoning specifically for residential use which excluded schools. It was explained that there was no such specific zone and that DIPNR is requiring broader based zones in LEP's.
4. Councillors raised questions and made requests for information as follows:
 - it was suggested that a briefing for residents be arranged to provide an overview for information about the rezoning application process.
 - questioned the ability for future allotments on the Prouille School site to comply with KPSO provisions.
 - requested provision of information identifying the heritage items on the lands adjacent to the subject lands.
 - requested information on the size of properties surrounding both the Prouille School and Billyard Avenue/Chilton Parade sites.
 - requested that trees on the Prouille School site be surveyed and plotted on a site plan.
 - requested advice as to the width of the battleaxe handle east of No 35 Chilton Parade which accesses the "seminary" land. (Note: this width is 6 metres).
 - requested advice as to the width of the battleaxe handle to Billyard Avenue at the eastern end of the "church" zoned land (Note: This width is 12.185 metres).
 - number of significant trees located within the access ways onto Chilton Parade and Billyard Avenue.
 - survey plans identifying tree locations for the site.
 - heritage status of the Water Street old school building.

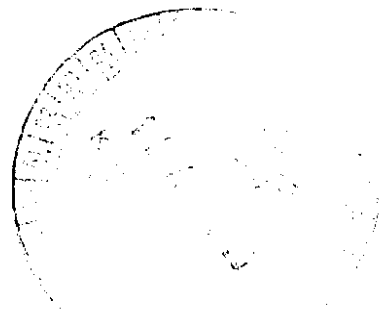
Note: This information is being collected and will be addressed in the report back to Council.

5. The inspection of the site concluded at 10.45am and Councillors then departed for the next site.

E. Mussett
19 Halcyon Avenue
WAHROONGA NSW 2076

Wednesday, August 10, 2005

The Director of Planning & Environment
Kur-ring-gai Council
818 Pacific Highway
GORDON NSW 2073



Att: Mr Rod Starr

Rezoning 3-5 Water Street (Prouille School), 33-41 Billyard Avenue (Holy Name Church) and 39 Chilton Parade, Wahroonga (Convent)

Dear Sir,

Ref Your S03746 of 18th July 2005 – re above subject

Objection to rezoning of land 39 Chilton Parade, Warriawee to Residential 2c to accommodate Prouille School from 3-5 Water Street, Wahroonga and 33-41 Billyard Avenue, Wahroonga.

Reasons for Objection:

The use of this land to accommodate a school of 400 to 600 pupils plus staff, parents dropping off and picking up children after school, will cause, to state it mildly, absolute traffic chaos in a street which can only be described as a very narrow, covered with bitumen, horse and buggy road.

It would not be possible for Chilton Parade to cope with school traffic and some of the surrounding roads (e.g. Young St) are no better.

How could Chilton Parade cope with the great numbers of large four wheel drive vehicles which the mothers mostly use to drop off and pick up their children, five and sometimes six days per week (sports days) and twice per day.

The noise, turmoil and disruption it would cause in the area, which as stated previously, is totally unsuitable for such traffic flow and devastation to the occupants of the houses surrounding the area.

2nd August 2005

Ku-ring-gai Municipal Council
Planning & Development

Fax: 9424 0880

No of Pages: 1

Dear Sir:

It has been brought to my attention that The Catholic Diocese in Wahoonga is again trying to get the land between Billyard Avenue and Chilton Parade rezoned so that they can put a school there. I believe they are proposing to relocate the Prouille school from Water Street, Wahoonga to Billyard Avenue. Obviously at this early stage there are no details as to where students etc would enter the site, however having another school in Billyard Avenue would be extremely detrimental to the area. Already there are two schools and a large church. Although St Lucy's is officially in Cleveland, the traffic still impacts on Billyard. Driving on Billyard Avenue during the hours when school commences or finishes is hazardous to say the very least as the street is quite narrow with a lot of through traffic and the traffic from Knox is substantial. Then, of course, there are the days when Knox has events scheduled and cars line Billyard Avenue right down as far as Young Street. They park both sides of the street and Billyard Avenue becomes a single lane only street. This is particularly dangerous around the area of the Catholic church as it is on a hill and you cannot see if traffic is approaching over the crest. I would very much like the Council to give some thought to having parking only on one side of the street in that particular part of the street.

If, per chance, the entry to this proposed school is to be in Chilton Avenue, the hazards are even greater. Chilton Avenue has that awful right angle bend, on a hill, where 2 cars can barely pass each other, right near where the school would be, and one could only imagine the chaos there. This is right in the midst of a quiet neighbourhood and would be very detrimental to the area.

Please do not allow this area to be re-zoned for a school. If they want to sub-divide it for housing lots, that is fine and fits into the area very nicely, but this area is unsuitable for the extra traffic that would result from a school of any kind, let alone the size proposed.

Yours sincerely,

Lynne Low *Charles Low*

LYNNE & CHARLES LOW.

22 Halcyon Avenue

Wahoonga 2078

Email address: lynne@low2marketchar.net.au

519332 X
S.D. & H.K. Brown,
12 Chilton Parade,
Warrawee. N.S.W. 2074
2nd August, 2005

The General Manager,
Ku-ring-gai Council,
Gordon. N.S.W. 2072

Dear Sir/Madam,

Ref. SO3746

Application to Re-zone 3-5 Water Street, 33-41 Billyard Avenue & 39 Chilton Parade.

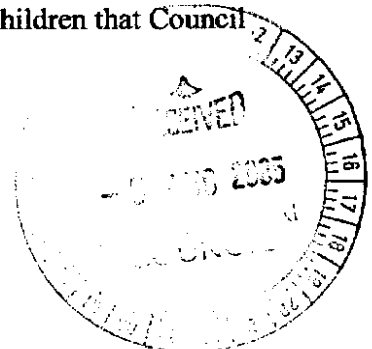
I am writing to voice my concerns against the abovementioned re-zoning of these allotments.

My issues of great concern relate to infrastructure currently here at Warrawee and neighbouring suburb of Wahroonga. Changes to re-zoning and development applications will always now and in the future require great scrutiny by your Council. Based upon the fact that in Warrawee and Wahroonga the suburbs originated in the late 1800's. Many of the roads around my home are the original laneways which over the past century they have just been re-surfaced to accommodate local traffic. Many of the streets which are narrow which enable only one vehicle to pass at a time are Young Street, Chilton Parade, Raymond Avenue, Warrawee Ave and sections of Water Street. Many of these streets have no curbing and guttering as there is no room for road widening or these facilities. Many sections have no footpaths - locals both young and old walk on the roads. Cars don't get up to high speeds as one must drive with great patience and be prepared to stop to allow vehicles to pass on these narrow laneways.

Re-zoning of large parcels of land is of concern as delivery trucks, buses, increasing further traffic to these areas could spell disaster if traffic came to a standstill altogether. Better to confront the issue now rather than later.

Areas of concern as to traffic is how much is Council prepared to spend to overcome these issues. There are a lot of schools both Catholic, independent and public in this area. Over the years all of these schools have at times have wanted to expand and increase numbers five fold it is big business. Questions we need to ask though can the infrastructure of Warrawee and Wahroonga sustain this growth.

Traffic in the morning at approx 8am and 3pm in the afternoon literally brings the suburb to a standstill therefore before any rezoning applications is approved an independent traffic study and an environmental impact study should be required. One way streets and "no parking" signs, roundabouts will not solve the issues of traffic in these areas. How many schools can a small area support, are these local children that Council



6 September, 2005

architectus™

The General Manager
Ku-ring-gai Council
PO BOX 15
GORDON NSW 2072

Attention: Mr Brian Bell

Dear Brian,

**Application for rezoning the properties at 3-5 Water Street,
Wahroonga (Prouille School), 33-41 Billyard Avenue, Wahroonga
(Holy Name Church) and 39 Chilton Parade, Wahroonga
(Convent)**

Architecture
Urban Design
Planning
Interior Architecture

We write on behalf of the Billyard and Chilton Residents Action Group regarding the proposed rezoning of the three properties at Billyard, Chilton and Water Streets. We write with a view of clarifying a point raised at the on-site meeting on Saturday 30 July 2005 related to the process of assessing the rezoning application and to identify matters that should inform Council's decision whether to prepare a draft Local Environmental Plan under Section 54 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Architectus Sydney Pty Ltd
ABN 11 098 489 448
41 McLaren Street
North Sydney
NSW 2060 Australia
T 61 2 9929 0522
F 61 2 9958 5765
sydney@architectus.com.au
www.architectus.com.au

We understand that the rezoning application will be placed on public exhibition with a draft Local Environmental Plan (LEP) to amend the Ku-ring-gai Planning Scheme Ordinance (KPSO) and public comments will be sought. We request on behalf of the Billyard and Chilton Residents Action Group that Council seek additional information to determine the suitability of the site to accommodate a school considering its impacts on the surrounding area, prior to exhibiting the draft LEP.

It was clear from the on-site meeting that the majority of resident concerns related to the rezoning of 39 Chilton Parade, Wahroonga and the intention of the Applicant to move the school from its current location at 5 Water Street to the new site in Chilton Parade. The rezoning application to Residential 2(c) should be consistent with the objectives of the Residential 2(c) zone. The objectives of the 2(c) zone are not explicit in the KPSO but we assume that the Residential 2(c) zone is generally low density with detached dwellings on large allotments (minimum allotment size 929sqm) with a limited range of complementary and compatible non-residential uses.

It is sound planning practice to rationalise obsolete 'special use' zones to take on zoning characteristics of the surrounding area. This approach is consistent with the State Government's planning reform process for improving and standardising the preparation of Local Environmental Plans. It is considered, however, that support for the rezoning proposal must be based on more than an assessment of residential uses permitted in the Residential 2(c) zone and the proposal should demonstrate how adverse impacts associated with the likely future school use of the site can be managed and mitigated. It must also demonstrate that it delivers an appropriate planning response to be supported.

Auckland
Brisbane
Christchurch
Melbourne
Shanghai
Sydney

An assessment of the likely future uses, permissible within the 2(c) zone, is required for Council to determine the suitability of the site having regard to the characteristics of the site and the surrounding area and its impacts on adjoining properties and the street network. Schools generate traffic movements in excess of those generated by low density residential development. The traffic generated by schools is generally

confined to a morning peak period and an afternoon peak with the occasional special event traffic generation. During the morning and afternoon peak there is a general traffic peak period which is exacerbated by the presence of the school. If traffic generated by the school is not effectively managed it can cause adverse impacts on the amenity of the surrounding areas, including delays to motorists at intersections, impacts on pedestrian and motorist safety and the environmental capacity of the local road network. The following traffic related considerations should be assessed to determine the suitability of the site at 39 Billyard Avenue, Wahroonga to accommodate a school use:

- Traffic impact of school generated traffic at the concentrated peak drop off and pick up times and the suitability of Chilton Parade and Billyard Ave and key intersections to accommodate such a use.
- Likely operation of, and management measures for, the internal parking area.
- Measures to mitigate potential vehicle queuing and resulting safety implications.
- Measures required to achieve the minimum safe sight distances at site access locations.
- Measures to discourage on street drop off and pick up of children.

The documentation lodged with the rezoning request, and identified in Council's rezoning report, is currently not publicly available. The list of supporting documents provided in Council's planning report indicate the Applicant's intention to demolish the existing buildings at 39 Billyard Avenue, Wahroonga and construct new buildings for a school.

The EP&A Act does not prohibit Council from requesting further supporting information for a combined rezoning and development application to enable Council to assess the impacts on the likely future use of the site conceptually illustrated in the Applicant's rezoning request. We consider that for Council to make an informed decision to rezone the Chilton Parade property, with the knowledge that it is the intention of the applicant to use the property at 39 Chilton Parade, Wahroonga for a school, Council needs to consider the impacts of the new school on the amenity of the surrounding area.

Yours sincerely,



Murray Donaldson
Urban Planner
Architectus Sydney

cc.

Mayor Adrienne Ryan, 9416 5032
Deputy Mayor Nick Ebbeck, 9449 2913
Cr Ian Cross, 9488 9075
Cr Michael Lane, 9402 5498
Cr Maureen Shelley, 9882 6948
Cr Graeme Innes
Cr Elaine Malicki, 9144 5716
Cr Anita Andrew, 9449 3873
Cr Laura Bennett, 9988 0064
Cr Tony Hall, 9144 3096

aryan@kmc.nsw.gov.au
nebeck@kmc.nsw.gov.au
icross@kmc.nsw.gov.au
mlane@kmc.nsw.gov.au
mshelley@kmc.nsw.gov.au
ginnes@kmc.nsw.gov.au
emalicki@kmc.nsw.gov.au
aandrew@kmc.nsw.gov.au
lbennett@kmc.nsw.gov.au
thall@kmc.nsw.gov.au

Antony Fabbro, Manager Strategic Planning, 9424 0880, afabbro@kmc.nsw.gov.au
Rod Starr, Senior Urban Planner, 9424 0880, rstarr@kmc.nsw.gov.au

524502 X

Rod Starr

From: Steven Head
Sent: Thursday, 18 August 2005 3:04 PM
To: Antony Fabbro; Rod Starr
Subject: FW: Rezoning application of school & church land

fyi
can we register and deal with as appropriate
regards
Steven

From: Ian Cross
Sent: Thursday, 18 August 2005 3:00 PM
To: Steven Head
Subject: FW: Rezoning application of school & church land

For Antony and Rod Starr
Ian

From: john & julie kelly [mailto:j.kelly@optusnet.com.au]
Sent: Thursday, 18 August 2005 2:32 PM
To: Nick Ebbeck; Ian Cross; Adrienne Ryan; thall@kmc.gov.au
Subject: Rezoning application of school & church land

Re: Water St,Billyard Avenue & Chiltern Parade

I am a ratepayer, parishioner & Prouille parent who would like to voice my support for the Rezoning application for the school,church land & convent.

It is critical to the ongoing viability of the parish school to renew our current facilities. Numbers of students have fallen from when my son started Kindergarten four years ago largely because of inadequate facilities for what should be our most valued Constituents.

These children need to attend school somewhere within the area!
This area is known for its school facilities and many financial benefits flow into the area directly because of the attraction of schools.
Including increases in property values to those houses within walking distance of schools.

Whilst I understand some nearby residents are against the rezoning I feel it is unrealistic of them to consider the current parklike land of the church and convent should remain unused & unavailable for the owners of this land simply because they prefer their current parklike view. This is imposing a huge cost on the owners to which they make no contribution.

Surely anyone buying into the area had enough intelligence and foresight to assume this land would not remain like it is forever.

What is being proposed is sensitive to the environment of the area and is a logical next use of that land. This rezoning will benefit large numbers of people, not just those supporting it now but all those generations to follow.

Please consider your duty to our children & our future. Thank you.

Julie Kelly
6 Mahratta Ave
Wahroonga 2076
02 9487 4925

18/08/2005

66 Hewitt Ave.,
Wahroonga NSW 2076

24th August, 2005

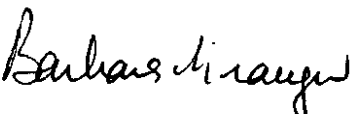
Ms. Adrienne Ryan,
Mayor,
818 Pacific Highway,
GORDON NSW 2073

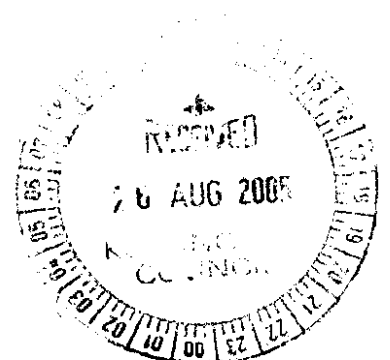
Dear Mayor Ryan,

I am writing on behalf of the Holy Name Parish in Wahroonga and in support for their desire to have the area around the Holy Name Priory rezoned.

My youngest daughter attended Prouille in the 1980's and I have a brother who is a Dominican priest in Perth and so my ties with the parish have always been close (although I live in the Hornsby council area) and I would love to see a new school in the church grounds. I realize that there are problems foreseen with traffic etc. but there is already another junior school in the street and I am sure that the plan for the school will handle these aspects very adequately. Fr. Sciberras has worked tirelessly to see this dream eventuate and the new school will be so much better for the children than the old one. But if they can stay in the old one until the new one is built there will be no disruption. An all round excellent solution.

Yours sincerely,


Mrs. Barbara Granger



From: john & julie kelly [mailto:j.kelly@optusnet.com.au]
Sent: Thursday, 18 August 2005 2:32 PM
To: Nick Ebbeck; Ian Cross; Adrienne Ryan; thall@kmc.gov.au
Subject: Rezoning application of school & church land

Re: Water St, Billyard Avenue & Chiltern Parade

I am a ratepayer, parishioner & Prouille parent who would like to voice my support for the Rezoning application for the school, church land & convent.

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Constituents.

These children need to attend school somewhere within the area!

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Including increases in property values to those houses within walking distance of schools.

Whilst I understand some nearby residents are against the rezoning I feel it is unrealistic of them to consider the current parklike land of the church and convent should remain unused & unavailable for the owners of this land simply because they prefer their current parklike view. This is imposing a huge cost on the owners to which they make no contribution.

Surely anyone buying into the area had enough intelligence and foresight to assume this land would not remain like it is forever.

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Please consider your duty to our children & our future. Thank you.

Julie Kelly

6 Mahratta Ave

Wahroonga 2076

02 9487 4925

207 Eastern Road, Wahroonga. N.S.W. 2076 Telephone: (02) 9489 3676

August 23rd, 2005

Dear *Mayor,*

I am writing to say how very important it is that we have the St. Catherine's land in Chiltern Parade rezoned as residential.

As you know, our church is hoping to rebuild the school Prouille on this land. This would be extremely beneficial for the children at Prouille as they would be next to their church but it would also ensure the survival of this very beautiful church itself.

This Neo-Romanesque church, designed by Nancy Davey in the early 1950s, is, in my opinion, one of the most impressive churches in Australia. It should be considered as a heritage building ~~in~~ in Ku-ring-gai and, as such, cherished by Ku-ring-gai Council. In these days, when there is a shortage of priests, there is always a possibility that churches could be closed and parish~~oners~~ sent off to another parish.

The school, Prouille, is old and will have to be rebuilt soon. An early plan for the rebuilding of Prouille, on land next to the church, designed buildings built around a central play area, so that noise could be contained. I imagine this aspect would be considered again.

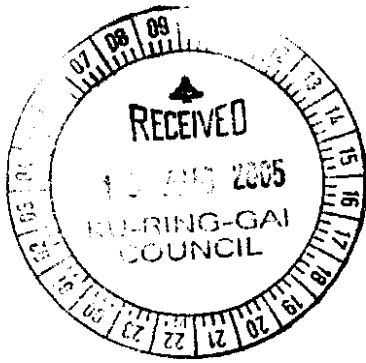
I noticed that when the Councillors inspected the land at St. Catherine's, they did not, as far as I know, look inside the church. I hope I was wrong. Aesthetics, of course, are not considered to be important in the day-to-day running of affairs. However when we look back at history and think of Greece, we think immediately of the Parthenon; when we look at Byzantine history we think of Sancta Sophia; England, France and Spain have magnificent Gothic cathedrals and Italy, great Renaissance buildings. In Sydney we have the Opera House, one of the great buildings of the 20th Century. Any really good architecture should be treasured and I hope that Ku-ring-gai Councillors will have a look at the church at Billyard Avenue and consider this.

The building of the school Prouille next to the church would ensure the survival of this church.

Yours sincerely,

Ursula Laverty.





52337+ x

40 Mitchell Crescent
Warrawee N.S.W. 2074
e-mail : mdonohoe@optusnet.com.au

15 August 2005

The Mayor, Councillor Adrienne Ryan
Ku-ring-gai Council Chambers
Locked Bag 1056
Pymble NSW 2073

Dear Councillor Ryan,

Re: Application for Rezoning to Prouille School, Holy Name Church and St. Catherine's Convent

I am writing in support for the proposed applications before Council.

On recent visits to Council meetings I have listened to members of Council making plain the limitations they have dealing with large scale developments, that invariably concern the large known developers. Developments that are not popular.

Much is said about the community of the area. The application before Council provides an opportunity to do something for the community and for the future of that community.

Prouille is part of the Catholic community of the area. It urgently needs space to cater for its children. It has presented to Council serious and costly alternatives which are demonstrably not popular with all persons in the area. Lamentably anything to do with the improvement of schools fails the popularity test.

Rejection of the application before the Council is neither going to promote nor assist the interests of the community in Ku-ring-gai now or in the future.

The children of Prouille, with other school children in the Ku-ring-gai area are the future of our community. The decision before Council is not an easy one. However, if the wider long term interest of our community is to be advanced, Council should

accept the application before it to benefit these children now and for future generations.

Yours sincerely,

A handwritten signature in cursive script, reading "Michael Donohoe". The signature is fluid and written in dark ink.

Michael J. Donohoe,

524473 x

E-Mail Message

From: Trish Migdoll [SMTP:trishmigdoll@mac.com]
To: KMC [EX:/O=KMC/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=KMC]
Cc:
Sent: 19/08/2005 at 9:39 AM
Received: 19/08/2005 at 9:40 AM
Subject: RE-ZONING APPLICATION OF PROUILLE SCHOOL

To; MAYOR ADRIENNE RYAN
COUNCIL CHAMBERS

Dear Ms Ryan,

We are writing to you as concerned parents at Prouille School and as members of the Holy Name Parish. We fully support the Parish's application to have the Parish and convent sites rezoned from Seminary/Convent/Charitable Purposes to Residential which will then allow the relocation and building of a new Prouille School and the rezoning of the Water Street site to residential.

We have three daughters, two of whom are still currently at Prouille, and fully support continuing to be able to have the choice of a Catholic Primary School in the Wahroonga area. The current Water Street site is now inadequate and the decision to relocate and rebuild a new Prouille next to the Parish Church is vitally important. Although our children would not see the new school as we only have a total of two and a half years remaining at Prouille, we believe the children and families of the future are entitled to the option of the caring, nurturing environment that both this Catholic Primary School and Parish offer. To date the residents of Chiltern Parade and Billyard Ave have benefited from the environs of the parkland both around the church and the convent sites however, we believe, that the design of the school would not overly impact on the "green" value of the location.

One of the major benefits of the new location over the old is the off-street pick-up and drop-off area which hugely benefits the safety of young children. To have the school adjacent to the parish church is also greatly beneficial to both the children and the parish.

Although we were not able to attend the meeting on the 30th July we registered our support with another parent who was present. We believe the meeting was somewhat hostile from the residents and we can fully understand this, however we also believe the Wahroonga area as we know it is changing and this is progress. The rate at which Sydney is changing overall and the influx of people into the city now means life cannot stand still for too long. We hope we can all work together in a peaceful and harmonious way which will lead to the positive support of this application.

Yours sincerely,

Michael and Patricia Migdoll
11 Hastings Rd
Warrawee NSW 2074

536146 x

16 September 2005

Mr G & Mrs T Vumbaca
9 Clissold Road
WAHROONGA NSW 7076

Telephone: 9489 9946

The Town Clerk
Ku-ring-gai Council Chambers
818 Pacific Highway
GORDON NSW 2072

Attention: Ms Elaine Malicki

Dear Ms Malicki

Re: Rezoning Application Submitted by the Catholic Schools Office on Behalf of Prouille

We write in support of the above rezoning application.

The reasons for supporting same:

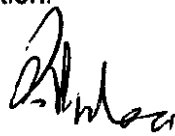
1. There are numerous other sites within the Municipality which have been rezoned for development.
2. In line with other rezoning positions this application is no different.
3. It would be discriminatory not to approve rezoning. Examples of other sites rezoned include but are not limited to the following:
 - 3.1 Land owned by the nuns in Junction Road.
 - 3.2 The seminary land on the corner of Eastern & Burns Road.
 - 3.3 Large scale developments along Bobbin Head Road, Turramurra.

The writer has been a resident of Wahroonga predominantly Clissold Road for approximately 50 years and it is my view and my wife's view that progress is important to sustain future generations not only in Ku-ring-gai Municipality but in all Municipalities. Further many land allotments were originally orchards and subsequently were rezoned residential for obvious reasons i.e. progress and to accommodate a growing population.

We thank you for the opportunity of allowing us to make a submission and once again reiterate our support for the above application.

Yours faithfully


George Vumbaca & Teresa Vumbaca



524799 K

E-Mail Message

From: The Pejkovics [SMTP:johlead@bigpond.net.au]
To: KMC [EX:/O=KMC/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=KMC], Nick Ebbeck [EX:/O=KMC/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=NEBBECK], Ian Cross [EX:/O=KMC/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN=CROSS]
Cc:
Sent: 20/08/2005 at 2:57 PM
Received: 20/08/2005 at 2:57 PM
Subject: All Councillors

Dear Councillors

As a parent of Prouille students and a Parishoner of Holy Name Church I emlore you to look at the re zoning of the land next to the church for what it is.....residential rezone, not a school development application.

The nuns are leaving therefore the land will become redundant and useless if the rezoning is not approved. That is a lot of money worth of useless land that is prime real estate based on unsubstantiated fears of the locals. Im sure they would be happy if the land was sold to a developer who wanted to put houses on the property therefore increasing the dollar value of their own properties, and that may be the final outcome! who knows!

The application for rezoning is an application for a rezone not an application for a new school or a school zone. Its for a residential zoning! That means that the land again becomes prime real estate, and if an application for a new school is later submitted, it too should be assessed on its merits! This is not the time for that.

I hope that you can all see through the dust storm and see that a residential zoning does not neccesitate a new school.

Sincerely

L.Pejkovic

9 Katina St
Turramurra NSW 2074

23 November, 2005

Cr Ian Cross
Councillor
Ku-rin-gai Municipal Council

Dear Cr Cross,

I am writing to express my strong support for the rezoning application for St Catherine's Convent site in Chiltern Parade, Warrawee.

Prouille School has a long history of educating children in Wahroonga and enjoys a well-deserved reputation for providing a high quality education at an affordable cost for parents. Indeed one of the reasons for my family locating to Turramurra was the proximity of Prouille School.

However, as a parent of an ex-pupil of Prouille School and a parishioner at Holy Name Church I am well aware of the desperate need to rebuild the current Prouille School. The current building is in a poor state of repair, lacks facilities and amenity and is severely restricted by lack of space on its current site. I firmly believe that the best and most feasible option is to relocate the school to the site currently occupied by St Catherine's convent in Chiltern Pde.

By doing so would relieve the considerable traffic burden on Water St, Cleveland St and other surrounding streets, a problem which is compounded by the close proximity of other schools such as Knox Preparatory School. By relocating to Chiltern Pde and by better traffic management systems, including more off-street drop-off and parking, the traffic problem is averted.

I understand that residents who live nearby may be concerned about potential noise but I do not believe that this will be a problem for the very limited time the school is in use.

I strongly urge you to support the rezoning application for the St Catherine's site and also the Development Application for the school when it is lodged. To do so would be to the benefit of the residents of Ku-rin-gai and in the best interests of the education of our children.

Sincerely,

Katrina Onishi



Prouille School Parents' and Teachers' Association

17 November 2005

Mayor Elaine Malicki

Ku-ring-gai Council
818 Pacific Highway
Gordon NSW 2072

By email: emalicki@kmc.nsw.gov.au

Dear Mayor,

**RE: Rezoning 3-5 Water Street (Prouille School),
33-41 Billyard Avenue (Holy Name Church and Seminary) and
39 Chilton Parade (Convent), Wahroonga.**

On behalf of the Prouille School Parents and Teachers Association I am writing to express the support of the parents and teachers involved in our school community for the application to rezone land in Water Street, Billyard Avenue and Chilton Parade, Wahroonga.

As we are aware the intention of the rezoning is to facilitate the replacement of the Prouille School with a modern school appropriate for the educational needs of primary school children in our local area. Clearly improving the education facilities within Ku-ring-gai is a significant benefit to all in our community.

We look forward to your support when this application is presented for Council consideration in the near future.

I would be pleased to discuss this matter further with you if you wish. I can be contacted by telephone on 0411 257 168, email mtmitchell@bigpond.com or mail at the school address.

Your Sincerely
Prouille School Parents and Teachers Association

Michael Mitchell
President

Rod Starr

From: Antony Fabbro
Sent: Monday, 21 November 2005 9:23 AM
To: Rod Starr
Subject: FW: Rezoning application - Prouille School Wahroonga

-----Original Message-----

From: Ian Cross
Sent: Monday, 21 November 2005 8:16 AM
To: Antony Fabbro
Subject: FW: Rezoning application - Prouille School Wahroonga

FYI

-----Original Message-----

From: Debbie Johnson [mailto:debbiejohnson@optusnet.com.au]
Sent: Sunday, 20 November 2005 6:23 PM
To: Ian Cross
Subject: Rezoning application - Prouille School Wahroonga

Dear Mr Cross,

I writing to you in relation to the rezoning application for the following sites:

- * Prouille School, Water Street
- * Church land, Billyard Avenue
- * Convent, Chilten Parade

My husband and I are parents of Prouille school and will be for the next 10 years. Being a catholic school, our church is an integral part of our children's education. Most catholic schools are adjacent to their church which helps builds a strong relationship between the church and the school. Currently the children have to walk 10 minutes from the school to the church for all school masses which takes away time from their normal school day. When the weather is inclement, they cannot celebrate these masses at the church and instead have to settle for the school's very small and inadequate hall. During your site visit, you would have seen the current conditions our children are experiencing at Prouille which are certainly below the standard of most schools in the area.

If the new school is built in Chilten Parade, it will not only bring our children closer to their church but it will also cause no disruption to their education. Whereas, if we were to build on the existing school site (the only option if rezoning is not approved) our children would have to contend with continuous disruption to their classes until the new school could be completed. This could have serious impacts for children particularly those that already have learning difficulties.

We ask that you consider to vote in favour of the re-zoning to ensure we build a stronger sense of community between our church and the school. This is essential especially when our world is in such turmoil today. Our children our the future of this country and we should do everything in our power to enhance and grow their education.

Thank you for your time.

Kind regards

Debbie & Stephen Johnson

2 WIRRA CLOSE, ST IVES - CONSIDERATION OF HERITAGE STATUS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

For Council to consider the heritage status of 2 Wirra Close, St Ives in Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance, following a site inspection held on 5 November 2005.

BACKGROUND:

The property at 2 Wirra Close, St Ives is listed as a heritage item under the Ku-ring-gai Planning Scheme Ordinance. Council has received an application to have the heritage listing removed from the property. An independent assessment of significance for the property was made to determine whether the presently listed heritage item should remain listed. The matter was considered by Council on 26 July 2005 and deferred for a site inspection that was held on 5 November 2005.

COMMENTS:

2 Wirra Close, St Ives retains the heritage values that originally warranted its individual listing in Schedule 7 of the KPSO and should retain its current local heritage listing.

RECOMMENDATION:

That 2 Wirra Close, St Ives remain listed as a property of heritage significance in Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance.

PURPOSE OF REPORT

For Council to consider the heritage status of 2 Wirra Close, St Ives in Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance, following a site inspection held on 5 November 2005.

BACKGROUND

Council received an application to have 2 Wirra Close, St Ives removed from Schedule 7 of the KPSO. An independent assessment of significance for the property was made to determine whether the presently listed heritage item should remain listed under Schedule 7 of the KPSO. The matter was considered by Council on 26 July, 2005 (see Attachment 1) and deferred for a site inspection that was held on 5 November 2005.

2 Wirra Close, St Ives

2 Wirra Close, St Ives is currently listed in Schedule 7 (Heritage items) of the KPSO as an item of local significance. On 20 April 2003 Council received an application made by Noel Bell Ridley Smith and Partners, Heritage Consultants (NBRS&P) (see Attachment 2) on behalf of the owner of No Wirra close St Ives to have the property removed from Schedule 7 (Heritage items) of the KPSO. NBRS&P stated the reason for the application was that the property was not appropriately identified in the original Heritage Study and has subsequently been modified with Council consent. In response to the request, Council engaged Glen Cowell Heritage Services to conduct an independent assessment of the properties significance to determine whether or not the presently listed heritage item should remain listed under Schedule 7 of the KPSO. The assessment of heritage significance concludes that 2 Wirra Close, St Ives to be of historical and aesthetic significance and of some technical/ research and social significance (see Attachment 2).

COMMENTS

A site inspection was held on 5 November, 2005 (see Attachment 3).

An issue was raised at the site inspection regarding roof leaks and the current state of repair of the original roof tiles (that may contain asbestos) and the cost of replacing the roof tiles and maintaining the distinctive low pitch and form of the original roof.

Council's Heritage Adviser has researched this matter and advised there are a range of alternative modern tiles and materials that would be suitable to replace the existing tiles, and these would not require any substantial modification to the distinctive pitch and form of the existing roof.

CONSULTATION

The property owners were notified of the Councillors site inspection held on 5 November 2005. The owners and consultants have been notified of this report going to Council.

FINANCIAL CONSIDERATIONS

All costs associated with the management of heritage Items are covered by the Planning Department budget.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

There has been consultation with Council's Heritage Advisor in the preparation of this report.

SUMMARY

Council has received a request from NBRS&P Heritage Consultants on behalf of the owner of 2 Wirra Close, St Ives to have the property removed from Schedule 7 of the KPSO. Council engaged Glen Cowell, Heritage Services to conduct an independent heritage assessment for the property to determine whether the presently listed heritage item should remain listed under Schedule 7 of the KPSO. The assessment of significance recommended that the property be retained as an item of significance within the suburb of St. Ives.

In conclusion the site still displays the heritage values that originally warranted its individual listing on Schedule 7 of the KPSO and should remain a heritage listed item.

RECOMMENDATION

- A. That the property at 2 Wirra Close, St Ives remains listed as a property of Heritage Significance in Schedule 7 of the Ku-ring-gai Planning Scheme Ordinance.
- B. That the property owners be notified of Council's decision.

Louise O'Flynn
Heritage Planner

Antony Fabbro
Manager Urban Planning

Steven Head
Director

Attachments: **Attachment 1 - Report to Council, 26 July 2005 - 516882**
 Attachment 2A - NBRS & P Consultants Assessment of Significance - 2 Wirra
 Close, St Ives - 556873
 Attachment 2B -Glen Cowell Heritage Services Assessment of Significance - 2
 Wirra Close, St Ives - 515828 & 515831
 Attachment 3 - Site Inspection Minutes of 5 November 2005 - 555387

CONSIDERATION OF VARIOUS HERITAGE MATTERS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

For Council to consider the removal of 23 Memorial Avenue, St Ives and 4 Munderah Street, Wahroonga from Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance (KPSO) and that Council retain 2 Wirra Close, St Ives in Schedule 7 (Heritage Items) of the KPSO.

BACKGROUND:

In 1998 fire destroyed the heritage listed cottage at 23 Memorial Avenue, St Ives and the owners have requested that the property be removed from Schedule 7 (Heritage Items) of the KPSO. In 2004 Council resolved to grant consent to the Development Application for demolition of the existing building and structures at 4 Munderah Street, Wahroonga. In 2003 Council received an application to have 2 Wirra Close, St Ives removed from Schedule 7 of the KPSO. Council engaged Glen Cowell Heritage Services to conduct an assessment of significance for the property to determine whether the presently listed heritage item should remain listed under Schedule 7 of the KPSO.

COMMENTS:

23 Memorial Avenue, St Ives and 4 Munderah Street, Wahroonga should be removed from Schedule 7 of the KPSO and 2 Wirra Close, St Ives retains the heritage values that originally warranted its individual listing on Schedule 7 of the KPSO and should remain a heritage list.

RECOMMENDATION:

That Council prepares an amending draft Local Environmental Plan to remove the properties 23 Memorial Avenue, St Ives and 4 Munderah Street, Wahroonga from Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance and that 2 Wirra Close, St Ives remains listed as a property of heritage significance in Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance.

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PURPOSE OF REPORT

For Council to consider the removal of 23 Memorial Avenue, St Ives and 4 Munderah Street, Wahroonga from Schedule 7 (Heritage Items) of the Ku-ring-gai Planning Scheme Ordinance (KPSO) and that Council retain 2 Wirra Close, St Ives in Schedule 7 (Heritage Items) of the KPSO.

BACKGROUND

Several heritage amendments have arisen that require action by Council. The subject properties are 23 Memorial Avenue St Ives, 4 Munderah Street, Wahroonga and 2 Wirra Close St Ives.

23 Memorial Avenue, St Ives

23 Memorial Avenue is located on the corner of Memorial Avenue and Killeaton Street, St Ives and is identified as Lot 2 of DP 654552. The 1987 Ku-ring-gai Heritage Study identified the property known as "Linden Cottage" as being of significance for its historic, social, architectural and rarity value.

In 1998 a fire destroyed Linden cottage the remains of which were consequently removed from the property. Since 1998 a number of trees occupying the site have been damaged by storms and removed. Today the property consists of lawn where the cottage was previously located prior to the 1998, the only obvious remains of the former built structures are a garage (possibly 1940s) and a fence (**ATTACHMENT 1**).

4 Munderah Street, Wahroonga

Since its inclusion in Schedule 7 (Heritage items) of the KPSO, the land at 4 Munderah Street, Wahroonga has been subdivided twice and with this has lost some of its historic value. In 2003 a development application was lodged proposing the demolition of the heritage listed property at 4 Munderah Street. In August 2004, the Officer assessing the development application recommended approval for the demolition. The matter went before Council on 27 July 2004 (**ATTACHMENT 2**) Council resolved:

That Development Application No.1699/03 for demolition of the existing building and associated structures at 4 Munderah Street Wahroonga, being Lot 61, DP 819554, be approved for a period of two years from the date of the Notice of Determination...

The demolition of the property will remove any heritage significance that the property once demonstrated.

2 Wirra close, St Ives

2 Wirra Close, St Ives is listed in Schedule 7 (Heritage items) of the KPSO has an item of local significance. On 20th April 2003 Council received an application made by NBR&P Heritage Consultants (**ATTACHMENT 3**) on behalf of the owner of No.2 Wirra close St Ives to have the property removed from Schedule 7 (Heritage items) of the KPSO. NBR&P stated the reason for

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the application was that the property was not appropriately identified in the original Heritage Study and has subsequently been modified with Council consent. In response to the request, Council engaged Glen Cowell Heritage Services to conduct an independent assessment of the properties significance to determine whether or not the presently listed heritage item should remain listed under Schedule 7 of the KPSO. The assessment of heritage significance concludes that 2 Wirra Close to be of historical and aesthetic significance and of some technical/ research and social significance (**ATTACHMENTS 4 & 5**).

COMMENTS

23 Memorial Avenue, St Ives

On 5 March 2005, Council received a request from NBR&P Heritage Consultants on behalf of the Trustee of the owner of 23 Memorial Avenue, St Ives for Council to consider the removal of the property from Schedule 7 (Heritage items) of the Ku-ring-gai Planning Scheme Ordinance (KPSO) and prepare the necessary amending Local Environmental Plan (LEP).

History of site

23 Memorial Avenue, St Ives was originally part of a land Grant made to John Ayres on 7 April 1836 of 320 acres and the site of an original orchard farmhouse. The property was identified as an item of heritage significance in 1978 and included in Schedule 7 (Heritage items) of the KPSO. The 1987 Ku-ring-gai Heritage Study identified "Linden Cottage" (23 Memorial Avenue) as being significant for its demonstrated historic, social, archaeological and rarity value as a remnant farmhouse. In the heritage statement undertaken by NBR&P Heritage Consultants (**ATTACHMENT 1**) it is noted:

The heritage values of the site were limited to historic associations and the evolution in demonstrating the early rural character of the area, its subsequent subdivision and the changing patterns of urban development. The building was a rare surviving example of an early orchard cottage in the Ku-ring-gai area, though it was typical of many such cottages throughout the State. The level of archaeological significance of the site is low due to the relocation of the house in the 1920s and the loss of all connection with other rural activity after the turn of the 20th Century.

In 1998 a fire destroyed 'Linden Cottage' leaving only minor remains of the building which have since been removed. Despite the presence of the inter-war garage, chicken yard, 1920s chain wire fence and some original vegetation on the site, NBR&P Heritage Consultants believe that 23 Memorial Avenue does not support the continued listing of the land in the absence of the cottage structure in Schedule 7 (Heritage items) of the KPSO.

Having reviewed the Consultants Heritage Statement (**ATTACHMENT 1**) for the site Council is of the opinion that 23 Memorial Avenue no longer displays the historic, social, archaeological and rarity value that had once warranted its listing in Schedule 7 of the KPSO. The property is no longer of 'heritage significance' as defined by the KPSO and should be removed from Schedule 7.

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4 Munderah Street was originally listed in Schedule 7 (Heritage Items) of the KPSO in 1989 as being of significance for its demonstrated architectural values. Given that Council granted approval for the demolition of the existing building and associated structures at 4 Munderah Street Wahroonga, being Lot 61, DP 819554, subject to conditions (refer to **ATTACHMENT 2**) in 2004 the property should be removed from the KPSO.

2 Wirra Close St Ives

Council has received a request from NBRSP Heritage Consultants on behalf of the owner of No 2 Wirra Close St Ives to have the property removed from Schedule 7 (Heritage items) of the Ku-ring-gai Planning Scheme Ordinance (KPSO).

History of site

The site of 2 Wirra Close, St Ives was originally part of a 47 acre Crown Grant in 1877 and was later subdivided into 14 and 15 acre allotments in 1882. Lot 2 was purchased in 1949 and further subdivided into two allotments in 1951. Torokina Avenue was formed in this subdivision and a narrow 'Right of Way' was formed along the northern edge of the subject site to give access to the remained of the site to the east. In 1961 the land was divided into 16 allotments and Wirra Close was constructed. Today Lot 9 of this subdivision is known as No. 2 Wirra Close. In 1962 the subject property was purchased by William George Sherington, the owner of Ford Sherington Pty Ltd (a luggage company). In 1969 Torokina Avenue was extended to the east and the main Torokina Avenue Estate was subdivided with allotments surrounding a central reserve. At the time of this subdivision 2 Wirra Close was amalgamated into the new lot pattern with the addition of a small triangular section of land fronting Torokina Avenue thus the site became part of the Torokina Avenue Estate subdivision. The house itself was designed by Bruce Robertson in 1962.

The property was identified in the Ku-ring-gai Heritage Study 1987 as being part of the Torokina Avenue Group" which was identified as significant for its social, aesthetic and group value and potentially of State level significance. The Torokina Avenue Group is a distinctive collection of large mid to late 1960s houses of varying styles representing the taste of the emerging Nouveau riche middle class in St Ives in the boom years following Post War consolidation of the area. The subject site was built in 1962 with other homes built in Torokina Avenue in later years.

The subject site & buildings

The residence at 2 Wirra Close was originally designed in a style closely modelled on the "Prairie Style" of the American architect Frank Lloyd Wright. The site is described as Lot 2 in DP 543666 and is bounded on the north by a right of carriage way and an easement fronting Torokina Avenue, on the west by Wirra close and also on the South by Wirra Close which has a dog leg form. On the eastern site of the site, it is bounded by No.4 Wirra close. Located on the site is a single storey painted brick and timber house with an asbestos shingle roof, surrounding a paved courtyard and an in-ground swimming pool. The house was designed by Bruce Robertson of Robertson & Hindmarsh Architects. The plan is linear in form and creates an 'L' shape around a north east facing courtyard. The open side of the courtyard is screened by a timber pergola and screen wall.

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The building layout of 2 Wirra Close closely resembles Wright's stylistic planning with an internal layout which turns its back on the street and addresses an interior courtyard through floor and ceiling glazed walls. The design of the residence attempted to integrate the house with nature. The design presents two long, low wings which reach out in opposite direction from the main pyramidal roofed pavilion which houses the living and dining areas. The style of the exterior facades resembles those of Wright's Prairie house design.

Application to remove property from Schedule 7 KPSO

An application has been made by NBR&P Heritage Consultants on behalf of the owner of No.2 Wirra close St Ives to have the property removed from Schedule 7 (Heritage items) of the KPSO. In the heritage Statement produced in support of the deletion of the heritage item by NBR&P Heritage Consultants (**ATTACHMENT 3**) it was stated that:

The existing place does not have significance for any value that would warrant its retention as a heritage item for the benefit of the Municipality of Ku-ring-gai...I would therefore strongly suggest that the item be removed from Schedule 7 of the KPSO by means of an amending LEP.

A meeting between Council staff and the owners was held to discuss their concerns. In response to the request to remove the property from Schedule 7 of the KPSO, Council engaged Glen Cowell Heritage Services to conduct an independent heritage assessment for the property to determine whether the presently listed heritage item should remain listed under Schedule 7 of the KPSO (**ATTACHMENTS 4 & 5**). The assessment like that conducted by NBR&P Heritage Consultants recognised that 2 Wirra Close is listed on Schedule 7 of the KPSO as an individual heritage item and that the subject property has some connection with the Torokina Avenue Estate Group however, even with this link "the Sherington House is obviously an individual item of significance which was designed and constructed well in advance of the building construction of the adjoining subdivision".

The assessment of significance found that:

The listing of 2 Wirra Close, as an interesting local interpretation of the style favoured by the America Architect, Frank Lloyd Wright, at the entrance to the Torokina Estate Group appears therefore, to be a very appropriate and local decision...'The Sherington House' along with Bruce Robertson's later commission at 29 Womerah Street Turramurra, are important examples of the architect's interpretation of Wright's 'Prairie Style' in Australia. These two houses in Ku-ring-gai municipality provide an insight into the philosophical as well as the economic direction of housing and the stylistic development of the Sydney architects of the mid nineteenth century leading up to the "Sydney School" of the 1960s. the two houses are important elements in understanding the residential development of the period.

The assessment of significance found 2 Wirra Close, St Ives to be of historical and aesthetic significance and of some technical/ research and social significance and recommended:

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- “The Sherington House” should be retained as an item of significance within the suburb of St. Ives. The extant building should be retained largely in its original form and detail as a single storey dwelling addressing this corner of Wirra Close
- “The Sherington House” should be retained as a largely intact external example of a simple mid century suburban house strongly influenced by the Prairie Style made famous in the early 1900s by the North American Architect, Frank Lloyd Wright.
- “The Sherington House” should be retained as an isolated building on its original corner allotment with any modifications or upper floor additions restricted to the far (garage) end of the eastern wing of the extant house.
- “The Sherington House” should be retained as a significant landmark element in its own right.
- First floor additions may be possible in areas that will not have a negative impact on the overall character of the building and that consideration should be given to allowing alterations at the far eastern end of the garage wing. Consideration should be given to allowing an upper floor addition of sympathetic design and complementary fabric located over the existing garage pavilion and an additional wing to further enclose the courtyard.
- The quality of design and original fabric of the interior, particularly the large open plan living /dining area with high vaulted timber clad ceiling and the focus of the interior towards the internal courtyard, appears to have remained largely intact if modified. As it has been indicated in the NBR&P Report that the original timber ceiling is intact under the later plasterboard ceiling lining, reinstatement of this significant element would add greatly to the integrity and intactness of the building. A heritage assessment of the interior should be made prior to any decision on the type and extent of redevelopment that the building could sustain

Having reviewed the NBR&P Heritage Consultant Heritage Statement (**ATTACHMENT 3**) for the site in conjunction with the heritage assessment produced by Glen Cowell Heritage Services (**ATTACHMENTS 4 & 5**), 2 Wirra Close, St Ives still displays the heritage values that originally warranted its individual listing on Schedule 7 of the KPSO and should remain a heritage listed item.

CONSULTATION

Consultation with the relevant owners has taken place in preparing the supporting documents for this report. Any draft LEPs if exhibited would involve formal consultation.

FINANCIAL CONSIDERATIONS

All financial costs associated with the removal of the properties from the KPSO through an amending LEP are covered by the Urban Planning budget.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

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There has been consultation with Council's Heritage Advisor in relation to each of the subject properties, in the preparation of this report.

SUMMARY

Several necessary heritage amendments have arisen that require action by Council. The subject properties are 23 Memorial Avenue, St Ives, 4 Munderah Street, Wahroonga and 2 Wirra close, St Ives.

Council has received a request that it consider the removal of 23 Memorial Avenue, St Ives from Schedule 7 (Heritage items) of the KPSO. Having reviewed the heritage assessment prepared by NBRS&P Heritage and having visited the property, the property no longer has heritage significance and should be removed from Schedule 7 of the KPSO.

4 Munderah Street was originally listed in Schedule 7 of the KPSO in 1989 as being of significance for its architectural value. In 2004 Council granted approval for the demolition of the existing building and associated structures at 4 Munderah Street Wahroonga and should be removed from Schedule 7 of the KPSO.

Council has received a request from NBRS&P Heritage Consultants on behalf of the owner of No 2 Wirra Close St Ives to have the property removed from Schedule 7 of the KPSO. Council engaged Glen Cowell Heritage Services to conduct an independent heritage assessment for the property to determine whether the presently listed heritage item should remain listed under Schedule 7 of the KPSO. The assessment of significance recommended that the property be retained as an item of significance within the suburb of St. Ives.

Having reviewed the NBRS&P Heritage Consultant Heritage Statement and the independent heritage assessment. The site still displays the heritage values that originally warranted its individual listing on Schedule 7 of the KPSO and should remain a heritage listed item.

RECOMMENDATION

- A. That Council prepare a Draft Local Environmental Plan to remove No. 23 Memorial Avenue, St Ives and No. 4 Munderah Street from Schedule 7 of the Ku-ring-gai Planning Scheme Ordinance.
- B. That the Department of Infrastructure, Planning and Natural Resources be advised of Council's decision in accordance with Section 54 of the Environmental Planning and Assessment Act.
- C. That the Draft LEP be publicly exhibited in accordance with the requirements of the EP & A Act.
- D. That a report be brought back to Council at the end of the exhibition period.

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- E. That the property at No. 2 Wirra Close, St Ives remains listed as a property of Heritage Significance in Schedule 7 of the Ku-ring-gai Planning Scheme Ordinance.

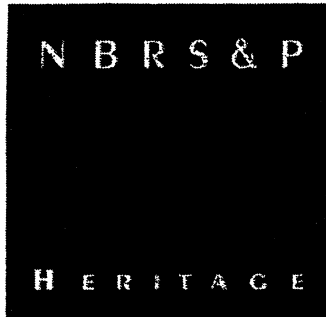
Louise O'Flynn
Heritage Planner

Antony Fabbro
Manager Urban Planning

Leta Webb
Director Planning &
Environment

Attachments:

- Attachment 1 - NBRS & P Heritage Consultants Assessments of Significance- 23 Memorial Avenue, St Ives**
- Attachment 2 - Resolution of Council - 27 July 2004, 4 Munderah Street, Wahroonga.**
- Attachment 3 - NBRS & P Heritage Consultants Assessment of Significance - 2 Wirra Close, St Ives.**
- Attachment 4 - Glen Cowell Heritage Services Assessment of Significance - 2 Wirra Close, St Ives.**
- Attachment 5 - Glen Cowell Heritage Services - 2 Wirra Close, St Ives - Heritage Inventory Statement.**



STATEMENT IN SUPPORT OF DELETION OF A HERITAGE ITEM
LISTED IN SCHEDULE 7 of KU RING GAI PLANNING SCHEME ORDINANCE

No. 2 WIRRA CLOSE ST. IVES

This Statement has been prepared to accompany an application by the owner of No. 2 Wirra Close for the deletion of that property from the Heritage Schedule of the Ku ring gai Planning Scheme Ordinance on the grounds that the building is not part of the Torokina Avenue Group and does not demonstrate any particular significant heritage values that would warrant its protection as a heritage item within the Ku ring gai Municipality.

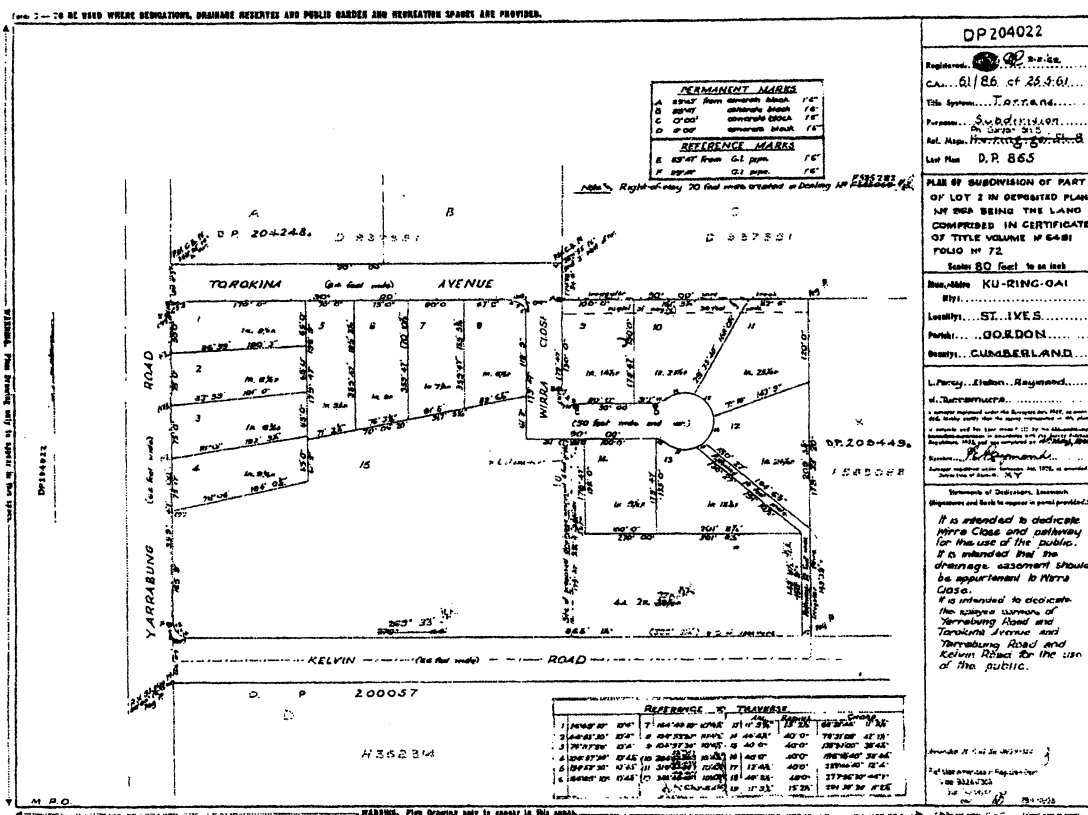
The building was identified in the Ku Ring Gai Heritage Study 1978 by Sheridan Bourke, acting as part of the consultant team undertaking the study, as being part of the Torokina Avenue Group which she identified for social, aesthetic and group value at potentially State level of significance! As with many other listings arising from the 1987 Heritage Study of Ku ring gai, no detailed information was provided with the identification, no Statement of Significance was provided and no evaluation of the potential or actual significance of the place was undertaken. The group of houses in Torokina Avenue is said to represent the Local Heritage Theme of Urban Consolidation.

The Torokina Avenue Group is a distinctive group of large mid to late 1960's houses of varying eclectic styles representing the taste of the emerging Nouveau riche middle class in St Ives in the boom years following Post War consolidation of the area. Apperly Irving et al, in their 'Pictorial Guide' describe the styles used in this area as 'Post War American Colonial' and 'Late 20th Century Australian Nostalgic'. While the general character of housing in this part of St Ives is largely characterised by revivalist styles based largely on American examples, the Torokina Avenue group also includes a large reproduction of Old Government House, Parramatta as well as a number of modernist fantasies and some vaguely Spanish Mission designs. The original listing of the group as having potential State heritage significance is highly questionable while the actual value of the group as anything but a social document of the period is also problematic. Despite their size, the buildings generally have low aesthetic values and no social value in the terms generally understood under the inclusion / exclusion guidelines of the NSW Heritage Manual. They do however form a distinctive group.

It is clear from the map accompanying the listing for this site in the Ku ring gai Heritage Study 1987 that the group as originally identified was confined to the subdivision along Torokina Avenue where it is divided with a central public reserve. Wirra Close where the subject site is located, is an earlier separate form of subdivision made in 1961 and has a distinct character separate to that of Torokina

In the Post war period, pressure for residential land in the vicinity of Sydney led to the subdivision of many semi rural areas and in particular the area of St Ives. The subject land was transferred in 1949 to Patrick and Constance Norris of Bellevue Hill and was subdivided into two unequal lots in 1951. (Volume 6491 Folios 72 & 73) At this time portion of the northern boundary of the larger Lot near its junction with Yarrabung Road had been formed as a road known as Torokina Avenue and a narrow Right of Way was created over portion of that lot along its northern edge to give access to the smaller 5 acre lot to the east. (Volume 6491 Folio 72)

Suburban subdivision of the land took place in 1961 when the 10 acres was subdivided into 16 lots and Wirra Close was constructed.(DP204022). Lot 9 of this subdivision was the land now occupied by No.2 Wirra Close and it was still affected by the original Right of Way along its northern edge giving access to the adjoining lot that was not to be subdivided until 1969. At the time of subdivision of Wirra Close, Torokina Avenue did not extend past the subject site.



1962 Subdivision Plan of western section of Torrikina Avenue and Wirra Close creating the subject site Lot 9 in DP 204022.

The Buildings

Located on the site is a single storey painted brick and timber house with an asbestos shingled roof, surrounding a paved courtyard and an in-ground swimming pool. The house was originally designed in 1962 by Bruce Robertson of Robertson & Hindmarsh Architects for William Sherington, Company Director. It is of the character used extensively in the 1960's and 1970's by Robertson & Hindmarsh architects imitating in a limited fashion, the late architectural idioms of Frank Lloyd Wright, with small linked pyramidal pavillion roofs featuring copper pinnacles floating over masonry forms. The plan is linear in form and forms an 'L' shape around a north east facing courtyard. The open side of the court is screened by a timber pergola and screen wall. The original joinery and fenestration was timber. The original documentation provided by Bruce Robertson is attached to this statement.

The building was extensively modified externally and internally in the 1980's by Lindsay Little and Associates, architects for Mr & Mrs B.C. McCallion an insurance company executive. Copies of the documentation for these changes is also attached to this Statement .

Guidelines for Applications for Removal

Council has prepared and published guidelines for applications for the removal of properties from the heritage provisions. This statement complies with the requirements of those provisions. While the Council officers who have reviewed the situation surrounding this property have agreed that it does not seem to meet the threshold requirements for inclusion as a heritage item, nevertheless the onus of proof is on the owner to show why the place should not be protected under the heritage provisions.

Statement of Significance:

The Council requires the applicant to provide a demonstration or understanding of the potential significance of the item. This has been undertaken by me against the standard assessment criteria following basic research into the history of the property and with a sound knowledge of architectural styles and the history of the area.

Historical Evolution & Associations

The place has no strong significance for either Historic evolution or Historic associations. It was designed for William Sherington by architects of the 'second order', Robertson & Hindmarsh, as a relatively minor part of the process of suburbanisation of St Ives in the Post War decades. With these values it does not meet the threshold for inclusion as defined in the NSW Heritage Manual Publication on Heritage Assessments. The place is neither Rare nor Representative for these values at any level.

Aesthetic /Creative Excellence / Visual Qualities

The place shows limited aesthetic qualities as a rather eccentric but not wholly convincing application of particular eclectic design idioms to a relatively small suburban house.

Robertson & Hindmarsh indicate that in their opinion this was one of Bruce Robertson's major works because he had it professionally photographed.

The building was designed to be introverted with limited exposure to the corner site and inward looking spaces. The most dominant surviving elements of the original design are the clustered low pyramidal roofs with their diagonal asbestos shingled sheeting and the copper spires. The horizontal forms are accentuated by deep, boxed eaves overhangs.

Reasons for Removal from the Heritage Schedule

In our opinion this building was incorrectly identified to be part of the distinctive grouping of ostentatious eclectic houses in Torokina Avenue when the Ku ring gai Heritage Study was carried out in 1987. It is neither part of that distinctive subdivision nor characteristic of that group of buildings. No specific or general details as to why the house was included in the inventory or why the house was considered significant were provided at the time and in my opinion the identification was totally deficient in this regard. The site was not included in the identification map attached to the proposed listing, which indicates the extent of the group listing at that time. This omission suggests it was an afterthought or was not considered to be part of the Group.

Notwithstanding the fact that the house is not a coherent part of the group as listed, in my opinion the house also has insufficient heritage values for individual listing as a heritage item based on the inclusion / exclusion guidelines of the NSW Heritage Office. It is a relatively mundane example of its kind and has subsequently been modified by extensive alterations that have permanently removed original characteristics of the original design and parts of its fabric.


The building had no real significance when it was misidentified in 1987, the removal of the listing requested by this application will not in my opinion significantly affect the heritage resources of the Municipality and will not have any effect on the intrinsic values of the adjoining listed group as they currently exist.

The building is in sound condition and is well maintained. Structural inadequacy is not one of the reasons for seeking removal from the Heritage Provisions.

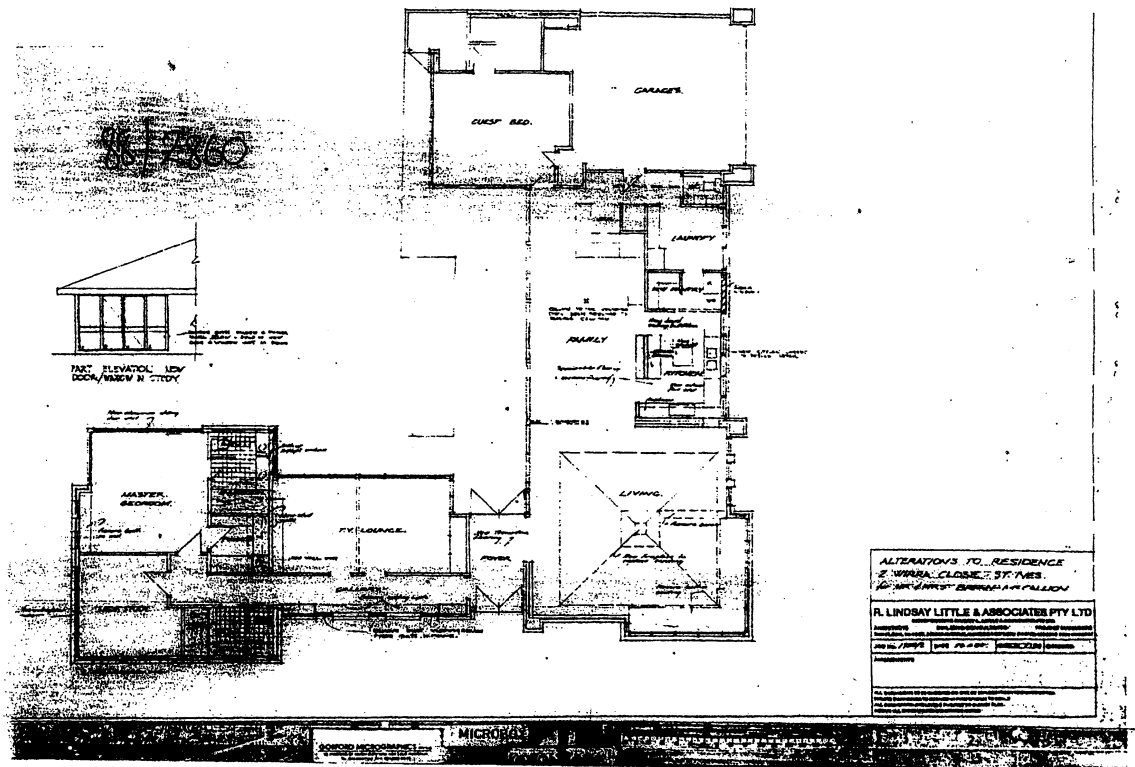
The imposition of the heritage order has however had a significant impact on the ability of the present owner to dispose of the property at its current market value in the climate of concern generated by general community concern for heritage. Repeated comments of potential purchasers have related to the Heritage listing as a significant disincentive to the purchase of a property that demonstrates no obvious heritage values and does not benefit from the heritage listing. The available heritage incentives for this site do not compensate for the devaluation arising from its listing.

Council's Heritage Advisor has already inspected the house in its surrounding context and expressed an opinion that based on the available material and the current altered state of the place, that the existing heritage listing could not be supported.

It is my professional opinion also that the existing place does not have significance for any value that would warrant its retention as a heritage item for the benefit of the Municipality of Ku ring gai, let alone for the State of New South Wales. For the reasons enumerated above I would therefore strongly suggest that the item be removed from Schedule 7 of the KPSO by means of an amending LEP at the earliest possible date and that the archival documentation gathered in this assessment be lodged with the Local Studies Collection of council for future reference.



ROBERT STAAS
Director / Heritage Consultant
Noel Bell Ridley Smith & Partners Architects Pty Limited
April 2003

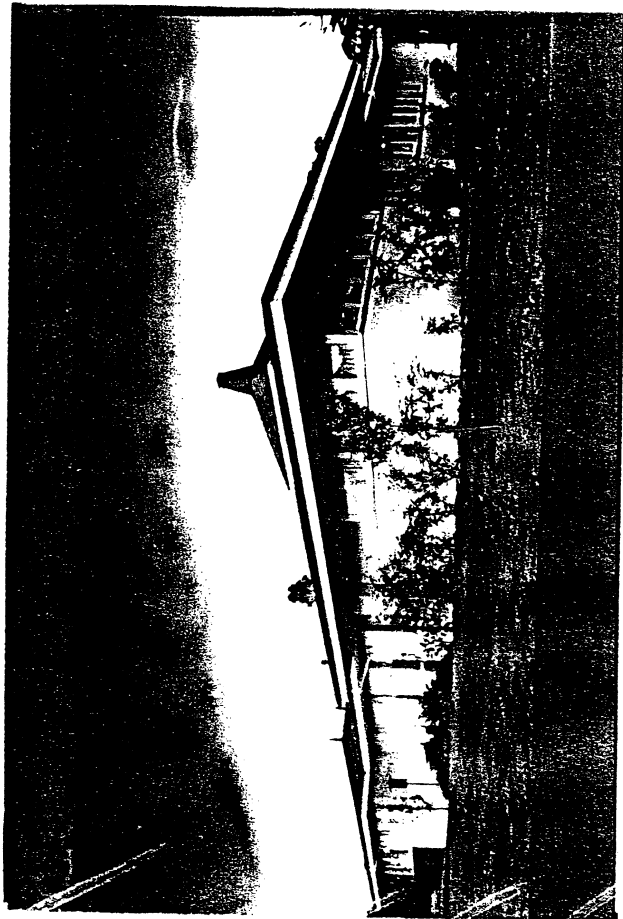
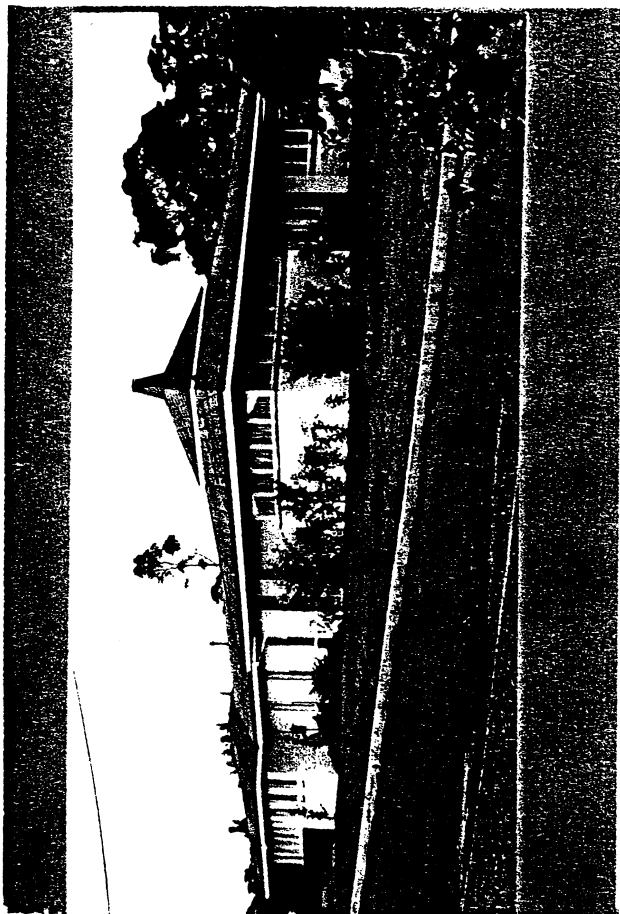


McCallion House
 2 Wirra Close St Ives
 Original working drawings by R Lindsay Little & Associates dated November 1988

Modifications to the original fabric carried out at this date included:
 Additional Bedroom and en suite behind garage
 Block original window to create Pantry
 New Kitchen and ceiling etc.
 Extended Family Room
 New fireplace and ceiling to Living Room and removal of built in seating
 New flooring to Foyer
 New windows to Gallery
 'New' Study and modifications to Master Bedroom
 New En Suite.

Subsequent modifications have also been made to this work by later owners including further internal changes to planning, especially around the kitchen and living room and with internal finishes and modification of the front doors.

ITEM NAME Tokokina Avenue Estate, St Ives LOCATION 30- 54, 27- 39 Torokina Avenue & 2 Wirra Close Municipality of Ku-ring-gai GROUP Torokina Avenue Estate	ITEM TYPE <input checked="" type="checkbox"/> Architectural <input type="checkbox"/> Landscape <input type="checkbox"/> Archaeological	REF. NO. 18:002
<hr/> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> SURVEY BY SB DATE OF SURVEY DATE AMENDED CATEGORY SUB CATEGORY </div> <div style="width: 50%;"> HERITAGE LISTINGS <input type="checkbox"/> Register of the National Estate (AHC) - Register <input type="checkbox"/> Register of the National Estate (AHC) - Interim <input type="checkbox"/> Register of National Trust (NSW) <input type="checkbox"/> Within National Trust Conservation Area <input type="checkbox"/> Register of Significant Twentieth Century Architecture (RAIA) <input type="checkbox"/> Department of Public Works Heritage and Conservation Register <input type="checkbox"/> Heritage Council Register - Permanent Conservation Order <input type="checkbox"/> Heritage Council - Interim Conservation Order <input type="checkbox"/> Heritage Council Register - Section 130 Order <input type="checkbox"/> Heritage Council Register - Nomination <input type="checkbox"/> NSW Government Department Heritage Register (S170 Heritage Act) <input type="checkbox"/> NP & WS Historic Sites Register <input type="checkbox"/> Institute of Engineers (NSW) Heritage Register <input type="checkbox"/> Regional Environmental Plan Heritage Schedule <input checked="" type="checkbox"/> Local Environmental Plan Heritage Schedule <input type="checkbox"/> Local Environmental Plan Heritage Schedule - Conservation Area <input type="checkbox"/> Other Listings : </div> </div>		
DESCRIPTION		
<hr/> MODIFICATIONS / CONDITION Various modifications - some items substantially intact and other items altered or extended sympathetically		
<hr/> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> HISTORY </div> <div style="width: 50%;"> EXTERNAL MATERIALS INTERNAL MATERIALS STYLES HISTORICAL THEMES - STATE HISTORICAL THEMES - LOCAL Suburban consolidation </div> </div>		
<hr/> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> DATE PERIOD 1960-1986 ARCHITECT / DESIGNER BUILDER </div> <div style="width: 50%;"> SOURCES </div> </div>		



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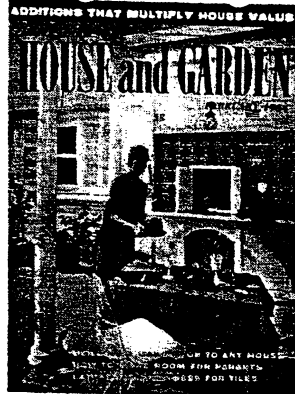
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Courtyard in the remodelled home of interior designer Barbara McKewan (Mrs Ian Campbell), Double Bay, NSW (See story page 30).

PHOTOGRAPHY: Color Prints.

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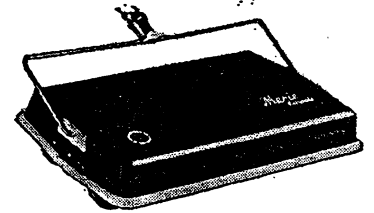
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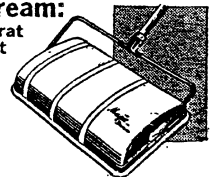


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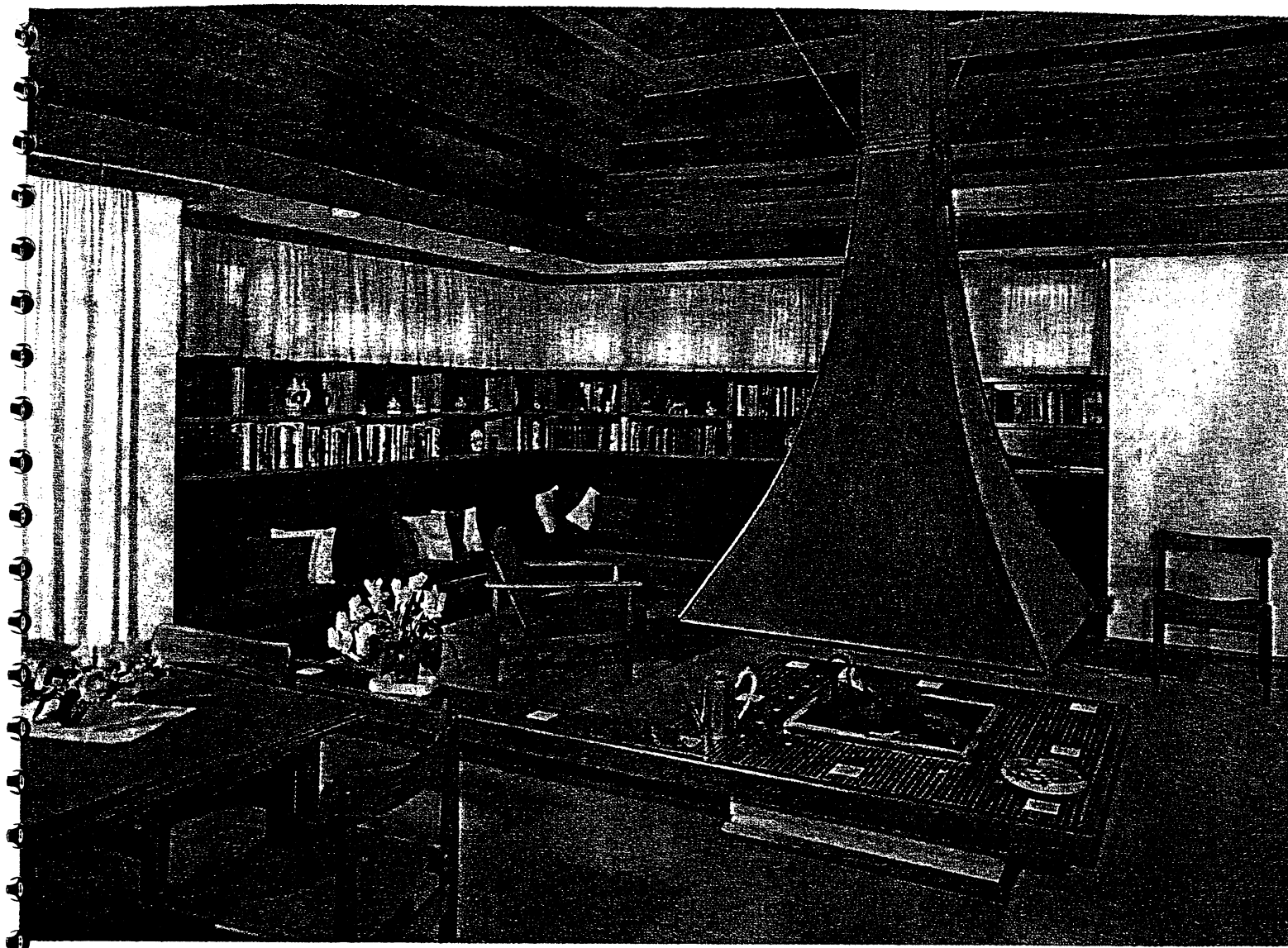
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THE TRUMPET-SHAPED copper firehood complements the domed Pacific maple roof of the living room. The low tiled bench separates the dining end from the book-lined eating area. Colors are natural browns with orange and olive green, offset by black.

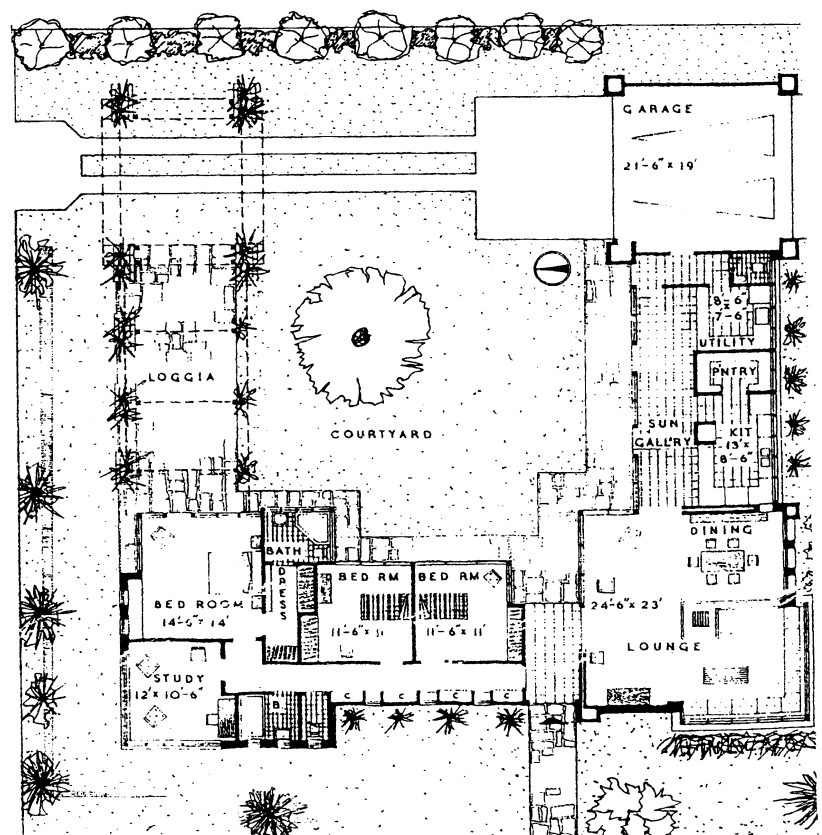
These windows give light to the hallway and break up the long outside wall. This window treatment, together with the dramatic roof shape and wide overhangs, is typical of the careful thought given to the design.

INTERIOR DESIGN BY THE ARCHITECT

The square entry hall has crisp black and white vinyl tiling, which is continued in the kitchen and gallery. The linking passageway between bedroom and living wing has four 8 ft high cupboards for linen, brooms and clothing. These cupboards are built into the window wall and alternate with the windows. Window-seats have bright yellow and white cushions to tone with the olive-green carpeting.

The living room has a 14 ft high timber ceiling, dome-shaped by means of scissor-trussing, which gives the room a tremendous effect of space and airiness.

Continued on page 62



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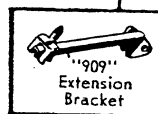


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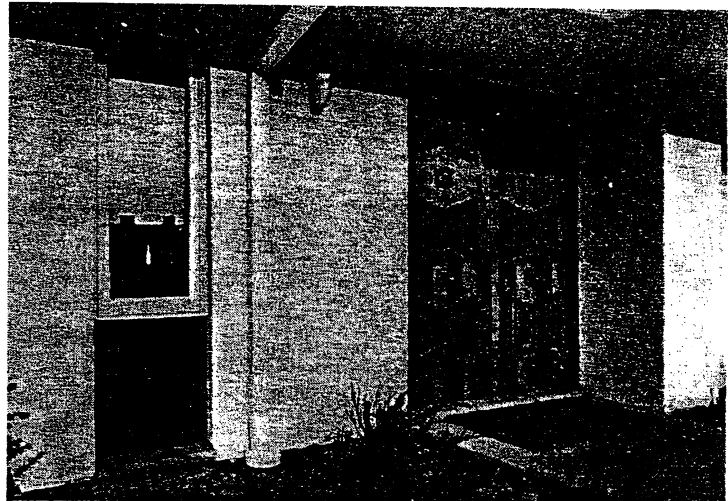
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ENTRY DOORS are veneered with Gaboon timber and have Queensland maple solid panels glued to them, in a design by the architect. The tall window looks on to the bedroom passageway, has dark chestnut weatherboarding, a stone sill, Thai silk blind.

FINE DECOR JUSTIFIES A GOOD PLAN

Continued from page 62

a continuation of the fireplace. The bench stands two feet off the ground, and is useful for ashtrays, magazines and pre-dinner drinks. It is low enough to step over, yet high enough to be a distinct divider between the two adjacent sections. The top of the bench and fireplace have one inch Italian black and white mosaics, relieved with gold.

The furniture is mostly teak, with a Pacific maple drinks-and-glass cabinet on the dining wall, recessed bookcases and a built-in seating unit in the living area. The L-shaped seating unit is 28 ft long and upholstered in dark olive green, several tones darker than the fitted olive green carpet used throughout the house. Curtains are white cotton scrim, both restful to the eye and good reflectors of daylight. Walls are cream, surrounds and woodwork are Pacific maple.

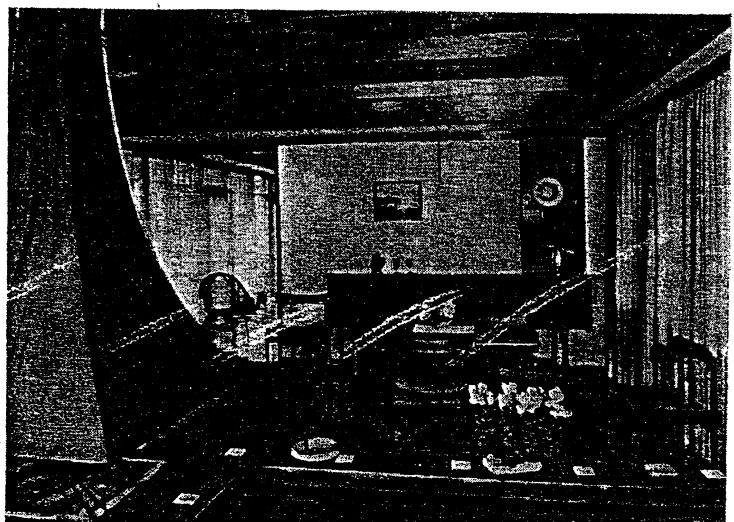
The color scheme revolves around the warm brown timbers and copper hood. Dining chairs

are upholstered in orange Thai silk; cushions are orange and cream.

A 25 ft long gallery on the north side gives the kitchen wing the feeling of a recreation area. The ceiling follows the roof slope and is covered with Klinkii pine plywood, supported by maple covered beams. Kitchen cupboard doors, pelmets and fascias contrast in varnished Pacific maple. Internal walls, including behind the built-in oven and in the pantry and utility room, are tongue-and-groove oregon. Fittings include a rotary fan above the stove, spot lighting, white laminated working tops and divider for bar-stool breakfasts. There's a walk-in pantry next to the refrigerator, with floor-to-ceiling shelving for china, pots and pans and foodstuffs.

The laundry is next to the pantry, and has been made a part of the kitchen wing, rather than being hidden behind a closed door. (See photograph.) A nearby door leads to the clothes line and double garage. #

FROM THE LIVING ROOM AREA can be seen the tiled gallery, and hatchway through to the kitchen. The mosaic-tiled steel bench is a distinctive room divider. The dining furniture is teak, with orange Thai silk upholstery and a drinks cabinet of Pacific maple.



KU-RING-GAI COUNCIL

Assessment of Significance for

2 WIRRA CLOSE, ST. IVES



REPORT WRITTEN BY
GLEN COWELL HERITAGE SERVICES PTY. LTD.
ARCHITECTS AND HERITAGE CONSULTANTS
26th June 2005

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1.0

INTRODUCTION

1.1 CONTEXT OF THE REPORT

This Assessment of Significance has been prepared at the request of Ku-ring-gai Council to identify the significance of the property known as 2 Wirra Close, St. Ives.

2 Wirra Close, St. Ives was designed in 1962 by the Sydney architect Bruce Robertson of Robertson and Hindmarsh for William Sherington. The property was gazetted as an Item of "Local Heritage Significance" in the Ku-ring-gai Planning Scheme Ordinance on November 4th, 1989. The current owners of the property have requested that the property be removed from the Ku-ring-gai Schedule of Heritage Items. In response to this request, Council has requested that the author prepare an independent heritage assessment of the property to determine its heritage significance, if any, and allow an informed decision to be made on its future.

1.2 DOCUMENTARY AND PHOTOGRAPHIC SOURCES

Documentary research for this assessment consists primarily of an assessment of data relating to mid to late 20th Century housing in Sydney and research undertaken by Ms. Glen Cowell, Director of Glen Cowell Heritage Services Pty. Ltd., into the history of the building and comparative stylistic designs around this period. Supplementary research and information has been sought by the author from the architectural firm of "Robertson and Hindmarsh" as well as the architect himself, Mr. Bruce Robertson. Various other sources such as current reports and contemporary articles relating to the property have been assessed in this assessment.

All current photographs were taken in March 2005 specifically for this report. Similarly, a preliminary inspection of the site, the exterior of the building and the immediate and wider context of the property in the municipality of Ku-ring-gai was conducted in March 2005.

1.3 AUTHORSHIP

This report has been prepared by Glen Cowell, Director of Glen Cowell Heritage Services Pty. Ltd., Architects and Heritage Consultants. Ms Cowell is a Conservation Architect and recognised Heritage Consultant who was employed as a Conservation Architect and Associate Director for Graham Brooks and Associates Pty. Ltd., Conservation Architects and Heritage Consultants between 1994 and 2000. She has also been employed as Heritage Advisor to Manly Council from 1995-2000, as a Heritage Planner for Woollahra Council from 2000-01, as Heritage Assessor for North Sydney Council during 2001-02, as Heritage Advisor to Kogarah Council from 2001-03 and is currently employed as Heritage Advisor to Auburn Council since 2003. (See Addenda 1 for CV of author).

1.4 SITE IDENTIFICATION

The property under consideration is known as 2 Wirra Close, St. Ives. The title description is Lot 2, DP 543666. The property is located on the corner of Torokina Avenue and Wirra Close and has its northern boundary on Torokina Avenue while both the western and southern boundaries address Wirra Close which turns a 'dog-leg' into a cul-de-sac at the south eastern corner of the site.

The property was identified as an item of potential significance in the Ku-ring-gai Heritage Study of 1978. No. 2 Wirra Close was identified as part of a group of houses in Torokina Avenue. The building is identified on the Heritage Study Inventory under the title "Torokina Avenue Estate, St Ives" with the address given as "30-54, 27-39 Torokina Avenue & 2 Wirra Close, Municipality of Ku-ring-gai." The Torokina Avenue Group has been identified under "Historical Themes-Local; Suburban consolidation" and reasons for listing given as: social, aesthetic group value, municipal, state (?) significance."

The property known as 2 Wirra Close is not part of an Urban Conservation Area (UCA) and is not located within a National Trust UCA.

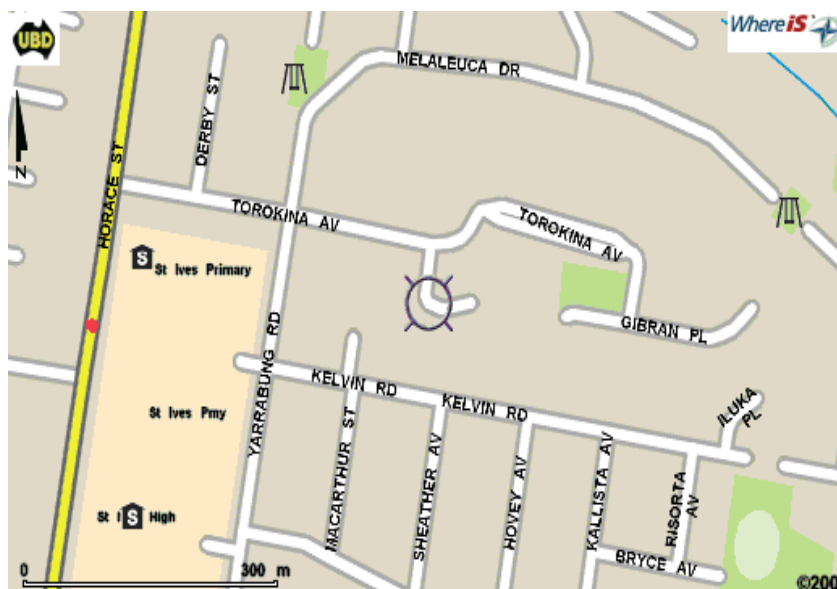


FIGURE 1. LOCALITY MAP 2 Wirra Close, St. Ives.

2.0

HISTORICAL OUTLINE

2.1 BACKGROUND

The pattern of development which occurred with the establishment of the northern railway did not occur in St. Ives. This area of Ku-ring-gai was to remain largely rural until the 1950s with a focus on orchards. Change was beginning to appear around 1944 when the architectural firm of Joseland and Gilling were commissioned by Ku-ring-gai Council to prepare a plan of a residential garden suburb in St. Ives. Council resumed a 20 acre site in 1946 which was named "Rosedale Gardens" and included sites for buildings, playing fields, landscaping and a memorial garden. The concept was extended until in 1961 it included tennis courts, sports ovals and a shopping centre.

One of the first subdivisions in the area was the development of a Housing Commission estate in c1954 in the Lawson Parade area where homes were built for returned servicemen. Areas in St. Ives were promoted as places where young families could establish new and enriched lifestyles. Many project homes were constructed in the 1950s and 1960s with building companies such as Lend Lease well featured in the growing district.

2.2 DEVELOPMENT OF THE SITE

The site of 2 Wirra Close, St. Ives was originally part of a 47 acre Crown Grant to John Black in 1877. In 1882 the land was subdivided into small 14 acre and 15 acre allotments intended for small scale farming. The streets formed by this early subdivision were named Yarrabung Road and Kelvin Street. In 1882

Lot 2 of the 1882 subdivision was purchased by Dennis Feathers of Terry Hills. In 1886 Lot 2 was purchased by Catherine Lucas, a widow from Sydney and then transferred to Issac Hininchoch in 1890. The land was eventually sold to Thomas Johnson in 1920 by the mortgagees of the Hininchoch property.

Lot 2 was purchased by Wing Commander Patrick Norris and his wife Constance in 1949. The Norris' were from Bellevue Hill and they subdivided the property into two allotments in 1951. Torokina Avenue was formed in this subdivision and a narrow 'Right of Way' was formed along the northern edge of the subject site to give access to the remainder of the site to the east. In 1957 the site was sold to Margaret Smith of Mosman and a subdivision of 1961 cut the land into 16 allotments and Wirra Close was constructed. Lot 9 of this subdivision is now known as No. 2 Wirra Close. At the time of this subdivision Torokina Avenue ended at the eastern kerb of Wirra Close.

In 1962 the subject site, 2 Wirra Close, was purchased by William George Sherington, a Company Director and owner of Ford Sherington Pty. Ltd., manufacturers of 'modern lightweight luggage' including the well known Globite brand. At the time of purchase by Sherington the site was encumbered by a Right of Way on the north boundary which gave access to the rear site formed by the 1951 subdivision. This R.O.W is still in existence.

Was Bruce
R. the
Architect for
a number of
the
Torokina
Houses?
You may
want to talk
personally
with Bruce
about 2
Wirra & its

In 1969 Torokina Avenue was extended to the east and the main Torokina Avenue Estate was subdivided with allotments surrounding a central reserve. At the time of this subdivision, Lot 9 (2 Wirra Close) was amalgamated into the new lot pattern with the addition of a small triangular section of land fronting Torokina Avenue. 2 Wirra Close was renumbered Lot 17 DP 238226 and became part of the Torokina Avenue Estate subdivision.

The site of 2 Wirra Close, St. Ives lies within the original land grant to John Black c.1877. The subject property (2 Wirra Close) was purchased by William George Sherington in 1962. Sherington commissioned the architect Bruce Robertson of Robertson and Hindmarsh to design and build a new residence on 2 Wirra Close. At the time of the design and construction in 1962, the subject site addressed the two boundaries along Wirra Close. It was not until the 1969 subdivision of the Torokina Avenue Estate, that a third street boundary was created along the extension of Torokina Avenue and the property was now identified as part of the Torokina Avenue Estate subdivision.

The house itself at 2 Wirra Close, St. Ives was designed by Bruce Robertson of Robertson and Hindmarsh in 1962. (See sketch plan Addenda 2). Ku-ring-gai Council granted building approval in June 1962 and the house was constructed by builder, Norman T. Sumner of Eastwood and was completed in November 1963 for approximately thirteen thousand, four hundred pounds.

3.0

THE EXISTING BUILDING

3.1 THE URBAN CONTEXT

The property under consideration is known as 2 Wirra Close, St. Ives. It is identified within the suburb of St Ives and falls within the local government area of Ku-ring-gai. Wirra Close is located west of Garrigal National Park and below the south eastern edge of the St Ives Character Study Area as defined in Fig 1.1 (Study Area) of "Ku-ring-gai Heritage and Neighbourhood Study" (June 2000), prepared for Ku-ring-gai Council by Godden Mackay Logan Keys Young.

The area to the south east of Mona Vale Road where the subject site is located is characterised by streets with no hard kerb and no front fencing. Front gardens merge with the road verge to make the landscaping appear continuous.

The immediate context of the subject property at 2 Wirra Close is currently residential with mostly single storey residences, some with first floor or roof additions located in Wirra Close and a variety of both single storey and two storey residences in the adjoining Torokina Avenue Heritage Group.

3.2 THE STYLE OF THE EXTANT BUILDING

2 Wirra Close, St. Ives is a single storey brick residence originally designed in a style closely modelled on the “Prairie Style” of the American architect Frank Lloyd Wright.

Sydney architects during the 1950s were strongly influenced by the designs of Japan and the United States of America. The early signs of a “romantic movement” are to be found in Sydney in the work of Peter Muller “who sought a dwelling of sheltered spaces in communion with nature for his own house at Palm Beach built in 1955”ⁱ. Since the end of the nineteenth century, Frank Lloyd Wright had been designing houses which integrated indoor and outdoor spaces, with projecting and therefore sheltering roofs, and what he called an “organic” relationship between building and site”.ⁱⁱ

The design of 2 Wirra Close and a slightly later, similar styled residence also designed by the architect Bruce Robertson (located at 29 Womerah Street, Turramurra) both closely follow the style developed by the well known American architect Frank Lloyd Wright in his early ‘Prairie Style’ houses. Wright’s houses of the turn of the century were to be the inspiration for the designs produced by Bruce Robertson at both Turramurra and St. Ives over half a century later. The architect having made a pilgrimage to Frank Lloyd Wright’s country retreat “Taliesin” at Spring Green, Wisconsin, unfortunately arriving immediately after Wright’s death in 1959ⁱⁱⁱ. Robertson did not have the opportunity to meet the world famous American architect. He did however wander around ‘Taliesin’ taking in the design concepts of the ‘Master’ and returned to Sydney to create his own interpretation of the ‘Prairie Style’ house in the designs for Turramurra and St. Ives.

Wright’s ‘Taliesin’ is described by James F. O’Gorman in his publication ‘Three American Architects’ as “conceptually one storied, with its wings wrapped around its hillside site just below the summit... the interior of Taliesin joined its surroundings through tall openings leading onto terraces overlooking the rolling terrain... Taliesin is not a mere building but an entire environment in which man, architecture and nature form a harmonious whole” Taliesin according to O’Gorman was “not merely rural, it was anti-urban”. Many of Wright’s ‘Prairie’ designs centred on a cruciform-layout with open plan living and a “central hearth” as the main focus. Robertson was influenced by this ‘central hearth’ feature which was the major feature of the 2 Wirra Close design. The open plan living and central fireplace (see plan addenda 2) was the ‘core’ of the house with wings radiating out on either side to form wings along both of the Wirra Close boundaries. The design turns its back on the street and opens inwards to a central courtyard which opens off the living areas and is overlooked by the bedroom wing. The dominance of the central living room over the two extending wings was accentuated by a pyramidal roof clad in smooth diamond pattern asbestos roof tiles, the apex of which formed the chimney to the living room fireplace.

Bruce Robertson was a follower of the ‘Sydney School’ architects. A small group of Post-War graduates led by Peter Muller and Bruce Rickard who shunned the stark functionalism of the Post-War International style practiced by Sydney Ancher and the Viennese-born Harry Seidler in the 1950s and turned instead to the “organic” influences of Frank Lloyd Wright and his “Prairie Style” housing. While Muller chose a path which exploited the “organic” nature of materials such as stone and timber, Robertson was experimenting with simple materials and a much closer connection to Wright’s stylistic detailing in “the Sherington House”. The design that Robertson created for 2 Wirra Close was a prelude to the larger and more obviously ‘Wrightsian’

design at 29 Womerah Street, Turramurra which was completed about 2 years after the St. Ives house.

3.3 DESCRIPTION OF EXTERIOR; 2 Wirra Close

2 Wirra Close is a small scale, single storey painted brick and timber residence located on a corner site on the corner of Wirra Close and Torokina Avenue, St Ives.

The house was designed in 1962 by the architect Bruce Robertson of Robertson and Hindmarsh in an interpretation of Frank Lloyd Wright's 'Prairie Style' which Robertson knew first hand from his recent visit to North America in 1959 (see 3.2, p.9). The building layout of 2 Wirra Close closely resembles Wright's stylistic planning with an internal layout which turns its back on the street and addresses an inner courtyard through floor to ceiling glazed walls. This was a design which integrated the interior of the house with nature. The design presents two long, low wings reaching out in opposite directions from the main pyramidal roofed pavilion which houses the living and dining areas. The exterior facades with their masonry and strip window detailing and low sweeping hipped rooflines, closely resembles Wright's Prairie house design for the Cheney house in Oak Park Chicago. Of particular note is "the way the windows are nestled in so protected a fashion between the wide eaves of the roof and the substantial sill that girdles the house."^{iv}

Robertson's design picks up on many of the defining features of Wright's style. The wide eaves, the opening of the inside to the outside and turning its back on the street, the central hearth and the wings with their different functions which reach out from the central living spaces. Of particular note is the ventilated roof to the living room which forms an anchor point for the whole house to pivot around, and the way the layout makes the most of the two street facades with the front entrance addressing one street and the service wing addressing the other street.

The house was constructed of simple low cost materials, painted brickwork, weatherboarding, asbestos diamond pattern roof shingles and simple awning and casement style windows. A feature of the living room pavilion was a bank of strip windows located immediately below the wide eaves overhang of the roof which externally, gave the impression of a floating roof and allowed plenty of space for the fixed seating around the wall of the living area.

The Torokina Avenue Group, in which 2 Wirra Close has been listed, is a group of large mid to late 1960s houses of varying eclectic styles. A combination of one and two stories which is indicative of the housing stock in the St. Ives area, the buildings in this group display an interesting representation of the eclectic tastes of the emerging middle class in St Ives. The general character of the group has been classed by Robert Staas as "revivalist styles based mainly on American examples"^v.

The listing of 2 Wirra Close, as an interesting local interpretation of the style favoured by the American Architect, Frank Lloyd Wright, at the entrance to the Torokina Estate Group appears therefore, to be a very appropriate and logical decision.

4.0

HERITAGE MANAGEMENT FRAMEWORK

4.1 AUSTRALIAN HERITAGE COMMISSION

2 Wirra Close, St. Ives is not recorded on the register of the National Estate

4.2 NSW HERITAGE COUNCIL

2 Wirra Close, St. Ives is not recorded as an item of State Significance.

4.3 KU-RING-GAI COUNCIL

2 Wirra Close, St. Ives is listed in Ku-ring-gai Council Local Environmental Plan as an item of local significance. The subject site is not located within a National Trust Urban Conservation Area (UCA) or Potential Conservation Area (PCA).

There is some confusion with this listing as 2 Wirra Close was not constructed as part of the Torokina Avenue development and is not shown on the map on Inventory sheet as one of the listed properties but is named within the description of the group. No 2 Wirra Close St. Ives should be listed individually.

4.4 NATIONAL TRUST OF AUSTRALIA (NSW)

2 Wirra Close, St. Ives is not included on the National Trust of Australia (NSW) Register.

4.5 ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS (NSW)

2 Wirra Close, St. Ives is not listed on the register of Significant Twentieth Century Buildings

5.0 ASSESSMENT OF SIGNIFICANCE

5.1 EVALUATION CRITERIA

This section establishes the criteria which are used to establish significance and identifies the reasons for the cultural values of the site and components.

“Heritage significance”, “cultural significance” and “cultural value” are all terms used to describe an items importance or value to our society. This value may be contained within the fabric of an item, its setting and its relationship to other items, the response that the item stimulates in those who value it now and in the historical records that allows us to understand it in its own context. The assessment of what has significance is not static. Significance may increase as more is learnt about the past and as items become rare, endangered or illustrate aspects that achieve a new recognition of importance.

Determining the cultural value is at the basis of all planning for places of historic value. A clear determination of significance permits informed decisions for future planning that will ensure that the expressions of significance are retained, enhanced or at least minimally impacted upon. A clear understanding of the nature and degree of significance will determine the parameters for, and flexibility of, any future development.

An analysis and understanding of the physical evidence provides the context for assessing the significance of an item. These are presented in the preceding sections. The NSW Heritage Office has produced standard evaluation criteria for assessing the cultural significance of potential items which are used in this assessment.

There are four criteria used to assess the significance of an item, they are :

- Criterion 1 historical significance (evolution and association). An item having this value is significant because of the importance of its association with, or position in the evolving pattern of our cultural history.
- Criterion 2 aesthetic significance (scenic / architectural / qualities / creative accomplishment). An item having this value is significant because it demonstrates positive visual or sensory appeal, landmark qualities and / or creative or technical excellence.
- Criterion 3 technical/research significance (archaeological, industrial, educational, research potential and scientific significance values). Items having this value are significant because of their contribution or potential contribution to an understanding of our cultural history or environment.
- Criterion 4 social significance (contemporary community esteem). Items having this value are significant through their social, spiritual or cultural association with a recognisable community.

There are two criteria used to assess the degree of significance:

- **Rarity** (An item is significant because it represents a rare, endangered or unusual aspect of the history of a place or its historic environment.)
- **Representative** (Items of this quality are significant because they represent an important class of historic items or environments and are good or excellent examples of that class.)

Other criteria which can also be used to qualify the nature of significance include:

- Intactness (of the physical fabric of the item)
- Seminal (an important early work of a major architect)
- Climactic (an important work which demonstrates the culmination of a particular architectural style)
- **Criterion 1 historical significance:** 2 Wirra Close, St. Ives has historical significance as a design of the Architect Bruce Robertson of Robertson and Hindmarsh, and as the home of William George Sherington, a Company Director and owner of Ford Sherington Pty. Ltd., manufacturers of 'modern lightweight luggage' including the well known Globite brand.
- The building has significance as a largely intact (external) example of a fashionable Mid 20th Century "romantic movement" residence which reflects the evolving pattern of stylistic development in Sydney and within the Ku-ring-gai Municipality throughout the 1950s and early 1960s.
- The building at 2 Wirra Close is a fine and largely intact example of the eclectic styles and North American influences which were evident in the designs of the "Sydney School" architects working in the emerging Northern Suburbs of Sydney in the 1950s and 1960s.
- **Criterion 2 aesthetic significance:** 2 Wirra Close, St. Ives has aesthetic significance as a largely intact external example of a residential building embodying the Japanese and American philosophy of "the need for a continuing communication between man and nature". The building, with its wrap around plan, asbestos tiled hip roof with high peaked ridge and wide overhanging eaves has strong connections to the "organic" style of Frank Lloyd Wright who had created the inspiration for this building with his "Prairie style" and "west coast architecture" of the early nineteenth century.
- **Criterion 3 technical/research significance:** The building has some technical /research potential for its unusual roof structure which incorporates a scissor truss structure with a ventilating ring at the intersection of the top and bottom chord of the truss. It is also significant for the intact detailing externally which displays the use of economic building materials and techniques.
- **Criterion 4 social significance:** 2 Wirra Close, St. Ives has some social significance as one of the earliest houses in the mid 20th century development of St. Ives as a new residential suburb. Some social significance as an example of the influence of American architectural styles on the post-War Sydney architect.

5.2 COMPARATIVE ANALYSIS

2 Wirra Close, St. Ives. has aesthetic significance as a largely intact example of the design philosophy of the period. The work of Frank Lloyd Wright was having a strong influence on Sydney houses of the 1950s and 1960s. A number of young Sydney architects including Bruce Rickard, Peter Muller, Ian Mackay and Bruce Robertson had visited North America in the late 1950s to study the work of Frank Lloyd Wright. On their return, these architects had put the influences to work in the designs of the houses for themselves and their clients, mostly around the northern suburbs of Sydney.

Peter Muller chose to follow Wright's later stylistic forms with his 'Richardson House' at Palm Beach (1956) with its warm tones of natural materials and a design that seemed to become part of the surroundings (Fig. 6). The work of Bruce Rickard, particularly the house in Wahroonga, followed Wright's formulae for the "Prairie Style" houses of Chicago and the mid west. The house Rickard designed for his family featured open planning in the living areas with a large central fireplace. "The long horizontal lines give a feeling of repose and shelter...[in its]...bushland setting and...all rooms, even the small bedrooms, relate to the exterior"

Bruce Robertson's "Sherington House" design of 1962 was closer to the style used by Rickard than to the designs of Muller, particularly with the interior layout with its open planning, the relationship of the interior to the outside and the use of simple, inexpensive building materials. Robertson's design philosophy is obviously indebted to Wright's earlier stylistic formula for the "Prairie Style" and is a recurring theme throughout his work.

"The architect-designed houses of the 1950's shared common characteristics. Most were unobtrusive buildings, more concerned with comfort and convenience than with outward show. Their sites were commonly battle-axe blocks or out-of-the-way pockets of land. One of the greatest differences between these houses and their predecessors lay in the minimal use of internal partitions, and the interconnection of many of the rooms...much of the organisation was based on zoning....and separation was achieved by distance or levels."^{vi} A common practice was to separate living and sleeping areas by location and courtyards exactly as Bruce Robertson has done in the Sherington House.

The designs of these so called 'romantic movement' architects was contrary to the "rationality" of the International Style which had been introduced to Sydney by the Viennese born architect Harry Seidler. Seidler and the Australian architect, Sydney Anchor who lived in Europe for some years during the 1930s introduced the sleek modern International style to Australia. Their designs were radical to conservative Australians and based on the work of architects such as Le Corbusier, Walter Gropius and Mies van de Rohe. Acceptance of the "International Style" was not immediate and the featured flat roof was particularly offending to Australian taste. Wright's "harmonious compositions" were much more compatible with the Australian bushland settings of the subdivisions which were opening up in the outer northern suburbs of Sydney.

'The Sherington House' along with Bruce Robertson's later commission at 29 Womerah Street Turramurra, are important examples of the architect's interpretation of Wright's 'Prairie Style' in Australia. These two houses in Ku-ring-gai municipality

provide an insight into the philosophical as well as the economic direction of housing and the stylistic development of the Sydney architects of the mid nineteenth century leading up to the "Sydney School" of the 1960s. The two houses are important elements in understanding the residential development of the period.

6.0

GRADING OF SIGNIFICANT ELEMENTS

6.1 INTRODUCTION

The various components of the building have been assessed to determine a relative grading of significance. This process assesses a number of factors including:

- Original Architectural Quality
- Degree of Intactness and General Condition
- Extent of Subsequent Change
- Association with important people or events
- Ability to demonstrate a rare quality, craft or construction process.

A four tier system of values has been chosen to establish the grading of significance across the whole building. This acts as a valuable planning tool and will assist in developing approaches to the conservation of the key elements within a potential redevelopment of the site.

The tiered system of ratings has the following components:

HIGH SIGNIFICANCE:

Of considerable or exceptional cultural significance to the wider community.

MEDIUM SIGNIFICANCE:

Of some significance within the particular building.

LOW SIGNIFICANCE:

Of relatively slight significance, particularly when compared to other features.

INTRUSIVE:

An intrusive or disruptive element of slight significance which tends to devalue the significance of the adjacent components or the building as a whole.

6.2 SIGNIFICANT ELEMENTS

ITEMS OF HIGH SIGNIFICANCE

The following items are considered to be of High Significance:

- The scale, massing and external detail of the original residence, including all original external brick and timber walling, string courses and mouldings, original windows and doors.
 - The scale, massing and detailing of the pyramidal roof including the original wings
- All original or early timber window joinery including timber frames, sashes, architraves and mullions. Including all original openings on south and west facades.
- The layout of the residence including the internal courtyard within the two wings of the house.
- The siting of the building when viewed from Wirra Close
- The original curtilage, including gardens, lawns and trees within the context of the streetscape.

These components are considered to have high significance rating due to their relative design quality, degree of intactness, condition and visual contribution in relation to the historic and aesthetic significance of the building

ITEMS OF MEDIUM SIGNIFICANCE

Modified copper lined front door. Layout of kitchen, laundry and adjoining glazed wall gallery (modified).

ITEMS OF LOW SIGNIFICANCE

Additions at rear of garage.

INTRUSIVE ITEMS

Interior plasterboard lining to ceiling and walls of living /dining room

7.0

STATEMENT OF SIGNIFICANCE

7.1 STATEMENT OF SIGNIFICANCE

"The Sherington House" at 2 Wirra Close St Ives is a low scale single storey painted brick and timber residence with design and detailing strongly influenced by the "Prairie Style" residences designed and constructed in Oak park, Chicago and the West Coast of USA within the early decades of the twentieth century. The residence is significant for the following reasons:

"The Sherington House" is significant as part of the residential development phase of the northern suburbs of Sydney around the middle of the twentieth century.

"The Sherington House" on its corner site is significant as a reflection of the 'romantic movement' which was being led by young Sydney architects of the period who had travelled to North America in the 1950s and early 1960s bringing back to their Australian practices, the stylistic influences of Frank Lloyd Wright .

"The Sherington House" is largely intact externally and has aesthetic and technical significance as one of the few residential buildings to be designed in a variation of the "Prairie Style" within Ku-ring-gai municipality.

The form, scale and detailing of the house is simple and characteristic of the "Prairie Style". The detailing of this particular residence is rare in Sydney for its design, particularly the pyramidal roof and its copper finial over the open plan living room and the low roofed wings which extend out along the two Wirra Close boundaries of the site.

The building has aesthetic significance for the largely intact original external fabric of the residence, which retains the character of the original design. It has significance as one of the early residences, constructed as part of the early subdivision of land in the immediate area. The overall design and character of the building is indicative of the early development of the suburb.

The interior of the building has not been inspected. However from the report by Robert Staas (April 2003), it appears that the recent internal modifications may have resulted in the removal of the central fireplace, new seating and ceiling lining to living room and enlargement of the sun gallery, however, the interior layout and overall design intent of the interior is largely as originally constructed.

The reinstatement of the original timber ceiling (which appears to be intact under the recent plasterboard lining, as indicated in the "Stass" report) would add greatly to the overall significance of the residence and this aspect should be investigated prior to any approvals for modification or alterations to the interior fabric.

The mature gardens around the house are significant as the original curtilage to this significant item.

8.0

RECOMMENDATIONS

“The Sherington House” at 2 Wirra Close is one of a number of Sydney residences designed in the “Prairie Style” by the architect Bruce Robertson of Robertson and Hindmarsh. The house is in a largely intact condition externally and still located in its original curtilage and surrounding gardens which are now somewhat overgrown.

This house, along with Bruce Robertson’s other “Prairie Style” design at Turramurra are fine and rare examples within the Ku-ring-gai municipality of a residential building which was strongly influenced by the philosophy of the early nineteenth century American architect Frank Lloyd Wright. The character of this building is reflective of the “Prairie Style” made famous by Frank Lloyd Wright in Chicago and the West Coast of America in the early decades of the twentieth century.

The site known as 2 Wirra Close has previously been listed on Schedule 7 of the Ku-ring-gai Planning Ordinance as part of the Torokina Avenue Group. 2 Wirra Close certainly has some connection with the Torokina Avenue Estate Group from the inclusion of the site as part of the Torokina Avenue Estate subdivision. However, even with this link, “The Sherington House” is obviously an individual item of significance which was designed and constructed well in advance of building construction on the adjoining subdivision. Consideration should therefore be given to re-listing by Ku-ring-gai Council as an individual heritage item in its own right.

Taking into consideration the context of the property and the assessed significance of the extant building identified within this report it is also considered appropriate that first floor additions may be possible in areas that will not have a negative impact on the overall character of the building.

Consideration should be given to allowing alterations and additions at the far eastern end of the garage wing. Consideration should be given to allowing an upper floor addition of sympathetic design and complimentary fabric located over the existing garage pavilion and an additional wing to further enclose the courtyard.

- “The Sherington House” should be retained as an item of significance within the suburb of St. Ives. The extant building should be retained largely in its original form and detail as a single storey dwelling addressing this corner of Wirra Close
- “The Sherington House” should be retained as a largely intact external example of a simple mid century suburban house strongly influenced by the Prairie Style made famous in the early 1900s by the North American Architect, Frank Lloyd Wright .
- “The Sherington House” should be retained as an isolated building on its original corner allotment with any modifications or upper floor additions restricted to the far (garage) end of the eastern wing of the extant house.

- The quality of design and original fabric of the interior, particularly the large open plan living /dining area with high vaulted timber clad ceiling and the focus of the interior towards the internal courtyard, appears to have remained largely intact if modified. As it has been indicated in the "Staas Report" that the original timber ceiling is intact under the later plasterboard ceiling lining, reinstatement of this significant element would add greatly to the integrity and intactness of the building. A heritage assessment of the interior should be made prior to any decision on the type and extent of redevelopment that the building could sustain.
- "The Sherington House" should be retained as a significant landmark element in its own right.
- "The Sherington house" should be retained as a significant item defining the entrance to the Torokina Avenue Estate Group

9.0 BIBLIOGRAPHY

Australian House and Garden Magazine, "Fine Décor justifies a Good Plan; Architect Bruce Robertson has this logical solution for privacy on a corner site", Gordon & Gotch, Melbourne, February 1964

Edwards, Zeny, 'A Report of the Heritage Significance of Sherington House, 2 Wirra Close, St. Ives, (4th march. 2005)'.

Irving, Robert, *The History and Design of the Australian House*, Oxford University Press, Melbourne, 1985

O'Gorman, James F., *Three American Architects, Richardson , Sullivan and Wright, 1865 -1915*, The University of Chicago Press, Chicago 1991

Sprague, Paul E., *Guide to Frank Lloyd Wright & Prairie School Architecture in Oak Park*, Oak Park Bi-centennial Commission of the American Revolution, Fifth Edition. The Village of Oak Park, 1986.

Stass, Robert, Noel Bell Ridley Smith & Partners, 'Statement in Support of Deletion of a Heritage Item Listed in Schedule 7 of Ku-ring-gai Planning Scheme Ordinance, April 2003.

ENDNOTES

ⁱ *The History and Design of the Australian House*, Compiled by Robert Irving, "Beyond the 1950s" by Jennifer Taylor, Oxford University Press, Sydney 1985, p, 146

ⁱⁱ Ibid.

ⁱⁱⁱ Information related to the author by the architect's son, Scott Robertson of Robertson and Hindmarsh.

^{iv} Description of the Cheney house, Sprague, Paul E., *Guide to Frank Lloyd Wright & Prairie School Architecture in Oak Park*, p75

^v "Statement in Support of Deletion of a Heritage Item Listed in Schedule 7 of Ku-ring-gai Planning Scheme Ordinance", Robert Staas, April 2003, p1.

^{vi} *The History and Design of the Australian House*, Compiled by Robert Irving, Beyond the 1950s, p.150

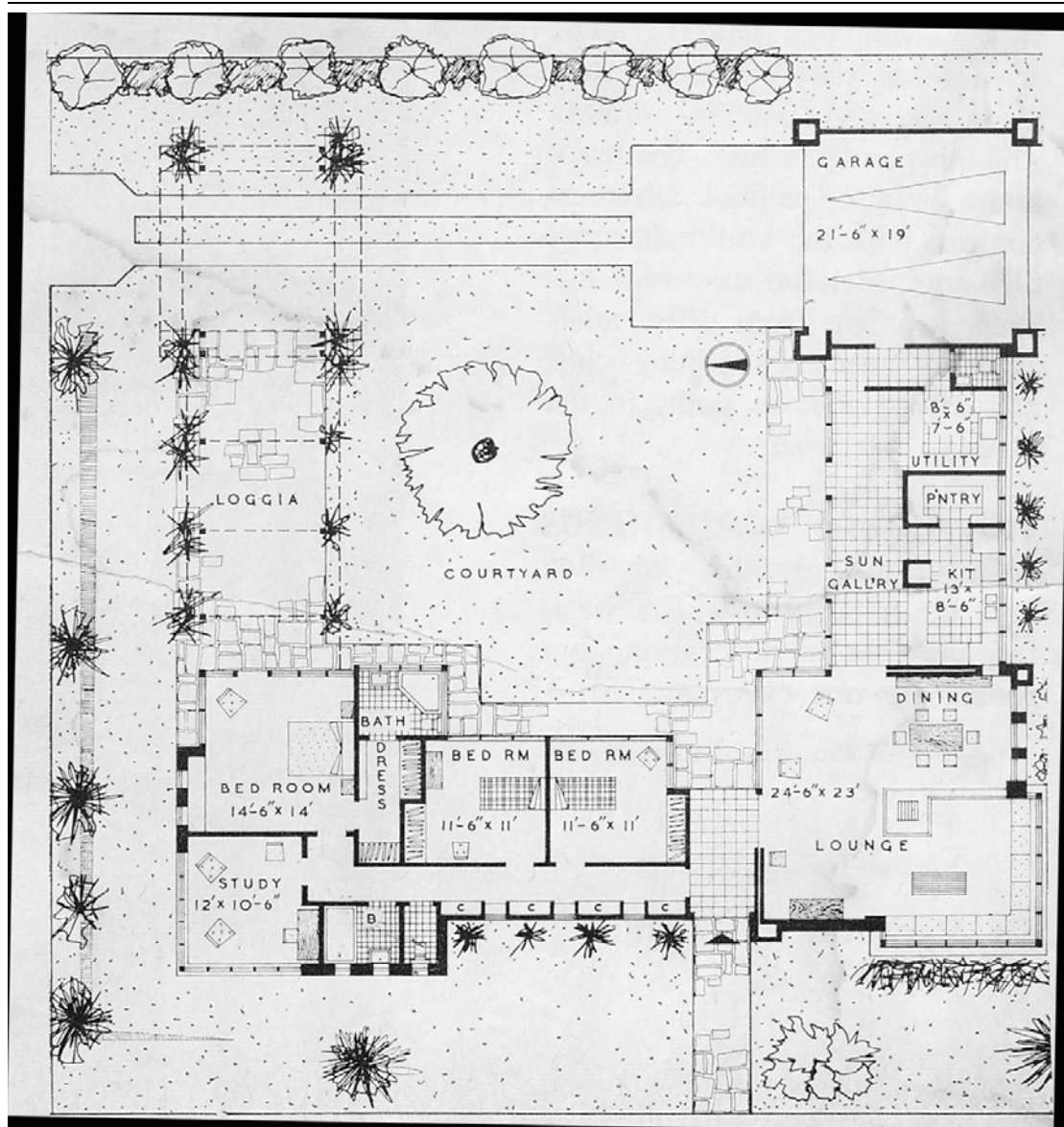


Fig 1 Plan of Building 2 wirra Close, St., Ives B. Robertson, Robertson & Hindmarsh c.1962



Fig 2 2 WirraClose Southern Elevation showing central pavilion and service wing. Architect's photograph c.1963

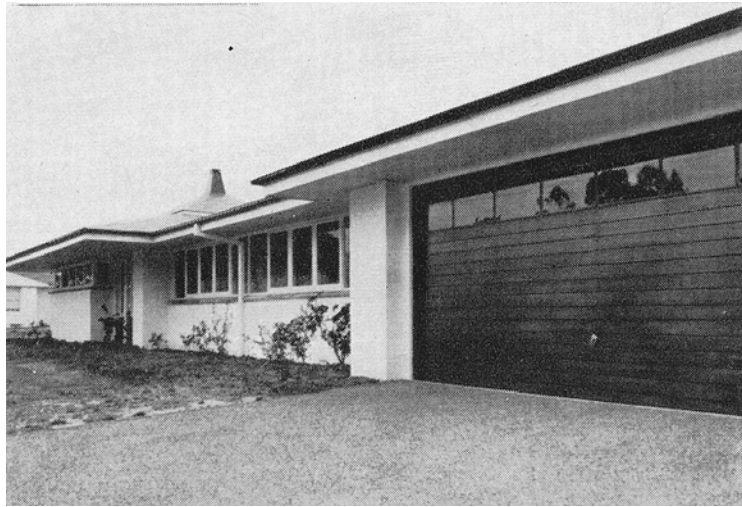


Fig 3 2 WirraClose Southern Elevation showing garage and service wing.
Architect's photograph c.1963



Fig 4 2 WirraClose Interior: showing central fireplace and rakes timber ceiling
Architect's photograph c.1963

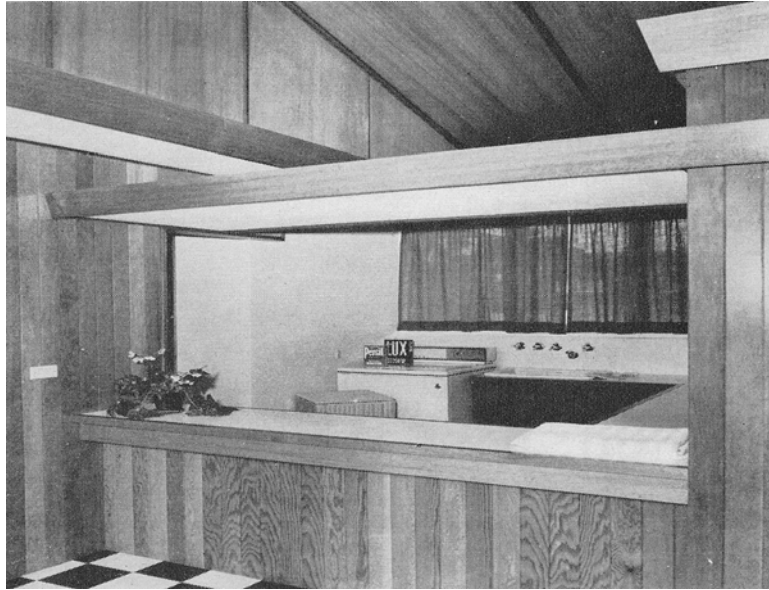


Fig 5 2 WirraClose Interior: showing laundry, photograph taken from gallery
Architect's photograph c.1963



Fig 6 2 WirraClose Interior: showing original kitchen, photograph taken from gallery
Architect's photograph c.1963



Fig 7 2 WirraClose Contemporary external photograph 2005. showing pyramidal roof and chimney of central pavilion Note original strip windows and wide eaves



Fig 8 2 WirraClose Contemporary external photograph 2005. showing main entrance and modified front door to central pavilion



Fig 9 2 WirraClose Contemporary external photograph 2005. showing northern end of bedroom wing. Note modified windows and doors



Fig 10 2 WirraClose Contemporary external photograph 2005. showing Kitchen/laundry service area windows



Fig 11 29 Womerah Street, Turramurra Contemporary external photograph 2005.
Note pyramidal roof of central pavilion, strip windows and wide eaves.
Design by Bruce Robertson , Robertson and Hindmarsh Completed 1964.



Fig 12 29 Womerah Street, Turramurra Contemporary external photograph 2005.
Note pyramidal roof of central pavilion, strip windows and wide eaves.
Design by Bruce Robertson , Robertson and Hindmarsh Completed 1964.

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ITEM DETAILS							
Name of Item	"The Sherington House"						
Other Name/s Former Name/s							
Item type (if known)	Built						
Item group (if known)							
Item category (if known)	House						
Area, Group, or Collection Name	Torokina Avenue Estate Group						
Street number	2						
Street name	Wirra Close						
Suburb/town	St. Ives					Postcode	2075
Local Government Area/s	Ku-ring-gai						
Property description	Lot 2 DP543666						
Location - Lat/long	Latitude				Longitude		
Location - AMG (if no street address)	Zone		Easting		Northing		
Owner							
Current use	Residential						
Former Use	Residential						
Statement of significance	<p>"The Sherington House" at 2 Wirra Close St Ives is a low scale single storey painted brick and timber residence with design and detailing strongly influenced by the "Prairie Style" residences designed and constructed in Oak park, Chicago and the West Coast of USA within the early decades of the twentieth century. The residence is significant for the following reasons:</p> <p>"The Sherington House" is significant as part of the residential development phase of the northern suburbs of Sydney around the middle of the twentieth century.</p> <p>"The Sherington House" on its corner site is significant as a reflection of the 'romantic movement' which was being led by young Sydney architects of the period who had travelled to North America in the 1950s and early 1960s bringing back to their Australian practices, the stylistic influences of Frank Lloyd Wright .</p> <p>"The Sherington House" is largely intact externally and has aesthetic and technical significance as one of the few residential buildings to be designed in a variation of the "Prairie Style" within Ku-ring-gai municipality.</p> <p>The form, scale and detailing of the house is simple and characteristic of the "Prairie Style". The detailing of this particular residence is rare in Sydney for its design, particularly the pyramidal roof and its copper finial over the open plan living room and the low roofed wings which extend out along the</p>						

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	<p>two Wirra Close boundaries of the site.</p> <p>The building has aesthetic significance for the largely intact original external fabric of the residence, which retains the character of the original design. It has significance as one of the early residences, constructed as part of the early subdivision of land in the immediate area. The overall design and character of the building is indicative of the early development of the suburb.</p> <p>The interior of the building has not been inspected. However from the report by Robert Staas (April 2003), it appears that the recent internal modifications may have resulted in the removal of the central fireplace, new seating and ceiling lining to living room and enlargement of the sun gallery, however, the interior layout and overall design intent of the interior is largely as originally constructed.</p> <p>The retention of the timber ceiling under the recent plasterboard lining (as indicated in the "Stass" report) would add greatly to the overall significance of the residence and this aspect should be investigated prior to any approvals for modification or alterations to the interior fabric. Some restoration of the interior may be possible to enhance the integrity of the house.</p> <p>The mature gardens around the house are significant as the original curtilage to this significant item.</p>	
Level of Significance	State	Local RARE

DESCRIPTION

Designer	Bruce Robertson, Architect; Robertson & Hindmarsh					
Builder/ maker	Norman T.M.Sumner, Builder					
Physical Description	<p>2 Wirra Close is a small scale, single storey painted brick and timber residence located on a corner site with a central pavilion marked by a dominant pyramidal roof with a central chimney.</p> <p>The building layout of 2 Wirra Close closely resembles Frank Lloyd Wright's "organic" architecture with an internal layout which turns its back on the street and addresses an inner courtyard through floor to ceiling glazed walls. This was a design which integrated the interior of the house with nature. The design presents two long, low wings of bedrooms and service areas reaching out in opposite directions from the main pavilion which houses the living and dining areas.</p> <p>The exterior facades feature painted masonry and timber walls with high-set strip windows. The low sweeping hipped rooflines with extended eaves, closely resembles Wright's Prairie house designs in Oak Park Chicago.</p> <p>The building was modified externally and internally in the 1980s by Lindsay Little and Associates, Architects, for Mr. & Mrs.B.C.McCallion, an insurance company executive.</p> <p>Additional modifications were made to the kitchen and living room by later owners.</p>					
Physical condition and Archaeological potential	<p>The property is in good physical condition both internally and externally.</p> <p>Archaeological potential LOW</p>					
Construction years	Start year 1885	1962	Finish year	1963	Circa	<input type="checkbox"/>
Modifications and dates	<p>The building was modified externally and internally in the 1980s by Lindsay Little and Associates, Architects, for Mr. & Mrs.B.C.McCallion, an insurance company executive.</p> <p>Modifications included:</p>					

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	<p>Additional bedroom and ensuite behind garage; One window blocked to create pantry; New ceiling to kitchen and new kitchen fit-out; The glazed gallery extended with new windows to create a family room; Living room ceiling lined with plasterboard, removal of fitted seating and new fireplace fitted; External door added to bedroom 2 to create study; Dividing wall between bedroom 3 & 4 removed to create TV lounge; Modifications to ensuite</p> <p>Additional modifications were made to the kitchen and living room by later owners.</p>
Further comments	<p>A number of modifications have been made internally, these changes however, are largely of a type that have not created a negative impact on the significance of the building.</p> <p>The reinstatement of elements such as the timber lined ceiling to living/dining room would add greatly to the intact nature of the building.</p>

HISTORY

Historical notes	<p>In 1962 No.2 Wirra Close, was purchased by William George Sherington, a Company Director and owner of Ford Sherington Pty. Ltd., manufacturers of 'modern lightweight luggage' including the well known Globite brand.</p> <p>"The Sherington House" was designed in 1962 by Bruce Robertson of Robertson & Hindmarsh Architects and Builders.</p>
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THEMES

State historical theme	<p>Housing Land Tenure Townships</p>
Local historical theme	<p>Suburban Consolidation</p>

APPLICATION OF CRITERIA

Historical significance SHR criteria (a)	<p>Example of early housing in the development of the new suburb of St. Ives. Example of the influence of Frank Lloyd Wright's "Organic architecture" in the 'Romantic' designs of the Post-War architects of the 'Sydney School' in the 1950s and 1960s.</p>
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Historical association significance SHR criteria (b)	The building has some historical association significance as the home of William George Sherington, owner and company director of Ford Sherington Pty. Ltd., manufacturers of modern lightweight luggage including the well known "Globeite " brand.
Aesthetic significance SHR criteria (c)	Landmark significance at the entry to the Torokina Avenue Estate Group. While not constructed as part of the Torokina Estate Group "The Sherington house" identifies the move towards "organic architecture" of the Post-War Sydney School architects and the direction of housing in the Post-War development of Sydney's new suburbs.
Social significance SHR criteria (d)	
Technical/Research significance SHR criteria (e)	Interesting technical /research significance in the ventilated roof design of the main pavilion.
Rarity SHR criteria (f)	One of two designs influenced by the "Prairie Style" of Frank Lloyd Wright's early house designs and the first of two similar buildings designed by Bruce Robertson in this style
Representativeness SHR criteria (g)	Representative significance as an example of the variety of "Sydney School" styles of architecture favoured by the upper-middle class or artistically nonconformist client of the late 1950s and early 1960s.
Integrity	The exterior of the house retains its original integrity with form, layout and style unchanged by later modifications. Some integrity of the interior has been lost by internal modifications but restoration of the existing living room timber ceiling would restore much of this loss of significant fabric

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HERITAGE LISTINGS	
Heritage listing/s	Ku-ring-gai Council Local Environmental Plan, Heritage Schedule

INFORMATION SOURCES				
Include conservation and/or management plans and other heritage studies.				
Type	Author/Client	Title	Year	Repository
Article	Australian House and Garden Magazine, Gordon & Gotch, Melbourne	"Fine Décor justifies a Good Plan; Architect Bruce Robertson has this logical solution for privacy on a corner site",	Feb. 1964	Ku-ring-gai Council
'Statement in Support of Deletion of a Heritage Item	Stass, Robert, Noel Bell Ridley Smith & Partners,	'Statement in Support of Deletion of a Heritage Item Listed in Schedule 7 of Ku-ring-gai Planning Scheme Ordinance,	April 2003.	Ku-ring-gai Council
Statement of Significance	Edwards, Zeny	A Report of the Heritage Significance of Sherington House, 2 Wirra Close, St. Ives,	4 th march. 2005	Ku-ring-gai Council
Publication	Irving, Robert	<i>The History and Design of the Australian House</i>	1985	Oxford University Press, Melbourne
Publication	O'Gorman, James F.,	<i>Three American Architects, Richardson, Sullivan and Wright, 1865-1915</i>	1991	The University of Chicago Press, Chicago
Publication	Sprague, Paul E.	<i>Guide to Frank Lloyd Wright & Prairie School Architecture in Oak Park</i>	1986	Oak Park Bi-centennial Commission of the American Revolution, Fifth Edition. The Village of Oak Park

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RECOMMENDATIONS	
Recommendations	<p>"The Sherington House" at 2 Wirra Close is one of a number of Sydney residences designed in the "Prairie Style" by the architect Bruce Robertson of Robertson and Hindmarsh. The house is in a largely intact condition externally and still located in its original curtilage and surrounding gardens which are now somewhat overgrown.</p> <p>This house, along with Bruce Robertson's other "Prairie Style" design at Turramurra are fine and rare examples within the Ku-ring-gai municipality of a residential building which was strongly influenced by the philosophy of the early nineteenth century American architect Frank Lloyd Wright. The character of this building is reflective of the "Prairie Style" made famous by Frank Lloyd Wright in Chicago and the West Coast of America in the early decades of the twentieth century.</p> <p>The site known as 2 Wirra Close has previously been listed on Schedule 7 of the Ku-ring-gai Planning Ordinance as part of the Torokina Avenue Group. 2 Wirra Close certainly has some connection with the Torokina Avenue Estate Group from the inclusion of the site as part of the Torokina Avenue Estate subdivision. However, even with this link, 'The Sherington House' is obviously an individual item of significance which was designed and constructed well in advance of building construction on the adjoining subdivision. Consideration should therefore be given to re-listing by Ku-ring-gai Council as an individual heritage item in its own right.</p> <p>Taking into consideration the context of the property and the assessed significance of the extant building identified within this report it is also considered appropriate that first floor additions may be possible in areas that will not have a negative impact on the overall character of the building.</p> <p>Consideration should be given to allowing alterations and additions at the far eastern end of the garage wing. Consideration should be given to allowing an upper floor addition of sympathetic design and complimentary fabric located over the existing garage pavilion and an additional wing to further enclose the courtyard.</p> <ul style="list-style-type: none"> • "The Sherington House" should be retained as an item of significance within the suburb of St. Ives. The extant building should be retained largely in its original form and detail as a single storey dwelling addressing this corner of Wirra Close • "The Sherington House" should be retained as a largely intact external example of a simple mid century suburban house strongly influenced by the Prairie Style made famous in the early 1900s by the North American Architect, Frank Lloyd Wright . • "The Sherington House" should be retained as an isolated building on its original corner allotment with any modifications or upper floor additions restricted to the far (garage) end of the eastern wing of the extant house. • The quality of design and original fabric of the interior, particularly the large open plan living /dining area with high vaulted timber clad ceiling and the focus of the interior towards the internal courtyard, appears to have remained largely intact if modified. As it has been indicated in the "Staas Report" that the original timber ceiling is intact under the later plasterboard ceiling lining, reinstatement of this significant element would add greatly to the integrity and intactness of the building. A heritage assessment of the interior should be made prior to any decision on the type and extent of redevelopment that the building could sustain. • "The Sherington House" should be retained as a significant landmark element in its own right.



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	<ul style="list-style-type: none"> "The Sherington house" should be retained as a significant item defining the entrance to the Torokina Avenue Estate Group
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SOURCE OF THIS INFORMATION			
Name of study or report	Heritage Study of the Municipality of Ku-ring-gai 1997	Year of study or report	1997
Item number in study or report	Item No. 18: 002		
Author of study or report	Glen Cowell		
Inspected by	Glen Cowell , Glen Cowell Heritage Services Pty. Ltd.		
NSW Heritage Manual guidelines used?		Yes	<input type="checkbox"/>
This form completed by	Glen Cowell	Date	June 2005



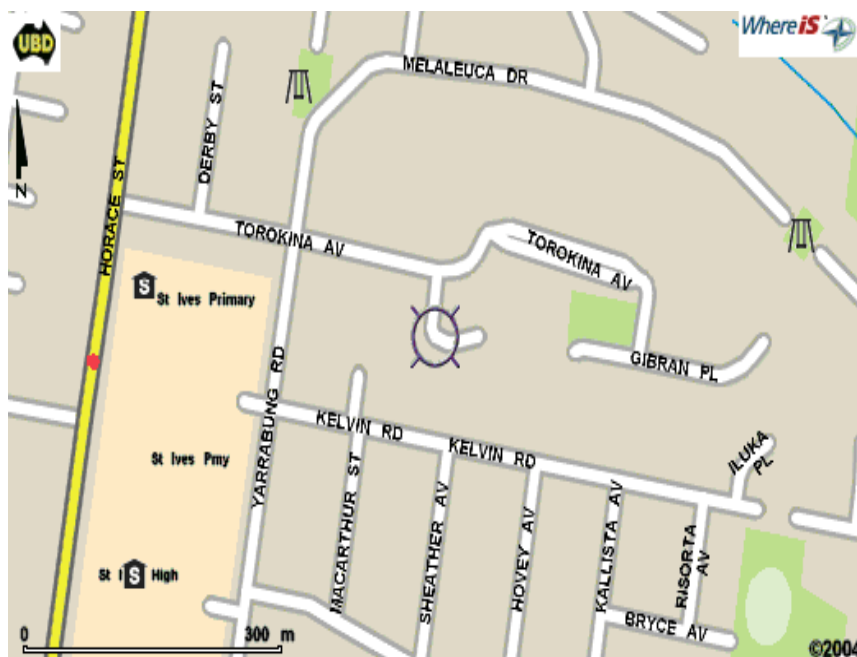
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IMAGES - 1 per page

Please supply images of each elevation, the interior and the setting.

Image caption	2 Wirra Close St. Ives, location plan				
Image year	2005	Image by		Image copyright holder	



2 Wirra Close St. Ives, Location map



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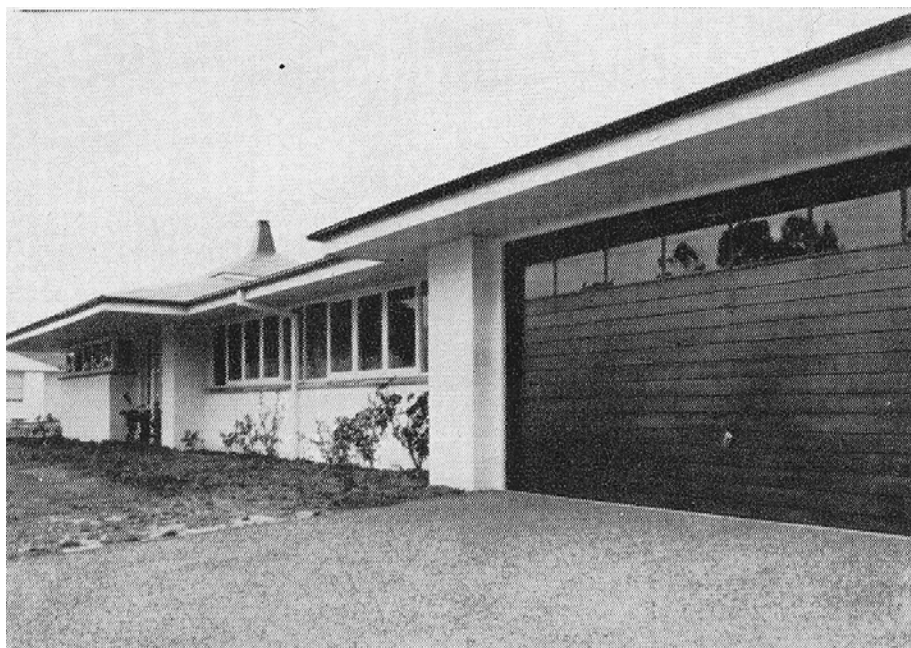


2 Wirra Close St. Ives: Architect's photographs, 1963
Southern facade
Robertson & Hindmarsh



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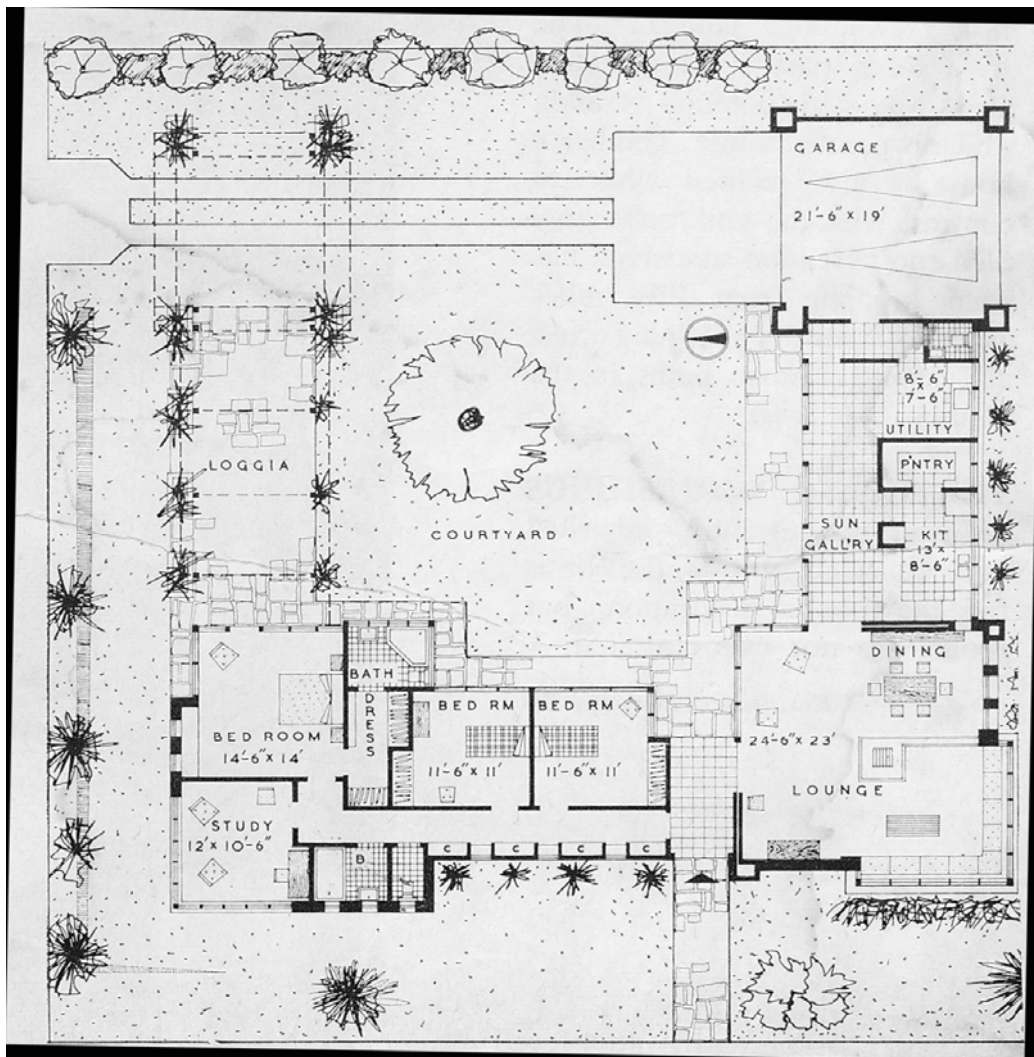
2 Wirra Close, St. Ives: Architect's photograph 1963
Southern facade



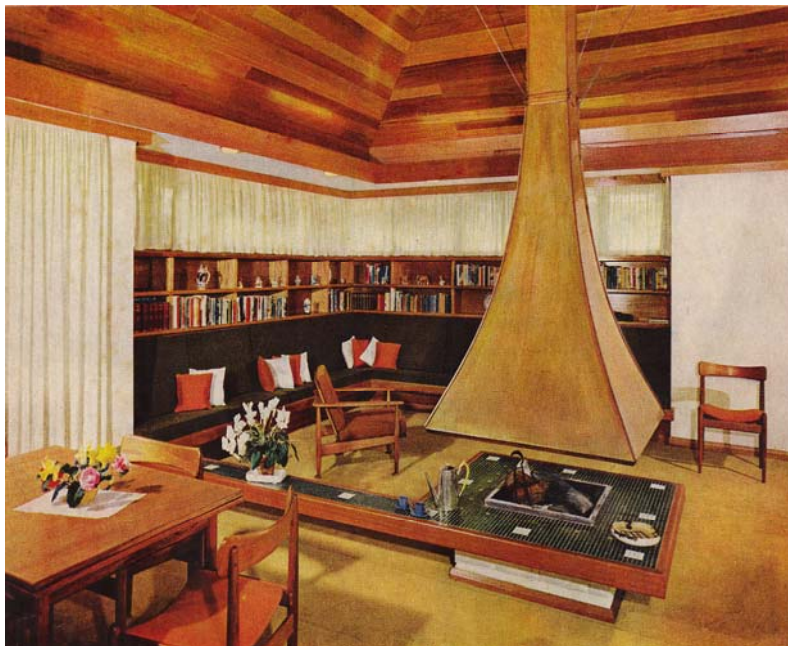
2 Wirra Close St. Ives: Architect's photograph 1963
Interior Living/Dining showing fireplace & copper hood



2 Wirra Close, St. Ives: Architect's photographs 1963
Looking into laundry from gallery



2 Wirra Close, St. Ives: Architect's photograph 1963
Plan of house
Robertson & Hindmarsh



Architect's Photograph: Sherington House living room interior

]



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Architect's photographs: Sherington House Kitchen & Gallery



2 Wirra Close, St. Ives
corner of house showing ventilation roof and central chimney,
asbestos tiles, strip windows, wide eaves and sandstone sills
May 2005



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2 Wirra Close, St. Ives
Western façade with modified copper plated front door
May 2005



2 Wirra Close, St. Ives
North western corner of house through mature plantings
Showing modified window walls with doors
May 2005



2 Wirra Close, St. Ives
Garage on south facade of house
May 2005



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Single storey brick house on northern corner of entrance to Torokina Avenue Estate
opposite 2 Wirra Close.
Lot 1 DP 238226



NSW
Heritage
Office

NSW State Heritage Inventory form

IMAGE

photograph, sketch, map

Site Inspection Report 2, Wirra Close, St Ives

05 November 2005

Commenced: 10.30am- finished at 11.15am
Present: Councillors Lane, Cross (part of inspection), Bennett, & Malicki (Mayor)
Officers: Antony Fabbro, Manager Urban Planning
Apologies: Ebbeck, Shelley, Innes, Ryan, Hall

Mr Gordon (owner) was also present for part of inspection.

Copies of Heritage Assessment Reports from G. Cowell, June 2005 and report by R.Stass NBRSP (2003) and the Council's Officers Report 26 July 2005 were provided to all Councillors.

Council Resolution 26 July 2005:

A. That consideration of Heritage Assessment – 2 Wirra Close St Ives be deferred pending a site inspection.

Original Officers Recommendation:

E. That the property at No. 2 Wirra Close, St Ives remains listed as a property of Heritage Significance in Schedule 7 of the Ku-ring-gai Planning Scheme Ordinance.

General Site Meeting Notes

An overview of the Heritage Consultants Report was presented. Part of the adjoining Torokina Group- was inspected (currently listed under the KPSO).

The exterior of No 2 Wirra Close was inspected- noting condition, original roof form, vegetation, original exterior detailing and the potential limits on future additional site development under DCP 38.

The owner invited Councillors to view part of the interior of the dwelling and the interior courtyard area noting changes to the original fabric, several alterations and additions.

The issue of the age and condition of the original asbestos tiles, current repairs to leaking tiles and cost of roof replacement were also discussed.

The Officers report on 2 Wirra Close, St Ives will be re-submitted for consideration at a Council meeting in November/December 2005.

Site meeting finished at 11am.

GREENGATE PRECINCT - TRAFFIC ASSESSMENT

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To consider the likely cumulative impact of traffic of all proposed developments under LEP194 within the 'Greengate' precinct.

BACKGROUND:

Most of the land fronting Bruce Avenue Killara has been rezoned under LEP 194 to permit medium density housing.

COMMENTS:

Under current traffic flows, the width of Greengate Lane and Bruce Avenue (parallel to the railway line) is probably adequate.

Maintaining two-way traffic in Greengate Lane would have the least impacts, however this would require road widening, which is considered difficult to achieve. Implementation of one-way flow (eastbound) in Greengate Lane and one way flow (northbound) in the north-south section of Bruce Avenue combined with road carriageway widening would also reduce pressure on Greengate Lane, but also in the north-south section of Bruce Avenue

RECOMMENDATION:

That the proposal for one way flow in Greengate Lane (eastbound) and one way flow (northbound) in the north-south section of Bruce Avenue be referred to the Ku-ring-gai Traffic Committee for consideration.

PURPOSE OF REPORT

To consider the likely cumulative impact of traffic of all proposed developments under LEP194 within the 'Greengate' precinct.

BACKGROUND

Most of the land fronting Bruce Avenue Killara has been rezoned under LEP 194 to permit medium density housing. Development Applications have been lodged for medium density development on some of the sites on the southern side of Bruce Avenue, with vehicular access proposed from Greengate Lane. The sites are:

- 1-7 Bruce Avenue and 6 Greengate Lane, Killara (32 x 3 bedroom units, 6 x 2 bedroom units and 4 x 1 bedroom unit).
- 657-661 Pacific Highway, Killara (2 x 3 bedroom units, 22 x 2 bedroom units and 16 x 1 bedroom units).
- 9-23 Bruce Avenue Killara (47 x 3 bedroom units and 12 x 2 bedroom units)

The northern side of Bruce Avenue is expected to generate some 103 x 3 bedroom units and 43 x 2 bedroom units. These sites would gain vehicular access directly via Bruce Avenue, or possibly via Cecil Street (depending on final lot amalgamations).

The section of Bruce Avenue between Pacific Highway and the North Shore railway line has a carriageway width of 10.1m, defined by kerb and gutter. However, the section of Bruce Avenue parallel to the railway line has a carriageway width of 4.1m-4.6m, within a road reserve of about 10m. Greengate Lane has a carriageway width of about 3.5m-4m, within a road reserve of about 6m-7.4m. Traffic flow in Greengate Lane is two-way, and the lane permits access to the rear of the properties which back onto it.

Masson Wilson Twiney, as traffic consultants for the applications at 1-7 Bruce Avenue and 657-661 Pacific Highway, have determined that existing peak hour traffic volumes at the eastern end of Bruce Avenue are about 25 vehicles per hour (two-way), and existing peak hour traffic volumes in Greengate Lane are up to 4 vehicles per hour (two-way).

COMMENTS

Development of the land fronting Bruce Avenue is likely to have traffic impacts on either Greengate Lane, the eastern end of Bruce Avenue, or both. Impacts would primarily be in the form of increased traffic volumes.

To determine the extent of the impacts, the traffic generation was calculated for the land fronting Bruce Avenue. This traffic was distributed to the surrounding road network under a number of access and circulation scenarios to determine what the impacts would be.

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The following access/circulation scenarios were considered:

1. Two-way flow in Greengate Lane (access for 25, 27, 29, 31 Bruce Avenue and 24 Greengate Lane from Bruce Avenue),
2. Two-way flow in Greengate Lane (access for 25, 27, 29, 31 Bruce Avenue and 24 Greengate Lane from Greengate Lane),
3. One-way flow (westbound) in Greengate Lane (access for 25, 27, 29, 31 Bruce Avenue and 24 Greengate Lane from Bruce Avenue), and
4. One-way flow (eastbound) in Greengate Lane (access for 25, 27, 29, 31 Bruce Avenue and 24 Greengate Lane from Bruce Avenue).

It should be noted that the final distribution of traffic would depend a number of factors, including origin/destination as well as choice of route. For example, for traffic travelling north on Pacific Highway wanting to access the precinct, there are 3 obvious routes:

1. By turning right from Pacific Highway into either Stanhope Road or Lorne Avenue, then proceeding to Greengate Road via Werona Avenue, or
2. By turning left from Pacific Highway into Essex Street, then proceeding to Cecil Street (west) via Norfolk Street, or (less likely)
3. By turning right from Pacific Highway into St Johns Avenue, then proceeding to Bruce Avenue via Henry Street/Ravenswood Avenue and Pacific Highway

Below is a summary of the expected peak hour traffic volumes in various sections of Greengate Lane and Bruce Avenue, and the two-way scenarios are also shown in the attachment titled, 'Existing Traffic Flows and Estimated Future Traffic Flows in Greengate Precinct Under Various Two-Way Traffic Flow Scenarios'.

	Greengate Lane (western end)	Greengate Lane (eastern end)	Bruce Avenue (western end)	Bruce Avenue (northern end)	Bruce Avenue (southern end)
Existing	0 (2)	4 (3)	27 (29)	20* (15)*	27 (30)
Scenario 1	64 (26)	26 (64)	152 (53)	37 (65)	54 (153)
Scenario 2	64 (20)	52 (90)	137 (52)	27 (74)	69 (154)
Scenario 3	69 (21)	21 (69)	145 (49)	44 (102)	61 (157)
Scenario 4	21 (69)	69 (21)	93 (44)	61 (119)	113 (162)

* Estimate: 7 (29) = am peak vehicles per hour (pm peak vehicles per hour)

The distribution considered in this analysis assumes no contribution from routes 2 or 3. Should these routes eventually carry some proportion of the evening peak traffic travelling north from Pacific Highway to the precinct, then the volumes at the northern and southern ends of Bruce Avenue would be lower, as access into the area would be shifted towards the western end of Bruce Avenue. Some additional increases could be expected as a result of the proposed car parking for the Greengate Hotel, however this is likely to feature more in the pm peak.

The results indicate that different scenarios have different benefits. In summary:

- Greengate Lane would be least impacted under Scenarios 1, 3 and 4.
- The western end of Bruce Avenue would be least impacted under Scenario 4.

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- The northern end of Bruce Avenue would be least impacted under Scenario 1 and 2.
- The southern end of Bruce Avenue would be least impacted under Scenario 1 and 3.

Therefore, Scenario 1 would appear to result in the least overall impacts. However, given the traffic volumes expected in Greengate Lane under Scenario 1, two-way traffic would not be desirable at the current lane width. AMCORD guidelines indicate that for local roads carrying 300-1000 vehicles per day (30-100 vehicles per hour), the road reserve width should be minimum 13m and the road carriageway width should be 5m-5.5m. Therefore, if 2-way flow is to be maintained in Greengate Lane (Scenario 2), the road reserve would have to be widened from 7m to 13m.

The Roads and Traffic Authority Guide to Traffic Generating Developments suggests that access ways (such as Greengate Lane) could generally support peak hour traffic volumes of up to 100 vehicles per hour before exceeding the environmental capacity for that road type.

Given the number and advanced state of some of the development applications before Council in the precinct, it would be difficult to require each landholder to dedicate a portion of their site for road widening. As a result, Scenario 3 or 4 (one-way conditions) would have the next lowest impact in terms of traffic volumes, and could be more readily achieved with only minor widening/formalisation of the carriageway within the existing road reserve required, as one-way traffic flow generally requires less road space.

One way conditions in Greengate Lane would also reduce the potential for conflict, but would not alter conditions for larger vehicles, and provide the opportunity to incorporate a footpath along the northern side of the longer leg of Greengate Lane. A similar situation exists in Tryon Lane, Lindfield, which is expected to carry some 75 vehicles per hour once the medium density development at the Minister's site is completed.

The shorter leg of Greengate Lane, which is about 6m wide, could incorporate a 5m wide carriageway with the eastern kerb against the boundary of 1-7 Bruce Avenue and a 1m wide footpath located adjacent to the kerb, inside the boundary of 1-7 Bruce Avenue. This would permit a 1m wide footpath on the western side of Greengate Lane, to service the proposed units at 657-661 Pacific Highway, which would have pedestrian access to the Lane. As a comparison, Tryon Lane is about 6.2m wide, and roadworks in the Lane associated with the development will achieve a kerb-kerb width of 4.3m, with no footpath provision.

Access into the rear of the properties fronting Greengate Road may become more circuitous under one-way conditions in Greengate Lane, however, the traffic counts undertaken by Masson Wilson Twiney indicate the rear of those properties are probably accessed infrequently.

AMCORD guidelines also indicate that for local roads carrying 1000-2000 vehicles per day (100-200 vehicles per hour), the minimum road reserve width should be 13.5m and the road carriageway width should be 5.5m or 7m. Bruce Avenue (parallel to the railway line) is expected to carry traffic volumes within this range, therefore the road reserve, or at least the road carriageway should be widened to 5.5m if two-way flow is to be maintained.

To reduce the impacts on the northern and southern ends of Bruce Avenue, consideration was given to implementing one-way conditions (northbound) in Bruce Avenue, while maintaining one-way

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flow (eastbound) in Greengate Lane. This was labelled as Scenario 5, and is compared against the existing situation and Scenarios 3 and 4 in the table below, and is also shown in the attachment titled, "Existing Traffic Flows and Estimated Future Traffic Flows in Greengate Precinct Under Various One-Way Traffic Flow Scenarios".

	Greengate Lane (western end)	Greengate Lane (eastern end)	Bruce Avenue (western end)	Bruce Avenue (northern end)	Bruce Avenue (southern end)
Existing	0 (2)	4 (3)	27 (29)	20* (15)*	27 (30)
Scenario 3	69 (21)	21 (69)	145 (49)	44 (102)	61 (157)
Scenario 4	21 (69)	69 (21)	93 (44)	61 (119)	113 (162)
Scenario 5	21 (69)	69 (21)	191 (87)	79 (88)	16 (119)

* Estimate: 27 (29) = am peak vehicles per hour (pm peak vehicles per hour)

The impacts that one-way movement in Bruce Avenue would have on Greengate Lane is essentially the same as Scenarios 3 and 4. Volumes in the northern and southern ends of Bruce Avenue have generally been reduced, although volumes at the western end of Bruce Avenue (and eastbound volumes in Greengate Road) are expected to increase.

Again, the final distribution of traffic would depend a number of factors, including origin/destination as well as choice of route, which may further reduce pressure on the northern and southern ends of Bruce Avenue. However, it is considered that the volumes at the western end of Bruce Avenue would still be below the RTA's desirable environmental capacity of 200 vehicles per hour during the peak hour.

It is considered that any further medium density development on the southern side of Bruce Avenue (following 1-7 Bruce Avenue and 657-661 Pacific Highway) would increase traffic volumes in the Greengate Lane sufficient to trigger the implementation of the suggested one-way system (or at least in Greengate Lane). Medium density development of the northern side of Bruce Avenue could then trigger the one-way flow in Bruce Avenue parallel to the railway line.

Requests have been made for signalisation on Pacific Highway at either Bruce Avenue or Greengate Road, to facilitate access into the precinct. While traffic signals would provide direct and convenient access, it may be difficult to fully transfer the cost of such an installation on the developments given the relatively small proportional increase in traffic. New traffic signals at the intersection of Pacific Highway with Greengate Road or Bruce Avenue would improve access to and from Greengate Road. However, this is considered to be undesirable because signals may increase the attractiveness of this route (given the limited right turn opportunities into/out of Pacific Highway in the area). As a result, traffic volumes would be expected to increase considerably in Greengate Road and Bruce Avenue.

CONSULTATION

No formal public consultation was undertaken with residents of the area, although previous submissions from affected residents in the area were considered.

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Council does not have the delegation from the Roads and Traffic Authority to approve one-way flows, therefore a traffic management plan must be prepared and forwarded to the Authority for consideration. As part of the process, the traffic management plan should be put on exhibition.

FINANCIAL CONSIDERATIONS

The costs of widening the carriageway in Greengate Lane and the northern and southern ends of Bruce Avenue should be included in the conditions for the relevant development applications.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Consultation has been undertaken with the Development and Regulation department in the preparation of this report.

SUMMARY

Most of the land fronting Bruce Avenue Killara has been rezoned under LEP 194 to permit medium density housing.

Under current traffic flows, the width of Greengate Lane and Bruce Avenue (parallel to the railway line) is probably adequate. However, future traffic flows will increase and will require carriageway and road widening in Bruce Avenue (parallel to the railway line), and either carriageway/road widening or implementation of one-way flow in Greengate Lane.

Maintaining two-way traffic in Greengate Lane would have the least impacts, however this would require road widening, which is considered difficult to achieve. Implementation of one-way flow (eastbound) in Greengate Lane and one way flow (northbound) in the north-south section of Bruce Avenue combined with road carriageway widening would also reduce pressure on Greengate Lane, but also in the north-south section of Bruce Avenue.

RECOMMENDATION

That the proposal for one way flow in Greengate Lane (eastbound) and one way flow (northbound) in the north-south section of Bruce Avenue be referred to the Ku-ring-gai Traffic Committee for consideration.

Joseph Piccoli
Strategic Traffic Engineer

Greg Piconi
Director Technical Services

Attachments: One-Way and Two-Way Traffic Flow Scenarios - 557796

Existing	20* (15)*
Scenario 3	44 (102)
Scenario 4	61 (119)
Scenario 5	79 (88)

Existing	27 (30)
Scenario 3	61 (157)
Scenario 4	113 (162)
Scenario 5	16 (119)

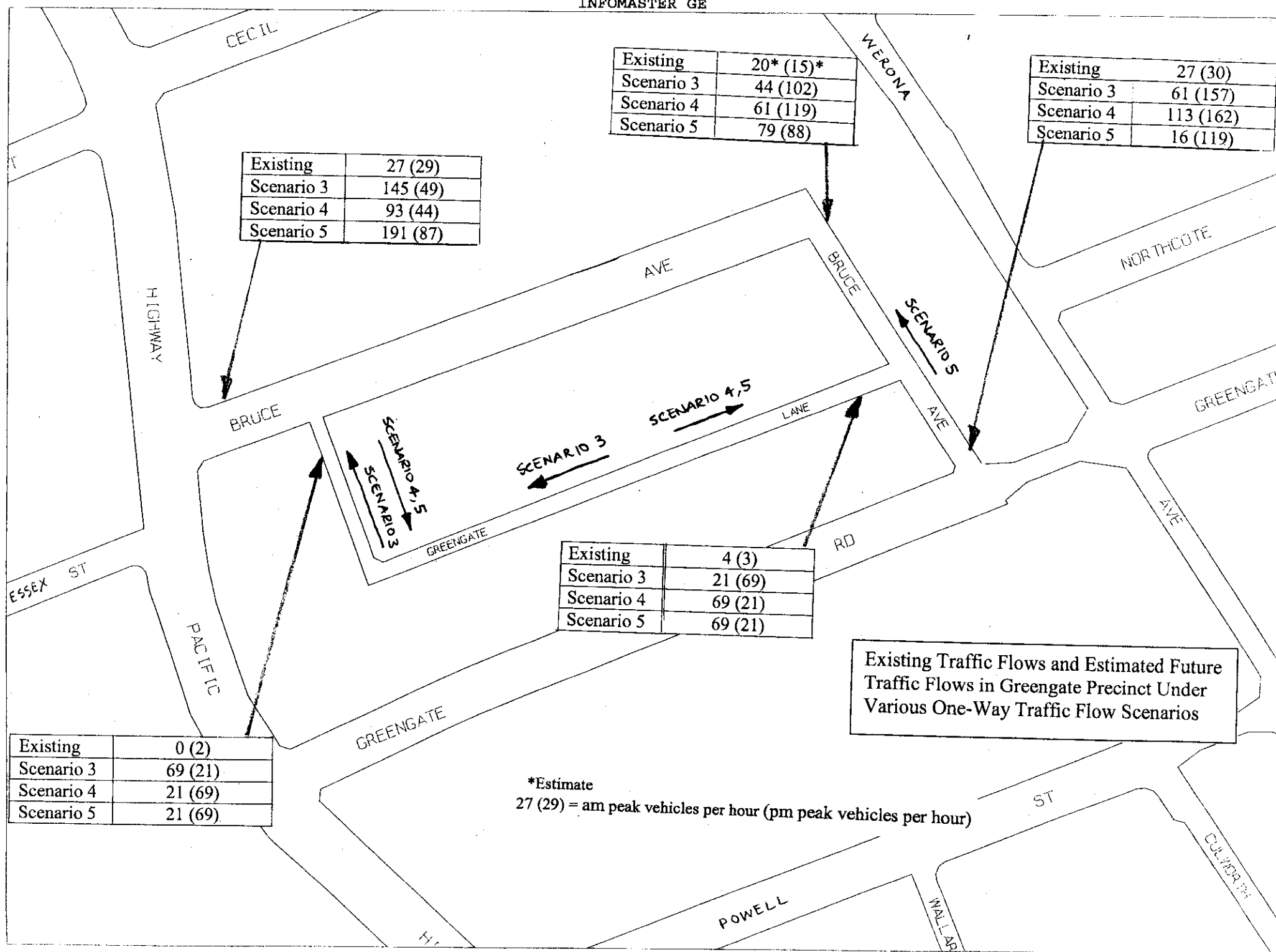
Existing	27 (29)
Scenario 3	145 (49)
Scenario 4	93 (44)
Scenario 5	191 (87)

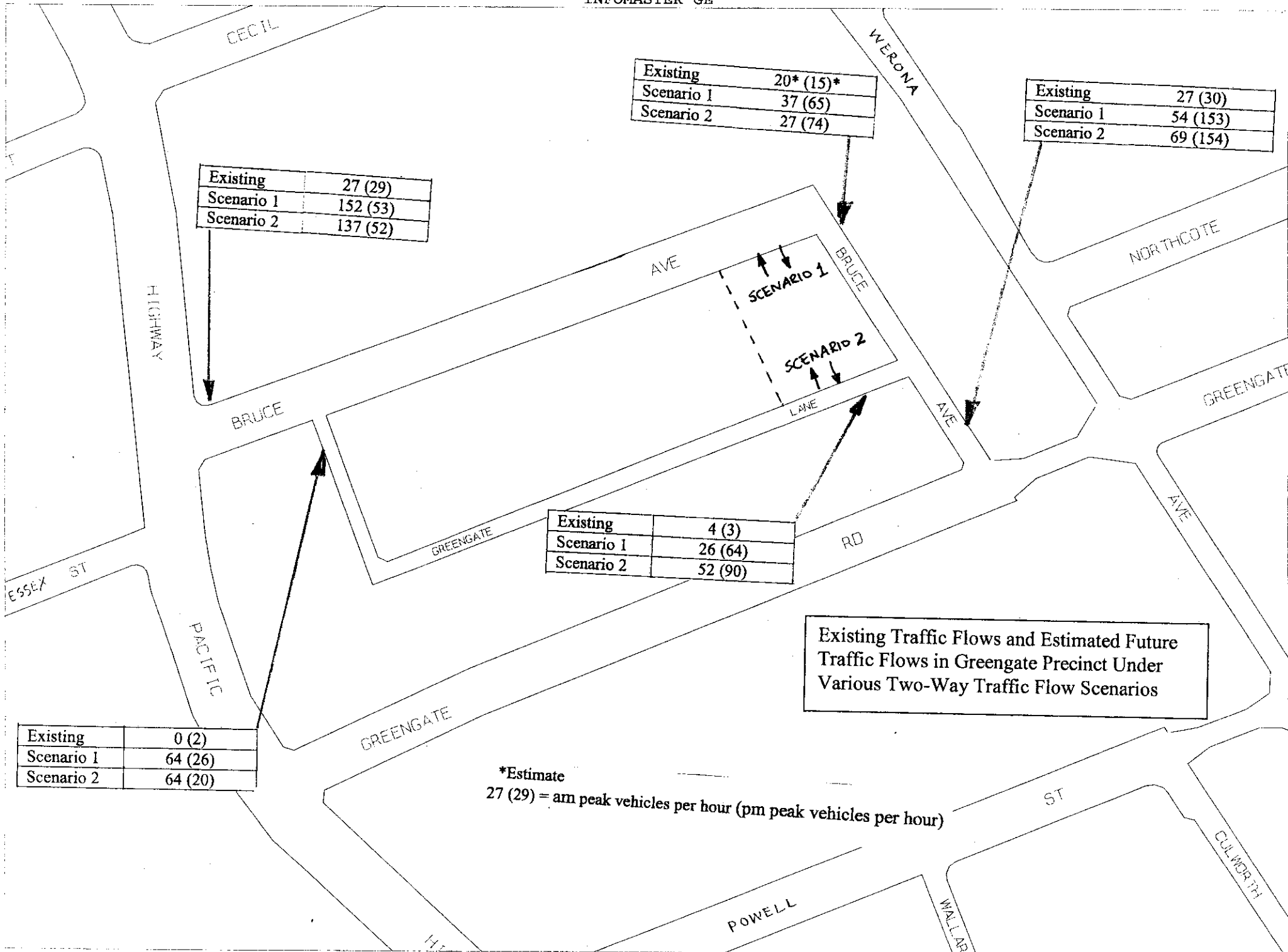
Existing	4 (3)
Scenario 3	21 (69)
Scenario 4	69 (21)
Scenario 5	69 (21)

Existing	0 (2)
Scenario 3	69 (21)
Scenario 4	21 (69)
Scenario 5	21 (69)

*Estimate
27 (29) = am peak vehicles per hour (pm peak vehicles per hour)

Existing Traffic Flows and Estimated Future Traffic Flows in Greengate Precinct Under Various One-Way Traffic Flow Scenarios





TURRAMURRA TOWN CENTRE PREFERRED LAND USE OPTIONS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To have Council consider the consultation and planning outcomes for the Turramurra centre and to seek Council's endorsement of the recommended option and to prepare a draft Local Environmental Plan and draft Development Control Plan to rezone certain lands in and around the Turramurra Centre to set more detailed planning and development controls for the area.

BACKGROUND:

The Minister has directed Council to prepare plans for additional housing in and around its town centres and to provide for retail and commercial activities to meet the needs of the local community. This report outlines the proposed land uses for the Turramurra Centre as the first planning stage for this centre.

COMMENTS:

Council has adopted an integrated place based approach to planning for Turramurra. This will ensure that maximum community benefit is achieved from redevelopment. Studies have been prepared and extensive consultation has been undertaken with the community and other stakeholders to identify issues, to establish a vision for Turramurra and to assess options for retail and commercial development, residential development, options for traffic management, community facilities and open space. A recommended option is put forward for Council's consideration and endorsement, prior to developing the plans for the next stage.

RECOMMENDATION:

That Council prepare a Local Environmental Plan and a Development Control Plan for Turramurra Centre in line with the recommendations included in this report.

PURPOSE OF REPORT

To have Council consider the consultation and planning outcomes for the Turramurra centre and to seek Council's endorsement of the recommended option and to prepare a draft Local Environmental Plan and draft Development Control Plan to rezone certain lands in and around the Turramurra Centre to set more detailed planning and development controls for the area.

BACKGROUND

In a letter dated 27 May, the State Government gave a direction (under section 55 *Environmental Planning and Assessment Act*) to Council to prepare an LEP in relation to areas in and around existing retail and commercial centres in the Rail / corridor and St Ives Centre as Stage 2 of its Residential Development Strategy.

This requires Council to prepare plans for additional medium density housing, including shop top housing and re-evaluation of density controls on existing medium density zones. It also requires Council to provide for retail and commercial activities in town centre to cater for the needs of the local community. In line with this direction, Council has substantially commenced the planning for St Ives town centre, Turramurra centre and commenced the preliminary planning work for the Gordon Town centre. The information for this report has been drawn from the **Turramurra Commercial Centre Background Report November 2005. (Attachment A)**

This report represents a comprehensive summary of the first stage of the integrated planning process for the Turramurra Commercial Centre. It provides an outline of the extensive stakeholder consultation and its outcomes; an overview of the site opportunities and constraints; it identifies the key design principles that will guide the planning process; documents planning and traffic options for the town centre; and concludes with a recommended option.

Development under RDS Stage 1

In stage 1 of Council's residential development strategy new areas were identified for medium density housing. The suburb of Turramurra is expected to have an additional 1163 dwellings with an estimated additional population of approximately 2,070 persons. The rezoned areas are generally in proximity to the Turramurra centre although some sites are dispersed further along the Pacific Highway, both to the north and south.

Integrated Planning Approach

Council has commenced integrated place-based planning for the existing commercial retail centres along the Railway Corridor/ Pacific Highway and the St Ives Centre.

This process will not only focus on increasing opportunities for residential development in each centre as required by the Minister but will also seek to achieve identified social, economic, environmental and amenity objectives. The integrated planning approach will focus on improving the viability and liveability of each centre, improving traffic and parking, providing new open space (where appropriate), improving public domain, improving safety, improving accessibility of each

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centre etc. Parallel to this work Council and community facilities will be reviewed to identify opportunities for upgrading facilities and / or including new facilities.

This approach also seeks to ensure that there is maximum community benefit derived from the redevelopment of the Turramurra centre.

The project is being run as an integrated planning exercise involving all departments of Council. Council staff are managing the core components of the project with specialist input from consultants as required.

Council's 2005-2009 Management Plan sets out the direction of Council in relation to planning for the commercial centres.

In the longer term

With Ku-ring-gai being a vibrant place while maintaining its unique character, natural environment and heritage. Integration of Council's planning will improve the liveability and vitality of local communities and the sustainability of the area. Council must respond to state government and community demands for additional housing, greater housing choice and associated facilities.

In the short term Council's management plan identifies the following actions relevant to planning for the Turramurra Centre;

- Continue to implement stage 2 of the Residential development strategy by preparing plans for major commercial centres.
- Review classifications of community landholdings in association with Stage 2 of the residential development strategy
- Prepare a comprehensive public domain plan
- Develop plans for traffic management and other forms of transport in the main centres

Measuring our achievements in 2005/2006 (KPI)

- finalise the integrated plan for Turramurra commercial centre

In general Turramurra centre project will:

- ☐ Produce a DCP and LEP for the Turramurra Centre consistent with the community's values and vision, with requirements of the Ministers S55 direction, LEP 194 and DCP 55 and in accordance with best practice planning principals and SEPP 65 and the NSW Residential Flat Design Code and the new Draft NSW standard LEP template.
- ☐ Involve and effectively engage the Council, community and relevant stakeholders in the preparation of plans; and

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- ☐ Following the exhibition of a draft DCP and LEP, review submissions and finalisation of a suite of planning documents for adoption by Council, including new Section 94 plan, and plans for public domain, traffic and parking, community facilities etc.

COMMENTS

Preliminary Consultation

Consultation has been in line with best practice and has included consultation methods based on "Ideas for Community Consultation" a report prepared by NSW DUAP February 2001.

The consultations to date have been completed in 4 phases –

1. Initially, with established local groups and interested residents,
2. Consultation workshop to develop a Vision for Turrumurra town centre,
3. Options workshops' consultations, and most recently
4. Public displays in the town centre seeking feedback on a Planning Option.

A chronology of surveys and consultations is attached in Attachment B.

Consultation has involved working extensively to establish and develop contact with interested stakeholders in the Turrumurra Commercial Centre. Positive links with the Turrumurra Chamber of Commerce have been notable. Others have included:

- Householders from Turrumurra and Warrawee
- Business-owners and retailers in Turrumurra
- Shoppers at Turrumurra
- Established local resident groups
- Young people
- Persons in retirement villages.

A large survey was posted to some 8000 householders in the Turrumurra/ Warrawee postcode 2074 area in February 2005. Survey results yielded information & opinion from nearly 2000 of these residents, on:

- Demographics
- Opinion on shops & business
- Shopping location choices
- Opinion about Turrumurra
- Sport & recreation choices
- Planning for the future.

The consultations and householder survey allowed the collation of an extensive e-mail register of persons interested in keeping informed of progress. This has been used to provide updated information quickly about Turrumurra town centre planning, and to seek feedback to Council via on-line surveys on a range of local and Council-wide issues.

In addition to the above, local paper publicity and distribution of The Turrumurra News (August) and The Ku-ring-gai News (October) by Council throughout the postcode 2074 area, provided progressive details of town centre planning.

Over the past month Council has received correspondence from the public both as letters and e-mails on the planning for the Turrumurra centre. This information has been passed to on staff and relevant consultants for consideration in planning process.

The correspondence has indicated a mixture of support, objection and areas that require further assessment. This correspondence has been acknowledged and the persons have been informed of the report going to Council.

Development of a vision for Turrumurra Centre

A vision statement identifies the characteristics of a place that residents envisage for the future and identifies what the community consider important about a place and should be protected and enhanced. The vision also identifies opportunities for change and improvements to meet community needs in the future.

A vision workshop was convened in central Turrumurra on Thursday 5 May 2005. It included 50 Turrumurra & Warrawee householders who had volunteered their availability to attend consultations when they completed the above resident survey. These householders were invited as a sample to range across age; time lived in the locality; and gender so as to provide a broad array of contributions to the workshop.

Each of the themes identified in the Vision workshop were used to build a sentence or phrase to describe the desired outcome. A survey of residents' opinion about the distilled results from the above workshop was then emailed to the 50 above participants, plus another 150 householders who had provided their email address for such purpose. Responses were sought within 7 days and some 75 out of a possible 200 were received.

The Vision survey responses from 75 Turrumurra/Warrawee householders gave very strong support (over 60 out of a possible 75) to each of the vision elements proposed.

Vision for Turrumurra centre

Turrumurra Centre will have a strong village atmosphere with a green landscape character, gardens and tall trees and village squares surrounded by cafes, shops and community facilities providing meeting places for the community.

The centre will offer a mix of uses including shop-top housing, retail, commercial and offices, community and open spaces. Cafes and restaurants will encourage night-time vitality. A comprehensive range of community facilities will include a library, youth and aged facilities. Health services will be available.

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The shops will be orientated away from the highway onto village squares. Future development will step down in height to the village squares to enhance solar amenity for residents and community. New developments will be set back from the highway to allow widening of the road and improved pedestrian amenity. Heritage items and significant buildings will be protected and integrated into the town centre encouraging reuse.

Pedestrian and cycle routes will provide strong connections between the main shopping areas to minimise the impediments of the highway and railway. Cycle routes to the centre will also be integrated with the regional networks. The bus interchange and train station will be upgraded to operate efficiently, be user friendly and be accessible to all.

The local road network will have improved traffic flows and reduced delays. Some car parking will be located underground to provide greater public space and pedestrian amenity within the town centre.

Development of Principles and Objectives for Turramurra Centre

The planning principles for Turramurra have been developed from information gained from a series of workshops involving staff, Councillors and consultants. Information gained from preliminary consultation has also assisted with the development of planning principles.

The design principles for the centre are set out below. These principles have been developed in response to a range of parameters including:

- The community aspirations identified through stakeholder consultation and the community vision
- Councillors issues and opportunities
- issues, constraints and opportunities identified by Council staff and consultants

Principles for Turramurra Centre

- Create a pedestrian oriented centre calm traffic reduce area of surface car parking
- Plan to minimize the inconvenience of 3 separate retail centres
- Increase retail by 4000sqm to cater for existing and new residents under current LEP 194 zoning
- Provide additional retail to cater for RDS stage 2 residents as per retail strategy recommendations
- Improve traffic circulation in the area
- Create new opportunities for open space in and around the town centre
- Provide two new public spaces on the eastern and western sides of the town centre either side of the railway
- Ensure new public spaces are largely green with trees to respond to garden character of the area
- Provide a strong pedestrian link between the two public spaces via improved and widened pedestrian bridge over railway
- Provide other small public places within the centre for people to sit and eat, relax and rest.

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- Provide improved community facilities in a centralised location
- Retain and extend the tall tree character on the western side of the town centre
- Retain items of heritage significance and other significant buildings
- Limit buildings heights adjoining public spaces to minimise overshadowing and overlooking impacts
- Retain and upgrade the existing bus interchange.
- Provide building setbacks along the highway frontage to allow for widening of the highway and for wider pedestrian footpaths
- Improve Rohini Street amenity and safety by reducing traffic flows and expanding and upgrading the public domain
- Retain and improve Cameron Park
- Investigate opportunities for reconfiguring roadways to improve pedestrian access and traffic flows including a new through link between Eastern Road and Turramurra Road to take through traffic out of the town centre.
- Investigate realignment of William Street with Kissing Point Road to improve linkages across the highway

STUDIES INFORMING THE DEVELOPMENT OF LAND USE OPTIONS

Specialist consultants were engaged to evaluate traffic and transport issues and retail and economic factors and community facilities. The following is a summary of the key issues; opportunities and constraints; and recommendations identified by the consultants.

Retail Study Recommendations for Turramurra Centre

The Ku-ring-gai Retail Centres Study prepared by Hill PDA recommends a retail strategy and retail hierarchy for Ku-ring-gai including recommendations on the amount of retail floor space (in terms of “net letable area”) to be provided in each of the 6 main centres. The retail strategy recommended by this study was endorsed by Council on 19 July 2005.

The Retail Study categorises Turramurra as a large neighbourhood centre with around 112 shop-front premises of which 30 are used for commercial services. Total shop front space is around 16,000sqm of which 12,400sqm is used for retail and 3300sqm is used for commercial services.

According to the Retail Study, Turramurra is currently trading at around 10% above the national average. This is well below the performance of Gordon, Lindfield and St Ives, which are currently trading around 30% to 50% above the national average.

The Retail Study recommends that, in order to adequately cater for its existing population, as well as for the expected population increase under stage 1 of Council’s Residential Strategy (RDS), Turramurra expand its retail floor space by up to 4,000sqm (including space for shop front commercial services). Some of this would be in the expansion of the two existing supermarkets, which are both undersized for modern supermarkets.

In addition to the retail expansion recommended by the Retail Study, provision should also be made for additional retail floor space to service the expected increase in dwellings within the town centre under RDS stage 2. In Australia every new household increases demand for retail by around 5

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square metres of retail floor space. In Turramurra that figure is around 6.2sqm per household because of higher than average household expenditure correlated with higher than average income levels. Neighbourhood centres at the scale of Turramurra can expect to capture around 35% to 40% of their neighbourhood's expenditure – the remainder being captured by higher order retail centres. Further to this is demand for shop front space for non-retail commercial users such as banks, travel agents, real estate agents, community uses, medical services and the like. In strip neighbourhood centres of this size these uses usually make up around 20% of total shop front space

Based on the preliminary urban design estimates, the potential dwelling increase in Turramurra under RDS stage 2 will be approximately 550 to 650 dwellings. This would require an additional 1200 to 1400sqm of retail floor space and 250 to 300sqm of shop front commercial floor space be provided.

Therefore the total expansion of retail ground floor space in Turramurra, sufficient to cater for both RDS Stage 1 and RDS Stage 2 growth, is approximately 5700sqm (including shop front commercial space but not including commercial office space found on the upper levels of buildings)

The retail study warns against the removal of retailing on the southern side of the highway (ie Turramurra plaza area) as it would result in an undersupply for the trade area south of the Highway. Turramurra residents north of the highway have good access to a range of centres including Hornsby and St Ives, whereas residents south of the Highway are less serviced. Removing the retail south of the Highway would undermine convenience and accessibility for these households, forcing them to travel further and/or travel across the highway. Feedback resulting from the exhibition of the options strongly supported the retention of viable retail on the southern side of the highway.

The Retail Study does not consider the impact of the recently opened Thornleigh Marketplace in Hornsby Shire due to the timing of the study. Anecdotal evidence suggests that this new centre is capturing significant supermarket trade from the South Turramurra and Fox Valley areas. If Council is to ensure that a supermarket on the south side of the highway remains viable, it will need to ensure that retail expansion allows the development of a modern, competitive and accessible supermarket supported by a range of specialty shops to service the residents in that trade area.

Figures contained in the Retail Study indicate that only 35% of Turramurra and Warrawee resident north of the railway use Turramurra centre for their food and grocery shopping, with most other residents using supermarkets in St Ives or Hornsby. This compares to over 50% of residents south of the railway using Turramurra centre for their food and grocery shopping. The reason for this lower level of service provided to residents north of the railway can be attributed to the location of both the existing supermarkets on the south side of the railway and their size. Part of the future retail expansion in Turramurra should be aimed at better servicing those residents in Turramurra and Warrawee north and east of the railway.

Community Services and Implications

Future planning for community facilities is based on a number of criteria including future usage needs and population projections:

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Branch Library

Space requirements and siting criteria for the Turrumurra Branch library have been provided by Dr David J. Jones, Building and Planning Advisory Service, State Library of NSW.

The space requirements were derived using benchmarks provided by the Library Council of NSW (2000). The population-based benchmark was used, which allows for a certain floor area per thousand population, with different calculations for branch and central libraries.

It should be noted that these space requirements are intended as minimum requirements only for a library facility, and local community needs, such as exhibition areas and community activities spaces, may exceed the minimum specified.

Compliance with these guidelines is also a prerequisite for applications for Library Development Grants from the State Library of NSW.

Based on the identified catchment areas, the minimum space requirement, using the population-based formula, for Turrumurra Branch library is 1527 sq meters. The current library is 700 sq meters, a space shortfall of 790 sq meters. This space shortfall is considerable, and to reach the benchmarked floor area, a branch library serving the Northern catchment, would need to be more than twice the size of the current library building. This need is also clear from the Consultant's observation and inspection of the facility.

Specifically a larger branch library at Turrumurra would provide all the facilities and services expected from a modern branch library, including distinctive children's areas, discrete spaces for young adults, extensive informal seating, adequate numbers of study seats, including quiet study space, more access to computers, groups study and meeting rooms, wide aisles, lower shelves, a collection that meets the needs of the community, display shelving and space for exhibitions or displays.

The Library Council of NSW, in its publication *People Places: a guide for public buildings in NSW* (2000) provides the following criteria for assessing library sites:

1. Proximity to Shops - in a main street or shopping area location which is highly visible, particularly from the shopping area.
2. Street Frontage - on a street frontage, and not hidden from the road by trees or other buildings
3. Transport - within walking distance to public transport
4. Site area/expansion - site able to accommodate future expansion if required
5. Parking - access to adequate and secure parking
6. Vehicle access - accessible for deliveries and other vehicles
7. Accessibility - a site which will enable easy ground floor access.
8. Safe and attractive pedestrian access - particularly for people with disabilities, older people, children, and parents with prams
9. Local criteria - other local factors that may be important to specific communities such as within a cultural precinct

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It should be noted that a site which is suitable may not necessarily score the maximum in all categories.

Within the Northern Catchment area, the Consultant considered the general location of the current library performed reasonably well against the criteria. The site is large, reasonably central and readily accessible from all parts of the catchment. It is close to a railway line, has a street frontage, is close to a shops and supermarkets, near bus routes, and adjacent to a car park.

Home and Community Care (HACC) Facility, Gilroy Road, Turramurra

Ku-ring-gai's ageing population will see an increasing demand for home support services to assist older residents to stay in their homes longer. This increase in population will place further strain on existing services.

The existing HACC facility in Gilroy Road houses offices, function space, and meeting rooms for a number of HACC support services, which target older people in the community. Services housed in the HACC centre include Easy Care Gardening, Community Transport, Senior's Centre, Meals on Wheels, Volunteers Service and a dining room.

The anticipated additional space requirements to meet future service demands are 2200 sq metres. The existing area is 727sq metres.

There is also a heavy demand for car parking as a majority of the work is carried out by volunteers, and is car based. Parking and garaging (for buses), therefore, is a major consideration. There is also a need for additional administrative office space and storage space for services catering for the needs of frail older people and people with disabilities.

Turramurra is the ideal location for the HACC facility as it is centrally located and close to Hornsby. Co-location of facilities is important and provides many benefits to services and clients.

Life Start, Cameron Park

Life Start is ideally located on the edge of Cameron Park, however demand is rapidly growing for extra space, as they have already outgrown their current facility. Council is in the process of locating a site for a multi-purpose children's centre, which could potentially incorporate Life Start at a later stage.

Hill View

There is scope for future co-operative arrangements with the State Government service providers based at Hill View, which offer a range of specialist services. These services are not necessarily committed to staying in Hill View, which is owned by the Department of Health. Council staff has had preliminary meetings with departmental representatives, who will be in a better position to provide space requirements for services in early 2006.

Traffic and Parking Study and Implications for Turramurra Centre

A traffic and parking study was commissioned to assess the current traffic and parking conditions and develop options to best manage future traffic generation through the Turramurra Centre

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associated with the Stage 2 Residential Development Strategy. The study also modelled the impact on the road network likely to be generated from the residential redevelopment under LEP 194. A summary note, traffic generation tables and economic analysis is provided in Attachment C.

Based on existing traffic conditions, the preliminary findings of the study found that intersections such as Pacific Highway and Rohini Street and Pacific Highway and Ray Street experience excessive delays during certain peak traffic times but mainly for the side streets, given that the Roads and Traffic Authority gives high priority to Pacific Highway traffic.

At this stage, the parking demands have not been fully examined but it is intended that the number of public parking spaces be retained and increased where possible and appropriate.

With the inclusion of all the proposed residential development under LEP 194, traffic modelling was undertaken to determine what the traffic generation from the new residential developments will have on the existing network. The major finding of this part of the traffic modelling was that the intersection of Ray Street and Rohini Street with the Pacific Highway will experience significant delays unless traffic flow and access improvements are implemented.

With the likely increase in residential, retail and potential increase in community facilities, this will place additional pressure on the side streets, as the RTA will not reduce the level of service for peak traffic flow on the Pacific Highway. Furthermore, the RTA would look favourably at removing the tidal flow arrangement on the Pacific Highway by Council, including provisions for widening the Pacific Highway to allow dedicated right turn bays and maintaining six lanes for through traffic.

Details on what traffic options to overcome the issues raised above are covered further in this report.

Traffic Options

A traffic analysis of the various planning options has been carried out to assess the likely impact of these options on the existing network.

Traffic generations using RTA guidelines were used to assess the likely impact of traffic on each of the planning options. Results of the traffic analysis is in the form of an annual cost, which is an estimate of the collective yearly cost that motorists would experience when travelling through that section of the road network, in terms of vehicle operating costs and delay (time) costs (Attachment C). This is related to the average vehicle delays and is another form of showing a comparison of the model. Other forms of comparison relates to the levels of service for the various intersections.

The annual cost result can indicate the best overall performing option, based on the above parameters, subject to the performance being acceptable during the peak periods. Typically, when considering arterial road network changes, the RTA would compare the annual cost of a proposal against the existing annual cost.

Below is a summary showing the comparison between the existing traffic conditions compared with the proposed in terms of annual costs. It should be noted that the annual cost of the signalised intersections of Pacific Highway (in Turramurra) in their current configuration is \$7.38 million.

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The annual costs with the impacts of gazetted LEP194 are calculated at \$9.54M. This is effectively the baseline for future planning.

Option A – 2 supermarkets at Ray Street and Community Facilities at Gilroy Street.

The SCATES modelling for this option showed a significant increase in the annual route costs (\$21.93 million). This is primarily due to the delays likely to be experienced at Ray Street caused by the traffic generated from the supermarkets.

Option B – Supermarkets at Ray Street and Gilroy Street, Community Facilities at Gilroy Street and Library at Ray Street.

The SCATES modelling showed an increase in the annual route costs to \$19.56 million. This is primarily due to the delays likely to be experienced at Ray Street from the traffic generated from the supermarket and the community facilities.

Option C – Supermarkets at Ray Street and Stonex Street, Community Facilities at Gilroy Street and Leisure Centre at Ray Street.

The SCATES modelling for this option showed a significant increase in the annual route costs (\$27.71 million). This is caused by the high traffic generation from the expanded supermarket and the leisure centre. It should be noted that in this option, the traffic generation rate used for the leisure centre was conservatively higher than in the other options.

Option D – Supermarkets at Turramurra Avenue and Stonex Street, Community Facilities at Gilroy Street, Leisure Centre and Library at Ray Street.

The SCATES modelling indicates that this is the best overall option for traffic generation, even though there is still an increase in the annual route costs to \$16.17 million compared with the base level.

Option E – Supermarkets at Ray Street and Stonex Street, Community Facilities at Gilroy Street and Library at Ray Street.

With annual route costs of \$19.39, the SCATES modelling for this option showed a slightly higher increase compared to Option D. This is primarily due to the delays likely to be experienced at Ray Street from the traffic generated from the expanded supermarket.

To improve the performance of the land use options, 4 possible improvement measures were identified:

1. New intersection with Pacific Highway

This involves the addition of a new set of traffic signals with a right turn bay from the Pacific Highway into Turramurra Avenue. The purpose of this new intersection is to direct traffic away from Rohini Street which is heavily used by pedestrians, commuters and people visiting the retail centre. It is not intended to make Turramurra Avenue the dominant link and with the

new link to Eastern Road, it is intended to make Turramurra Avenue one way south from Boomerang Street.

This new intersection will need to be assessed by the Roads and Traffic Authority to ensure that peak traffic flows along Pacific Highway are not adversely delayed by the proposed signalisation of the intersection.

2. Conversion of Rohini Street to Left in and Left Out with the removal of traffic signals and providing a new link to Turramurra Avenue

Because of the close proximity of the railway station and the retail frontage, motorists experience delays with the pedestrian crossing, parking of vehicles and the traffic signals at the Pacific Highway. In order to overcome the delays, it is intended to remove the traffic signals and only allow a left in and left out arrangement. Turramurra Avenue currently operates under this arrangement and the delays are not significant. The relocation of the pedestrian crossing to Turramurra Avenue will allow vehicles to exit Rohini Street and only concentrate on Pacific Highway traffic. The provision of the new link to Turramurra Avenue will allow for the circulation of traffic around the shopping centre precinct.

3. Provision of a direct connection from Kissing Point Road to William Street and a one way link to Ray Street via Forbes Lane

The purpose of this change is to allow a direct vehicular and pedestrian link from Kissing Point Road to the railway station and the facilities proposed for this precinct. This will allow better access and remove one of the turning bays on the Pacific Highway. Widening of the Pacific Highway will allow for a dedicated right turn bay into Ray Street and therefore allow removal of the tidal flow arrangement on the Pacific Highway. Variations to the circulation movements and drop off arrangements are still to be finalised.

4. A new connection from Kissing Point Road to Duff Street

While there is an indirect link from Kissing Point Road to Duff Street through the shopping centre car park, it is proposed to formalise this link through a new road. This will assist traffic heading north along the Pacific Highway rather than being delayed by the traffic signals at Kissing Point Road and the Pacific Highway.

5. Removal of tidal flow on Pacific Highway

As mentioned above, removal of the tidal flow arrangements would enable dedicated right turn bays and maintain six lanes (3 in each direction) for through traffic. While 3 lanes are currently provided on the peak direction under tidal flow arrangement, some additional capacity would be obtained through the removal of the tidal flow.

These measures were tested on the best two performing options (options D and E, above) to determine the effects on the route. The results of the modelling show that the annual cost of Option D would be \$11.56 million while the annual cost of Option E would be \$13.81 million.

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Further information relating to the levels of service of the various intersections will be provided in the traffic report.

PLANNING OPTIONS

The preparation of design options or scenarios is an important part of the planning process whereby the community is given a number of viable alternatives that can be debated in terms of the advantages and disadvantages of each. All options took account of the site analysis; community responses and vision; planning principles and objectives; input from staff across Council; and Councillors and consultants involved in retail study, traffic study and urban design study. The following options for planning the Turramurra centre were exhibited in August 2005 (refer Attachment B for details of dates).

Land Use Options:

1. Mixed use and retail

- A. Two mixed use centres - retail centralised
- B. Two mixed use centres – retail distributed
- C. Three mixed use centres

2. Community Facilities and Open Space

- A. Community facilities combined
- B. Current locations of facilities retained
- C. Distributed community facilities including new leisure centre

Traffic Options:

3. William St & Kissing Point Road

- A. Align William Street and Kissing Point Road – Ray Street/Forbes Lane loop
- B. Align William and Kissing Point Road – in/out from William Street
- C. Do not align William Street and Kissing Point Road, widen Forbes Lane

4. Duff Street & Kissing Point Road

- A. No access between Duff Street and Kissing Point Road
- B. Access between Duff Street and Kissing Point Road via new street
- C. New street linking Kissing Point Road and the highway

5. Access around Rohini Street

- A. Two way Rohini Street and extension of Wonga Wonga Street
- B. One way Rohini Street, new straight cross street
- C. Rohini Street mall
- D. Complete one way system

A full description and assessment of exhibited options taking into account the retail strategy, open space and recreation, community facilities, traffic and transport, planning and urban design, environmental assessment and community consultation feedback is provided in the Turrumurra Commercial Centre Background Report November 2005 (Attachment A).

Consultations on Options

To promote consultation, some 8000 copies of the *Turrumurra News* (August) were distributed locally, giving background material and inviting participation in the Options Survey on the 5 Planning Options traversed above.

Three Options Workshops were convened during August & September 2005. A stratified sample of residents, who had offered their availability via survey, plus resident-group representatives and businesses, attended the first workshop. A further 20 self-selected people also attended. A similar workshop was convened with commercial land-owners in the Turrumurra town centre. A third, publicly advertised workshop of some 40 persons, comprised self-selected people, local Church members, augmented with household survey respondents.

Supplementing this was a series of public planning Options Displays held during August and September 2005 in the Turrumurra town centre. The options survey was distributed at 3 consultations, 4 displays and was accessible at Council's web-site, www.kmc.nsw.gov.au. E-mail advice of the above was also sent to some 700 persons those who had registered interest, during surveys or consultations.

THE RECOMMENDED PLANNING OPTION FOR TURRAMURRA CENTRE

Council has been working closely with a number of specialist consultants to develop a land use option to guide the long term planning for Turrumurra centre. The recommended option takes into account the results of:

- Preliminary community consultation
- The community vision
- Community feedback on planning and traffic options
- Councillor issues and opportunities
- Traffic assessment
- Retail assessment
- Urban design input

The full details of the assessment process are documented in Attachment A - Turrumurra Commercial Centre Background Report. Option D is shown in Attachment D.

The recommended planning option (Option D) proposes:

- Turrumurra will be a Local Centre with a total of approximately 21500sqm net floor area (NFA) of retail.
- The total retail comprises approximately 16,000sqm NFA existing; an additional 4000sqm NFA of retail to cater for the existing population, as well as for the expected population increase under RDS stage 1; approximately 1500sqm NFA of retail to cater for potential dwelling increase in Turrumurra under RDS stage 2.

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- The centre will comprise two main retail areas one on the southern side of the highway serving south Turrumurra residents and one on the eastern side of the railway near Turrumurra Avenue serving residents to the north and east of the centre.
- Between the two retail areas (in the centre) are the rail station and a community facilities “hub”.
- Community facilities are to be consolidated within the Ray Street precinct to create a community hub
- Two supermarkets with a combined total of 4,500sqm one located in each of the retail areas
- Potential for a 4000sqm leisure centre in the Ray Street precinct subject to community consultation and Council approval
- Retaining the strip shops fronting onto the Pacific Highway and allowing commercial and retail uses
- new cafes, restaurants and speciality shops at the rear of the centre facing north onto new public spaces at Gilroy Lane and at William Street
- a total of 5000sqm NFA commercial (located on the upper floors rather than ground floor) to cater for small local businesses, professional services, medical services and the like. This includes approximately 3700sqm NFA of existing floor area and an allowance of 30% for future growth.
- Residential shop top housing in all retail areas.

Option D is recommended for the following reasons:

- Option D satisfies the objectives of the Minister's Directive by providing shop top housing in the centre
- The proposal is comprehensive taking into account a wide range of factors and meets Council's resolution to prepare an Integrated Plan for Turrumurra
- Option D is a combination of the exhibited land use options 1C and 1B which were the two most preferred options by the community.
- The land use arrangement locates the highest traffic generators (supermarkets) in the areas with the least traffic constraints and as a result it has the lowest Economic costs (Annual Route Costs) and the lowest Delay Averages for both side streets and the highway.
- Option D provides a good retail model with the two supermarkets at either end of the centre creating major attractors that will draw people from one side of the centre to the other. Between the two is a network of enhanced public spaces that is bounded by speciality retail. The rationale is to put the supermarkets where the majority of people can access them easily and where they cause the least traffic impact.
- Option D consolidates community facilities. This has been noted as the preferred arrangement by staff given the synergies and economic benefits of co-locating.
- Option D provides the opportunity in the future for a leisure centre to be located in Turrumurra centre if the community determines this is the best location

ALTERNATIVE LAND USE OPTION E

This option has arisen because there has been significant community concern about the possibility of a new supermarket on Council's Turrumurra Avenue car park as per land use option D. Particular concern was shown by the Uniting Church as the new location for the supermarket adjoins their site. In response Council requested staff explore an alternative land use option that retains the existing supermarkets in their current location, this has been named land use option E. Option E has

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undergone traffic assessment with the same assumptions as option D so that it is possible to directly compare the impacts of each with the other.

The land use Option E proposes:

- Turramurra will be a Local Centre with a total of approximately 21500sqm NFA of retail
- Two main retail areas one on the south side of the Pacific Highway off Kissing Point Road the other centrally located in the Ray Street area
- Community facilities are distributed through the Ray Street area and the Gilroy Lane area
- two expanded supermarkets with a combined total of 4,500sqm
- No provision for a leisure centre
- Strip shops are retained fronting onto Pacific Highway with commercial and retail uses
- new cafes restaurant and speciality shops at the rear of the centre facing north onto new public spaces
- Total of 5000sqm NFA commercial (located on the upper floors rather than ground floor) to cater for small local businesses, professional services, medical services and the like.
- Residential shop top housing in all retail areas

Option E is not recommended for the following reasons:

- in traffic terms it retains one of the highest traffic generators (supermarket) in a location that is highly constrained.
- has higher Economic costs (Annual Route Costs) and higher Delay Averages than option D. Most significantly the delay averages on the Pacific Highway are more than double that of Option D and would not be acceptable to the RTA.
- in retail terms the existing retailer would prefer to stay in the Ray Street precinct. However, given traffic limitations in this location, there is only minimal potential for an increase in retail floor space. This may or may not be acceptable to the retailer.
- The only potential for major traffic improvements to Option E is the introduction of a new road bridge at Ray Street over the rail line connecting to Rohini Street. This however will require a lot more work to determine viability and impacts.
- Community facilities are distributed rather than consolidated.
- It does not provide flexibility to accommodate a leisure centre in the future should Turramurra centre be determined as the most appropriate location.

CONCLUSION

Option D is the recommended option as it provides, on balance, the best outcomes from a range of perspectives. It is recognised there is community concern regarding option D, particularly regarding the proposed location of supermarkets. However Option D meets the Minister Direction; Council's resolution to undertake an integrated planning process; and satisfies strategic planning and traffic planning objectives.

Option E is very similar to option D the main difference being the location of the supermarkets. While Option E provides similar benefits to option D, the traffic issues are of significant concern. Therefore option E cannot be recommended at this stage without further investigation, particularly

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with regard the benefits of a new bridge at Ray Street over the rail line and further investigation of the Ray Street / Pacific Highway intersection.

RECOMMENDED TRAFFIC OPTION FOR TURRAMURRA

The recommended traffic option for Turramurra is Option 3SV as documented in Attachment C. It is important to note that not all changes will happen at the same time rather the changes will be made progressively as development takes place over the next 20 or so years.

The following traffic changes and stages are recommended as part of Option 3SV:

Short term

- Minor alterations to the intersection of Ray Street and Pacific Highway restricting the left turn from Ray Street onto the highway
- Creating a no stopping zone at the top of Rohini Street to provide for a dedicated left turn onto the highway

Medium term

- New Street (Two Way) between Kissing Point Road and Duff Street along the alignment of the existing access way
- Realign Forbes Lane (One Way) with new connection at Kissing Point Road.
- No right turn permitted from Forbes Lane into Pacific Highway. (This movement is catered for via Kissing Point Road, Stonex Street and Duff Street.)
- No left turn from Pacific Highway into Forbes Lane.
- Rohini Street (Signals removed, left in left out only)
- New Street between Gilroy Road and Turramurra Avenue (Two Way)
- Turramurra Avenue one way south from Boomerang Street. (Two Way)
- New Signals at Turramurra Avenue/Pacific Highway
- Left Turn Bays on Pacific Highway at Turramurra Avenue and Kissing Point Road.

Long term

- Further investigation of the Ray Street Bridge to determine benefits and impacts

OTHER ISSUES

This report seeks Council's endorsement for the recommended option and recommended zonings. This section sets out further key sites and issues that will require further investigation and additional study, assessment and consultation prior to further recommendations being made to Council.

1. Improved pedestrian access along the Pacific Highway

Key issues:

- Pedestrian access paths along the Pacific Highway traveling east to west or vice versa have poor amenity. Footpaths are old and relatively narrow given the volume of traffic
- The highway bridge over the railway line has dangerous pedestrian conditions. Footpaths are very narrow and there is no protection for pedestrians from vehicles

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For further investigation:

- potential for new pedestrian access bridge cantilevered off the existing highway road bridge
- Costs and funding sources need to be determined
- building setbacks along the highway through the commercial area to allow for widening of footpaths, removal of power lines and street tree planting to improve amenity

2. New street between Eastern Road and Turramurra Avenue

Key issues:

- as per land use options D and E a new road is required between Eastern Road and Turramurra Avenue to reduce through traffic impacts on Turramurra Avenue, Rohini Street and Gilroy Lane.
- A new road is supported by traffic modeling for both options
- The preferred location is close to the commercial centre to reduce impacts on Turramurra Avenue. The current location being explored is along the northern edge of the Uniting Church
- The Uniting Church has shown clear opposition to this proposal

For further investigation:

- Impacts on Church need to be further considered and addressed as part of site planning
- Further traffic modeling, assessment and consultation with landowners required to determine final alignment
- Mechanisms for securing new street including funding, Section 94 and other planning mechanisms

3. New leisure centre

Key issues:

- Council's Consultant has identified a strong community need for a leisure/aquatic facility in Ku-ring-gai LGA
- The consultant has identified the Ray Street precinct as one of three preferred sites in the LGA
- the site is preferred because it is close to public transport, it is located in the northern half of the LGA, the site is Council owned and can accommodate the building footprint
- possible relocation of existing supermarket creates opportunity for development of a community hub in this area
- traffic assessment of option D indicates that the leisure centre has a lesser impact on Ray Street when compared with a supermarket (option E) or a mix of uses with no leisure (option DA)
- A Leisure centre could potentially support other community facilities by acting as an "anchor"

For further investigation:

- Whether a leisure centre is located in Turramurra centre at Ray Street is the subject of further traffic modeling, further assessment by leisure centre consultant, community survey and consultation and finally Council endorsement

4. New road bridge over railway at Ray Street

Key issues:

- Option identified by community during options exhibition period
- Subsequently traffic consultant has raised the option as means of addressing traffic constraints in the town centre
- The main benefit would be to remove all right turns from the highway expect at Turramurra Avenue. All traffic accessing the centre would go via Turramurra Avenue, proposed new street to Gilroy Road, then Rohini Street and over a new bridge to the Ray Street area.
- The bridge would provide additional pedestrian and cycle link over railway

For further investigation:

- Require preparation of concept plan and cost estimate for the bridge
- Cost benefit analysis required
- Implications for traffic network and road hierarchy will need to be considered
- Undertake further feasibility assessment and traffic modeling as required
- Mechanisms for securing new street including funding, Section 94 and other planning mechanisms

5. New Village Green (eastern side of the centre on Gilroy Lane)

- The possible relocation of existing community facilities (HACC) buildings in Option D creates an opportunity for new park in the town centre
- Existing croquet lawn could be retained as part of new park
- Existing building(s) could be retained/modified as part of park setting for commercial use such as restaurant or café however this would compromise amount of useable open space available

For further investigation:

- The extent and area of park still to be determined
- Land use, ownership and management

6. New Turramurra Village Park (western side of centre on Ray/William Streets)

- Possible relocation of Turramurra Village Park from highway to William street car park area as per option D
- The new location will provide new park in quiet protected location centrally located and useable
- Potential to incorporate “railway gardens”
- Turramurra Village Park has lost its function and amenity due to traffic on highway and is not well used.

For further investigation:

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- Relocation of Turramurra Village Park partly relates to decision to realign William Street
- Will require reclassification of land from community to operational land and rezoning
- Extent of new Village Park still to be determined through site planning process for DCP
- Land use, ownership and management

7. Hillview and surrounds

Key Issues:

- Hillview estate sits within a larger precinct defined by Kissing Point Road, Pacific Highway, Boyd Street and the railway.
- The area contains a number of heritage items both listed, potential and awaiting gazettal. It also contains the former road corridor land in which the RTA and DOP have an interest. This land has potential to yield some public open space and a public access way from Boyd Street to the highway
- The Hillview estate is a smaller area within this precinct. The area is zoned 2(d) and therefore falls within the Ministerial Directive
- The Hillview estate is currently occupied by Hornsby Ku-ring-gai Area Health. Discussions with representatives from Area Health indicate that the existing Hill View building is not an appropriate facility to run a health service
- Area Health wants to move from the building however they cannot give any timelines at this stage. Funding the relocation needs to be resolved
- The area is not envisaged as a commercial / mixed use zone. In planning terms the objective is to consolidate the commercial zone therefore a residential zone is seen as more appropriate.

For further investigation:

- Further assessment of heritage within the area
- An appropriate future use for the Hillview building needs to be determined
- Appropriate use of the road corridor land to the satisfaction of the RTA/DOP
- Potential for adaptive re-use of heritage buildings

8. Turramurra Rail Station – Pedestrian Bridge Easy Access Upgrade

The identified Planning Principles for Turramurra Centre identify objectives of improving pedestrian access to and through the centre as well as improving the connectivity of both sides of the railway.

A part of the East Access Upgrade Program the Rail Corporation is proposing to build a new pedestrian bridge over the rail line at Turramurra Rail Station. The bridge links Rohini Street with William Street.

The current proposed design is 3.75 metres wide and provides for minimum access requirements for people to safely and easily access the station platform. Discussions with Rail Corp have identified the opportunity to build a wider bridge to cater for pedestrians moving between the eastern and western sides of Turramurra centre.

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A width of approximately 7.5 metres is considered optimum. This is the width at Gordon Station and provides a comfortable width for circulation and access to the station. Shops are preferable as they provide passive surveillance to the bridge, provide a sense of linkage between centre and are also a potential funding source.

The table below outlines the various options for development of the new bridge. Each option with the exception of the currently proposed 3.75 wide bridge will require additional funding.

Table 1 Comparative cost of pedestrian bridge options

Proposal	Total Cost	Additional Funding Required by Council
DA Version 3.75 metres wide, canopy, no shop	\$887,500	-
DA Version + one shop	\$932,500	
5 metres wide, with canopy, no shop	\$1,452,000	\$564,500
with 2 shops	\$1,542,000	
7.5 metres wide, with canopy, no shop	\$1,715,000	\$827,500
with 2 shops	\$1,805,000	
10 metres wide, with canopy, no shop	\$1,975,000	\$1,087,500

Note: shops approximately \$45,000 each. Rail Corp proposing to build one shop as part of DA. Council will be required to fund additional shops as required.

Recommendation:

Council fund the additional costs associated with the construction of a 7.5 metre wide pedestrian bridge including a canopy and 2 shops.

Total estimated costs	\$1,805,000.
Rail Corp funding	\$932,500
<u>Funding by Council</u>	<u>\$917,500</u>

9. Open Space Zoning/Acquisition Principles

Much of the discussion relating to open space within the Turrumurra centre has revolved around the creation of two new town squares. Existing open space sited within the centre include Turrumurra Village Park sited on the highway, Cameron Park, Hillview and The Lookout.

Just outside the study area, but reasonably well connected to city centre is Karuah Park and Turrumurra Memorial Park, heavily utilised as sports ground and identified within Council's current section 94 plan for embellishment. On the southern side of the highway is the bushland reserve containing Blue Gum High Forest.

The Turrumurra centre is not particularly well served by open space areas. Council's planning for open space should recognise the limitations of the existing provisions and seek to add value to existing space where appropriate as well as acquire further land for open space where opportunities allow.

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Similar to the approach advocated within the St Ives Centre, rezoning of land identified as potential future open space is not recommended within this report with the exception of lands owned by Council

Opportunities highlighted within the study as being worthy of future effort by Council include seeking opportunities to increase the size of the bushland reserve adjacent to Turramurra Plaza (this requires further assessment in terms of ownership and mechanisms for acquisition), adding to the existing Karuah/Turramurra Memorial Park, the retention and enhancement of Cameron Park, seeking opportunity to increase open space within the Hillview site and improving the linkage within and access to The Lookout.

Turramurra Village Park located on the highway does not provide for quality open space. Its value is predominantly the aesthetic qualities and opportunities for access to the town centre it provides.

Consistent with the opportunities outlined in the report, Council's Open Space Acquisition Strategy, Council could seek to enter discussions and negotiations with owners of appropriate sites at market rate. Where owners do not wish to consider sale of land for additional open space, the purchase of that land need not be pursued. Opportunities may also exist within integrated developments within the core of the centre to add to the public domain as a component of development.

As part of the Turramurra centre site analysis and urban design studies, heritage matters have been considered. The information has been sourced from Ku-ring-gai Heritage and Neighbourhood study 2000 Godden McKay Logan- Keys Young, with particular reference to Part B detailed analysis of Study areas – Turramurra. This report has investigated the history, neighbourhood character values, built heritage values and landscape values.

Reviews of this information have been made with Council's Heritage adviser, Senior Urban Design, Urban design consultant and planning staff. Current items of heritage significance (existing and items for further review) are identified in the Turramurra Commercial Centre Background Report.

Following Council's adoption of the recommended option, additional heritage assessment for particular sites will be undertaken to complement the planning and urban design work for the Turramurra centre.

PROPOSALS FOR ZONING

Turramurra Centre Planning Options

Rezoning of land in the Turramurra centre will need to be done in accordance with the zones provided under the draft standard LEP. The rezoning process will take the form of an amendment to the new Ku-ring-gai (Town Centres) Local Environmental Plan which is currently being drafted to apply to the St Ives centre.

The proposed zonings and future development standards to be incorporated into the LEP will provide the statutory framework for the implementation of the final overall planning option for the Turramurra centre. It is important to note that the proposed zoning scheme presented below

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provides sufficient scope to implement either planning Option D or planning Option E without further amendments to this zoning scheme.

It is proposed that the 'Local Centre' zone provided under the draft standard LEP be used for the core of the Turrumurra centre. This zone will permit developments with a mix of retail, commercial, residential and associated community facilities, consistent with the Minister's direction. The reason for not using the 'Mixed Use' zone as proposed for St Ives, is that the Local Centre zone distinguishes Turrumurra as a lower order centre than St Ives. This is consistent with the retail centres hierarchy recommended in the Retail Study endorsed by Council on 19 July 2005.

It should be noted that the Local Centre zone does not mean that shop top housing or retail development will cover all of the lands zoned as, unlike the Mixed Use zone, residential flat buildings is not a mandated permissible use on all land within the zone. The Local Centre zone will provide flexibility in identifying and preparing the areas suitable for shop top housing, taking into account the range of planning matters such as urban design, heritage, traffic and transport, etc. Further details of these aspects will be incorporated into the draft LEP and DCP.

It is proposed that mixed use retail/commercial/residential development within the Local Centre zone will be in the range of 3 to 5 storeys. However, final development standards relating to height, floor space ratio and built upon area to be incorporated into a draft LEP cannot be determined until the desired draft planning option and associated master plan controls are finalised by Council.

Other zones proposed to be used include 'Residential - High Density' (with densities similar to 2(d3)), 'Local Open Space – Public' and 'Infrastructure – Place of Public Worship'. The details of the proposed rezonings for each property is outlined in Table 2 below and shown on the map in Attachments E, F and G.

Table 2: Proposed Turrumurra Centre Zoning Scheme

Precinct Description	Addresses	Existing Use	Existing Zones	Proposed Zones
Proposed mixed use retail precinct on southern side of highway between Duff Street and Kissing Point Road.	1A, 1, 3 Kissing Point Road	Shops, medical practice	3(a)-(A2) Retail Services	Local Centre
	1364, 1370-1378, 1390, 1392, 1396 Pacific Highway	Shops	3(a)-(A2) Retail Services	Local Centre
	1380-1388 Pacific Highway	Turrumurra Shopping Village (Franklins)	3(a)-(A2) Retail Services	Part Local Centre Potential Part Local Open Space - Public
	1408 Pacific Highway, 2 Duff Street	Petrol Station, Commercial premises	3(a)-(A2) Retail Services,	Local Centre
	4 Duff Street, 3 Stonex Lane	Council Car park, open space	Part 3(a)-(A2) Retail Services, Part 6(a) Recreation	Part Local Centre Part Local Open Space - Public
Hillview Precinct	1334, 1340 Pacific Highway	Hillview – health services, Car parking	Residential 2(d), Reservation – County Road Proposed	Residential - High Density – Potential additional permitted uses: health centre; community facilities; commercial; open space public access
	1356, 1358, 1360, 1362 Pacific Highway, 2 Kissing Point Road	Shops, commercial premises,	Part 3(a)-(A2) Retail Services, & Part Reserved	

Precinct Description	Addresses	Existing Use	Existing Zones	Proposed Zones
		medical practice	County Road Widening	
Future residential corner Ray St and Pacific Hwy	1335, 1337 Pacific Highway	Shops(Freedom), commercial premises	3(a)-(A2) Retail Services	Residential - High Density
Proposed mixed use retail, commercial, community facilities hub in Ray and Williams Street precinct	1275 Pacific Highway, Turramurra	Turramurra Village Park	6(a) Recreation Existing	Local Centre
	1293, 1295, 1297-9, 1301, 1305, 1307, 1311, 1315, 1319, 1323, 133 Pacific Highway	Shops, Commercial Premises	3(a)-(A2) Retail Services,	
	1 Ray Street, Turramurra	Coles	3(a)-(A2) Retail Services,	
	5 Ray Street, Turramurra	Turramurra Library	3(a)-(A2) Retail Services,	
	4, 6, 8, 10, 12 William Street, Turramurra	Shops	3(a)-(A2) Retail Services,	
Proposed Mixed Use retail, village green in Rohini Street, Gilroy Lane, Turramurra Ave precinct	1-3, 5-7, 9, 17, 19, 21, 23, 25, 29, 31, 33, 35, 37, 39 Rohini Street	Rohini Street Shops	3(a)-(A2) Retail Services,	Local Centre
	1251, 1253, 1255, 1257, 1259, 1263, 1267, 1269, 1271, 1273 Pacific Highway	Turramurra Arcade, Shops, Commercial Premises	3(a)-(A2) Retail Services,	
	1-7 Gilroy Road, Turramurra	Ku-ring-gai Support and Services Centre – HACC, Turramurra Senior Citizens Centre	3(b)-(B2) Commercial Services,	
	2-8 Turramurra Avenue, Turramurra	Turramurra Avenue Car Park	3(b)-(B2) Commercial Services,	
	9-11 Turramurra Avenue,	Turramurra Uniting Church	5(a) Special Uses A	Infrastructure – Place of Public Worship.
Future Residential cnr Turramurra Ave and Pacific Hwy	1233, 1243, 1245, 1247 Pacific Highway	Turramurra Masonic Centre, Former Petrol Station	3(a)-(A2) Retail Services,	Residential – High Density
Eastern Road mixed use retail precinct.	47- 49 Rohini Street	Residential Flat Building	3(a)-(A2) Retail Services,	Residential - High Density
	2, 4, 8, 10, 14, 20 Eastern Road	Former petrol station, shops, commercial premises	3(a)-(A2) Retail Services,	Local Centre

Existing Medium Density sites

The Minister's Directive requires Council to review all existing medium density zones including 2d, 2e and 2h to determine which areas are appropriate for rezoning to higher densities similar to those under the 2(d3) zone in LEP 194. The sites identified in Table 3 below and shown on the map in Attachment F have been identified for further assessment of their potential to rezone for a high

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density, as required by the Ministers directive. The assessment of the potential of these properties for higher densities will cover a range of planning matters including:

- Economic viability;
- Heritage assessment and potential impacts on heritage items within the areas or adjoining;
- Traffic impacts;
- Potential interface impacts on adjoining low density zones.

Councillors will be consulted on any recommendation for rezoning of these existing medium density sites via Council's Planning Committee. Final recommendations on rezoning of these sites will be subject to a further Council resolution before incorporating them into the draft LEP

Table 3 – Existing Medium Density sites for further investigation for rezoning

Precinct	Address	Current Zoning
Area bounded by Ray Street, Pacific Highway, Cherry Street and railway line.	1345, 1351, 1359 Pacific Highway	Residential 2(d)
	6, 8 10, 12, 14, 16, 18 Ray Street.	Residential 2(d)
	2 Cherry Street	Residential 2(d)
Corner of Pacific highway and Duff Street	1A Duff Street, 1416, 1420 Pacific Highway	Residential 2(d)
Corner of Kissing Point Road and Boyd Street	4-6, 8 Kissing Point Road, Turrumurra	Residential 2(e)
	2-4, 6 Boyd Street, Turrumurra	Residential 2(e)
Area bounded by Rohini Street, Eastern Road, King Street, pathway between King and Cherry Streets and railway line.	51, 53 Rohini Street	Residential 2(d)
	22, 24, 26, 28 Eastern Road	Residential 2(d)
	6 King Street	Residential 2(d)

INTERFACE SITES

Council has identified the following sites within Turrumurra Centre study area that are defined as interface sites. Council resolved on 18th October, 2005 that the following sites be investigated as part of the stage 2 Turrumurra centre study:

- 30 Turrumurra Avenue, Turrumurra
- 37 & 39 Gilroy Road, Turrumurra
- 3 Wonga Wonga Street, Turrumurra
- 1 & 3 Nulla Nulla Street, Turrumurra
- 5 Duff Street, Turrumurra
- 2 Nulla Nulla Street, Turrumurra

The assessment of these sites for potential rezoning is yet to be completed. In addition to these sites already nominated by Council, other sites which are currently zoned 2(c) or 2(c2) with potential interface implications from the final planning option are being identified and assessed. The assessment of all sites will use the same methodology identified in the interface sites report presented to Council on 18 October 2005 and will include a detailed heritage assessment of any

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existing or potential heritage items that are included. Councilors will be consulted on the recommendation for rezoning of interface sites within the Turramurra centre study area via Council's Planning Committee. Final recommendations on rezoning of interface sites will be subject to a further Council resolution before incorporating them into the draft LEP.

Reclassification of Land Council Owned Land

Land which is owned by or under the control of a local council (with some exceptions, such as roads and crown reserves) must be classified as either 'community land' or 'operational land' under the *Local Government Act 1993*. Community land will ordinarily be land which is open to the public, such as a park, bushland reserve or sportsground, while operational land may be held by council as an asset or used for other purposes such as works depots or garages.

The purpose of the 'community land' classification is to identify council owned land which should be set aside for use by the general public. Community land cannot be sold by the council and can only be leased for certain purposes. There are a number of restrictions on the way councils can deal with community land:

- community land cannot be sold;
- a council can grant a lease over community land, but only for certain purposes which are authorised by the plan of management for the land;
- community land must be managed in accordance with a plan of management; and
- community land may only be dedicated as a public road where the road is necessary for enjoyment of the land.

Normally, land can only be reclassified from community land to operational land by making a new LEP. The procedures for making an LEP must be complied with, including public exhibition of the plan and consideration of submissions from members of the public. The plan must be made by the Minister for Planning.

In the case where reclassification of the land is carried out by an LEP it will also require a public hearing to be conducted under section 68 of the EP&A Act and section 29(1) of the Local Government Act. It is intended that the public hearing will be conducted during the public exhibition period of the DLEP.

The following Council owned lands have been identified as potential sites that may be considered in the future for possible reclassification;

Item No.	Address	Property	Description
1	1275 Pacific Highway, Turramurra	Lot 1 DP 81994	Turramurra Village Park
2	5 Ray Street, Turramurra	Lot 2 DP 221290	Turramurra Library
3	5-7 Eastern Road, Turramurra	Lot B DP 358184 Lots 19, 20 and 21 DP 6494	Cameron Park, Turramurra Early Childhood Intervention Centre – Lifestart
4	1-7 Gilroy Road, Turramurra	Lot 1 DP 840070	Ku-ring-gai Support and Services Centre – HACC, Turramurra Senior Citizens Centre
5	2-8 Turramurra Avenue, Turramurra	Lot 2 DP 840070	Turramurra Avenue Car Park

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Reclassification of Council owned land at this stage will be deferred until a planning option is endorsed by Council, in conjunction with more detailed planning controls for the various land uses, locations and building envelopes is developed. It may well be that only a portion of each site may need reclassification.

More detailed background information on the history, size, encumbrances, land values and other information that may affect these sites will be prepared and reported back to Council, via Council's planning committee.

Development Control Plan

A draft Town Centre Development Control Plan (DCP) template has been prepared for all 6 town centres in Ku-ring-gai, including Turramurra Centre (**Attachment I**). However the overall structure and contents of this DCP may change subject to the draft NSW standard LEP template to be released either late 2005 or early 2006.

Calculation of development yield

Once more detailed plans are developed and prior to a draft LEP and DCP being brought back to Council for a resolution to exhibit, staff will calculate anticipated development yields for the residential component of the redevelopment based on building envelopes as proposed. A consultant will also be engaged to calculate the feasibility to demonstrate that the controls as included in the draft documents are such that would give sufficient incentive to the redevelopment of land.

Based on the preliminary urban design analysis the potential dwelling increase in Turramurra will be approximately 550 to 650 dwellings resulting in a potential population yield of 1,000 to 1,200 people over the life of the plan. It should be noted this is a preliminary estimate only.

CONSULTATION

This has been summarised in this report and fully documented in the Turramurra Commercial Centre Background Report November 2005.

FINANCIAL CONSIDERATIONS

All primary costs are met by the Departments operational and projects budgets. Additional funding opportunities for new and enhanced public facilities will be sourced through the preparation of a new section 94 plan, potential grant funding and other planning mechanisms. Detailed Economic feasibility assessments will be undertaken as part of the next phase of the project including developing building envelopes and controls.

Other funding sources will also be incorporated into the project, including a new section 94 plan and potential grant funding.

PROJECT PROGRAM

In accordance with the RDS Stage 2 Town Centre Planning Timetable provided to the Department of Planning and the Minister the next stage for the Turramurra centre is the Draft DCP, LEP and Section 94 plan to Council for endorsement in March 2006. Formal exhibition in May 2006 and the final plan submitted to the Department of Planning for gazettal June, 2006.

In order to meet these tight timeframes following Council's resolution on this report, all information will immediately be distributed to the urban design team and specialist consultants with a request that the analysis is progressed and information submitted to staff for the presentation of a Draft LEP & DCP to Council in March 2006.

It is not considered that time is available for a preliminary exhibition of the Draft LEP prior to the formal reporting to Council seeking resolution to exhibit that document.

TURRAMURRA CENTRE PROJECT PROGRAM

Preparation of building envelopes, public domain master plan, S94 plan, DCP and LEP

1	Notification to DIPNR of Council resolution 15 th Dec (S54)	Dec 05
2	Notify relevant government agencies (S62)	Dec 05
3	Commence preparation draft building envelopes and public domain concept	Dec 05 – Jan 06
4	Undertake and complete consultation with landowners of key sites	Dec 05 -Jan 05
5	Engage S94 consultant to prepare town centre plan	Jan 06
6	Engage economic consultant for feasibility modelling	Jan 06
7	Present draft building envelopes and public domain concept plans to PC meeting (1st in February)	Feb 06
8	Finalise building envelopes and public domain plans. Commence preparation of DCP and LEP	
9	Present final draft building envelopes and public domain to PC meeting 1 st meeting in March	March 06
10	Finalise Draft LEP, DCP and S94 documents	
11	Council meeting to resolve to exhibit Draft LEP, DCP and S94 Plan (2 nd meeting in March)	March 06
12	Amend and revise Draft LEP, DCP and S94 following Council resolution. Prepare for exhibition	April 06
13	Formal exhibition of Draft DCP/LEP (6 WEEKS)	May 06
14	To Department of Planning for Gazettal	June 06

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

The integrated planning approach has ensured input from all Council departments throughout the project.

SUMMARY

Council has adopted an integrated planning approach to planning of the Turramurra Centre and has embarked on a process of extensive community and stakeholder consultation to ensure that the

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requirements of the Minister's direction are met in a way which improves the amenity of the Turramurra centre and which maximises the benefits to the community of redevelopment.

This will ensure that existing problems, such as traffic and parking are addressed and new open space, public domain improvements and new and improved community facilities are provided and that current and future retail, commercial and local business and employment needs of the local community are met.

The first stage of implementation of plans for Turramurra Centre requires the preparation of a new LEP and a new DCP to guide future redevelopment of the centre.

The report provides an overview which sets out a preferred option for future development of retail and commercial activities and assesses other sites that are currently zoned for medium density development for suitability for rezoning for medium density development consistent with the provisions of LEP 194.

The report also identifies sites that interface sites that were rezoned under LEP 194 and which would benefit from rezoning to medium density and other sites which have special circumstances that make them suitable for rezoning to medium density and makes recommendations for their rezoning.

It also considers Council owned land and proposes that certain sites be reclassified from community to operational land to provide for more flexible use in the future consistent with plans for the Turramurra centre.

The draft LEP and DCP will be brought back to Council for further resolution to exhibit the documents as presented. This report will outline further consultation strategies for the exhibition of these documents and will present plans for other aspects of planning for the Turramurra centre area, such as a public domain plan, traffic / parking management proposal, proposals for community facilities and open space so that these can be considered and, where appropriate included in a schedule of works for a section 94 plan and or for inclusion in future capital works schedules so that the overall vision for Turramurra Centre can be progressively achieved.

All recommendations arising from this report will be subjected to further detailed analysis and assessment by Council staff and specialist consultants, this will include economic feasibility analysis, traffic and transport assessments, urban design and planning analysis, and land information assessment. The results of these assessments and review will be brought back to Council's planning committee and Council where appropriate and in some cases there may be a demonstrated need to vary from the recommended option.

Overview of the recommended planning option (Option D)

The proposed landuse changes for option D included:

- Turramurra will be a Local Centre with a total of approximately 21500sqm net floor area (NFA) of retail.

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- The total retail comprises approximately 16,000sqm NFA existing; an additional 4000sqm NFA of retail to cater for the existing population, as well as for the expected population increase under RDS stage 1; approximately 1500sqm NFA of retail to cater for potential dwelling increase in Turrumurra under RDS stage 2.
- Two supermarkets with a combined total of 4,500sqm one located in each of the retail areas
- The centre will comprise two main retail areas one on the southern side of the highway serving south Turrumurra residents and one on the eastern side of the railway near Turrumurra Avenue serving residents to the north and east of the centre.
- Between the two retail areas (in the centre) are the rail station and a community facilities “hub”.
- Community facilities are to be consolidated within the Ray Street precinct to create a community hub
- Potential for a 4000sqm leisure centre in the Ray Street precinct subject to community consultation and Council approval
- Retaining the strip shops fronting onto the Pacific Highway and allowing commercial and retail uses
- new cafes, restaurants and speciality shops at the rear of the centre facing north onto new public spaces at Gilroy Lane and at William Street
- a total of 5000sqm NFA commercial (located on the upper floors rather than ground floor) to cater for small local businesses, professional services, medical services and the like. This includes approximately 3700sqm NFA of existing floor area and an allowance of 30% for future growth.
- Residential shop top housing in all retail areas. Based on preliminary Urban design analysis this will result in approximately 550 to 650 additional dwellings or approximately 100 to 1200 additional residents in total over the life of the plan.

Proposed traffic improvements associated with this option include:

- New signalised intersection with Pacific Highway at Turrumurra Avenue
- Conversion of Rohini Street to Left in and Left Out with the removal of traffic signals and providing a new road link between Gilroy Road and Turrumurra Avenue.
- Provision of a direct connection from Kissing Point Road to William Street and a one way link to Ray Street via Forbes Lane.
- A new road connection from Kissing Point Road to Duff Street.
- Road widening to remove the tidal flow on Pacific Highway

RECOMMENDATION

- A. That Council adopt in principle the recommended option (option D) as outlined in this report and in Attachment D to guide future development of retail, residential, community and commercial activity within the Turrumurra Centre.
- B. That Council commence preparation of a Draft Local Environmental Plan to rezone land consistent with Council’s preferred option and notify the Department of Planning of its resolution under Section 54 of the Environmental Planning and Assessment Act.

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- C. That Council notify relevant government agencies of its intention to prepare a Local Environmental Plan as required under Section 62 of the Environmental Planning and Assessment Act.
- D. That the Draft Local Environmental Plan propose rezoning of lands in accordance with the following table and as outlined in this report.

Land Description	Addresses	Proposed Zones
Land Bound By Duff Street, Pacific Highway and Kissing Point Road.	1A, 1, 3 Kissing Point Road	Local Centre
	1364, 1370-1378, 1390, 1392, 1396 Pacific Highway	Local Centre
	1380-1388 Pacific Highway	Part Local Centre Potential Part Local Open Space - Public
	1408 Pacific Highway, 2 Duff Street	Local Centre
	4 Duff Street, 3 Stonex Lane	Part Local Centre Part Local Open Space - Public
Land bound by Kissing Point Road, Pacific Highway and Railway line	1334 (Hillview), 1340, 1356, 1358, 1360, 1362 Pacific Highway, 2 Kissing Point Road	Residential - High Density – Potential additional permitted uses: health centre; community facilities; commercial
Land on corner of Ray Street and Pacific highway	1335, 1337 Pacific Highway	Residential - High Density
Land bounded by Ray Street, Pacific Highway and Railway Line	1275, 1293, 1295, 1297-9, 1301, 1305, 1307, 1311, 1315, 1319, 1323, 133 Pacific Highway, 1& 5 Ray Street, 4, 6, 8, 10, 12 William Street,	Local Centre
Land Bounded by Rohini Street, Eastern Road, Gilroy Road, Uniting Church and Turramurra Ave.	1251, 1253, 1255, 1257, 1259, 1263, 1267, 1269, 1271, 1273 Pacific Highway, 1-3, 5-7, 9, 17, 19, 21, 23, 25, 29, 31, 33, 35, 37, 39 Rohini Street, 1-7 Gilroy Road, 2-8 Turramurra Avenue.	Local Centre
	9-11 Turramurra Avenue,	Infrastructure – Place of Public Worship.
Land on Corner Pacific Highway and Turramurra Avenue	1233, 1243, 1245, 1247 Pacific Highway	Residential – High Density
Land on corner of Eastern Road and Rohini Street.	47- 49 Rohini Street	Residential - High Density
	2, 4, 8, 10, 14, 20 Eastern Road	Local Centre
	4 Duff Street, 3 Stonex Lane	Part Local Centre Part Local Open Space - Public

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- E. That Council prepare a Draft Development Control Plan for the Turrumurra Centre in accordance with the table of contents outlined in Attachment I.
- F. That Council adopt the work programme as outlined in the report including the timeframe for the final submission of an adopted Local Environmental Plan to the Minister for Planning.
- G. That Council formally consider the Draft Local Environmental Plan and Draft Development Control Plan prior to them being placed on public exhibition.
- H. That this report consider reclassification of community land within the Turrumurra centre
- I. That the following be prepared for the Turrumurra Centre:
 - i. A public domain concept plan.
 - ii. An action plan for traffic and parking management.
 - iii. Proposals for community facilities.
 - iv. Other proposals for a schedule of works for inclusion in a Draft Section 94 Plan.
- J. That the development of a Section 94 Development Contributions strategy be commenced.
- K. That Council inform Rail Corp of its support for a 7.5 metre wide pedestrian bridge over the railway at Turrumurra Station, subject to further negotiation regarding the financial aspects, and provide a further report to Council on funding matters associated with making this commitment.
- L. That creation of a new roads generally as indicated on the map in Attachment H be further considered by Council prior to inclusion in the Draft Local Environmental Plan and Draft Development Control Plan.
- M. That final controls and rezoning of land within the Turrumurra Centre as outlined in this report is subject to economic feasibility assessment by a suitably qualified consultant and further consideration and investigation and review as outlined within this report.
- N. That a further report be brought back to Council on the assessment of the potential to rezone properties currently zoned residential 2d and 2e to higher densities similar to those under the 2(d3) zone in LEP 194. This report is to specifically address the properties identified in the table below and as outlined in Attachments E and F and include recommendations on which properties should be included for rezoning in the draft Turrumurra Centre LEP.

Precinct	Address
Area bounded by Ray Street, Pacific Highway, Cherry Street and railway line.	1345, 1351, 1359 Pacific Highway
	6, 8 10, 12, 14, 16, 18 Ray Street.
	2 Cherry Street

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Precinct	Address
Corner of Pacific highway and Duff Street	1A Duff Street, 1416 and 1420 Pacific Highway
Corner of Kissing Point Road and Boyd Street	4-6, 8 Kissing Point Road, Turrumurra 2-4, 6 Boyd Street, Turrumurra
Area bounded by Rohini Street, Eastern Road, King Street, pathway between King and Cherry Streets and railway line.	51, 53 Rohini Street 22, 24, 26, 28 Eastern Road 6 King Street

- O. That a further report be brought back to Council on the assessment of interface properties and include recommendations on which properties should be included for rezoning in draft Turrumurra LEP. This report is to included the properties identified in Council's resolution on 18 October 2005 as well as any other properties in Residential 2(c) or 2(c2) zones that may be impacted by the resolved preferred draft planning option for the Turrumurra centre.

Steven Head
Director Open Space & Planning

Greg Piconi
Director Technical Services

Bill Royal
Senior Urban Designer

Antony Fabbro
Manager Urban Planning

Attachments:

- Attachment A - Turrumurra Commercial Centre Draft Background Report November 2005.**
- Attachment B - Chronology of Surveys and Consultations.**
- Attachment C - Turrumurra Town Centre Traffic Study.**
- Attachment D - Recommended Option D - map.**
- Attachment E - Land zoning proposed core - map.**
- Attachment F - General study area land zoning proposed - map.**
- Attachment G - Open space and heritage - map.**
- Attachment H - Roads to be closed / open - map.**
- Attachment I - Draft DCP template - Town Centres.**

Ku-ring-gai Council

Turramurra Commercial Centre

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EXECUTIVE SUMMARY

This report represents a summary of the first stage of the integrated planning process for the Turrumurra Commercial Centre. It provides an outline of the extensive stakeholder consultation and its outcomes, an overview of the site opportunities and constraints, identifies the key design principles that will guide the planning process, documents planning and traffic options for the town centre and concludes with a recommended option.

The planning options for Turrumurra evolved through a process of extensive stakeholder survey and consultation. This document proposes a recommended option that will result in the creation of a revitalised town centre offering a place for people to live and work as well as shop and pursue leisure activities.

Overall the majority of residents shared common aspirations for the future of Turrumurra Centre. These included:

- Village atmosphere
- Economic viability and vitality
- Improved community facilities particularly for the young
- Village parks and greens
- Improved traffic and parking

The special characteristics of the area have been analysed with diagrams illustrating their opportunities and constraints that suggest possible appropriate uses and future character for each area. The Councillors' visions for Turrumurra, the community's aspirations and the detailed site analysis identify the design principles for the future development of the centre.

The design principles have in turn guided the development of the concept plan options. The concept plan options aim to optimise the potential of the centre in terms of its unique environment. The three options all have a similar mix of uses, however the placement of the uses and the emphasis varies from one option to another.

The stakeholder consultation has proven to be very successful in establishing an effective communication framework to all key stakeholders and in identifying both the strengths and opportunities of the site and in determining a number of concept options.

The next stage in the planning process is the development of detailed building controls and a public domain master plan, together with economic appraisal and further traffic modelling, and the preparation of statutory planning documents.

1.0 Introduction

1.1 BACKGROUND

Stage 1 of Ku-ring-gai Council's Residential Strategy culminated with the Gazettal of Ku-ring-gai Local Environmental Plan (LEP) 194 on 28 May 2004. The LEP rezoned land for medium density housing along the Railway / Pacific Highway corridor including the Turrumurra centre.

In a letter dated 27 May, 2004, the Minister Assisting the Minister for Infrastructure and Planning (Planning Administration) gave a direction to Council to prepare an LEP in relation to areas in and around existing retail and commercial centres in the rail corridor and St Ives Centre as Stage 2 of its Residential Development Strategy. This work is to include shop-top housing and re-evaluate density controls on existing medium density zones. Council has given an undertaking to the Minister that the planning work for Turrumurra will be complete by June 2006.

The Minister's directive contained the following underlying principles, aims and objectives:

Principles

1. *To encourage the provision of housing that will broaden the choice of building types and locations available in the housing market and to make efficient use of existing infrastructure and services;*
2. *To revitalise the existing retail / commercial centres.*

Aims

1. *To rezone land to facilitate the development of multi-unit housing and increase housing choice particularly in the form of "shop-top" housing.*

2. *To improve the development standards so as to encourage the land in the existing multi-unit housing zones.*

Objectives

1. *To include provisions which allow for the redevelopment of land for multi-unit housing consistent with the development standards contained in LEP 194.*
2. *To provide for retail and commercial activities to cater for the local community and to implement housing density standards which complement those contained in LEP 194.*

Council has commenced integrated place based planning for the existing commercial retail centres along the Railway Corridor/ Pacific Highway and St Ives Centre. This process will not only focus on increasing opportunities for residential development in each centre but will also seek to achieve identified social, economic, environmental and amenity objectives. The integrated planning approach will focus on improving the viability and liveability of each centre, improving traffic and parking, providing new open space (where appropriate), improving public domain, improving safety, improving accessibility of each centre etc. Parallel to this work Council and community facilities will be reviewed to identify opportunities for upgrading facilities and / or including new facilities.

1.2 PROJECT OBJECTIVE

Council's Management Plan 2004-2005 has identified the Turramurra commercial centre for increased residential development. The centre is to incorporate an appropriate mix of retail, commercial, residential, community and open space activities that provide a basis for on going economic viability, sustainability and vitality of the centre.

The project will address the vision, issues and opportunities identified by the community and the aims and objectives of Council and State Government.

1.3 PROCESS

An important element of the process has been to establish communication with the residents and stakeholders and to ensure the development of a common consensus and vision. This has been achieved with a process of surveys, group consultations, stakeholder workshops and presentations to organisations.

The use of email to give and seek feedback to stakeholder has also been notable. The planning process has involved using a team of experienced urban designers, and other specialist consultants. The urban design team analysed the town centre and identified opportunities, constraints and options. A land economist has reviewed the areas economic potential and identified the costs and benefits of development of the site. Traffic and transport issues have been explored with consideration given to the external and internal road networks. Heritage and landscape issues have also been identified.

The reporting has been divided into two stages. This report, Turramurra Commercial Centre – Recommended Option Report is the first and it outlines the process of the development of the recommended option. The second report will be in the form of a draft Development Control Plan, draft Local Environment Plan and Section 94 Plan for the Centre.

This report is divided into two parts:

Part 1 the process and outcomes of preliminary consultation, analysis of existing conditions, identification of key resident, Councillor and stakeholder issues, a vision for Turramurra, establishment of the opportunities and constraints and preliminary design principles for the concept options.

Part 2 of the report presents the concept planning and traffic options, results of community survey and exhibition, discusses the assessment of the options, and concludes with a description of the recommended option and next steps.

PART ONE

2.0 PRELIMINARY CONSULTATION

Community consultation in good town planning has a notable history. Ku-ring-gai Council's commitment to full-bodied, open and transparent engagement with its community is a measure of wanting to listen to all interested people in its constituency – including the often silent. At the same time, gleaning the experience and ideas of local special interest groups can provide perspectives and opportunities that are important when considering strategic issues in a practical light.

Current technology allows messages and material to be available quickly and at low cost, to and from large numbers of interested persons and groups – Ku-ring-gai will continue to apply these media to assist its on-going, two-way community links in the planning of the Turramurra Commercial Centre.

2.1 Stakeholder Surveys & Consultations

The consultations to date have been completed in 4 phases – initially with local groups and interested residents, then further consultation to establish a Vision for Turramurra town centre, then Options workshops' consultations, and most recently to provide advice on a Planning Option. Consultation has involved working extensively to establish and develop contact with interested stakeholders in the Turramurra Commercial Centre. These have included:

- Householders from Turramurra and Warrawee
- Business-owners and retailers in Turramurra
- Shoppers at Turramurra
- Established local resident groups
- Young people
- Persons in retirement villages.

2.2 Initial Surveys

A large survey was posted to some 8000 householders in the Turramurra/Warrawee postcode area 2074 in February 2005. This survey sought information & opinion on:

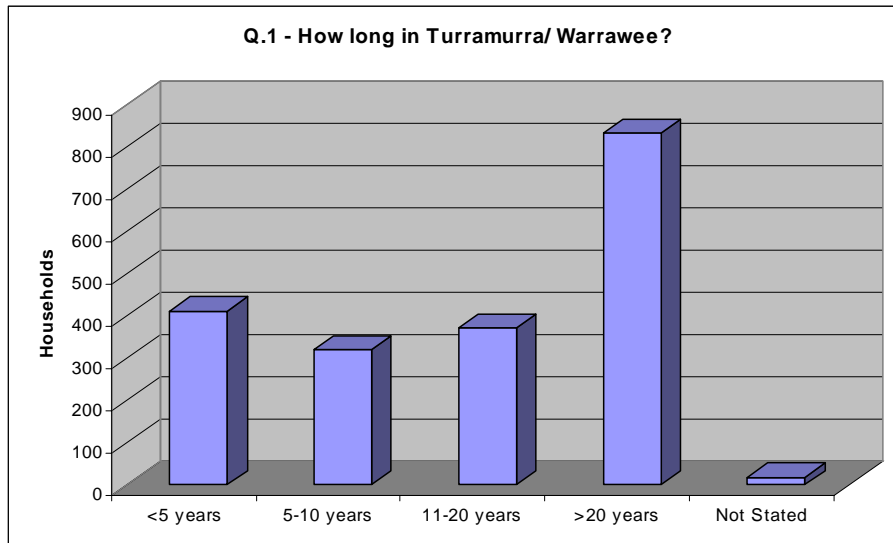
- Demographics
- Opinion on shops & business
- Shopping location choices
- Opinion about Turramurra
- Sport & recreation choices
- Planning for the future.

Nearly 2000 responses were received, giving a wealth of information on habits, opinion and experience of living in the area. Qualitative, open questions, such as seeking good points and bad points about Turramurra shops and businesses, were complemented by quantitative ones seeking ratings on statements like *car parking and traffic flow is satisfactory*. Passive and active recreation choices were also sought. Notably, contact details by 'phone and / or email/fax were also sought from interested residents, for further occasional contact in relation to the planning of Turramurra town centre, or for other Council-wide issues. A youth survey was also distributed to students of Pymble Ladies College; responses were predominantly qualitative and have been included in the Youth responses below. (Approaches to local high schools were not successful.)

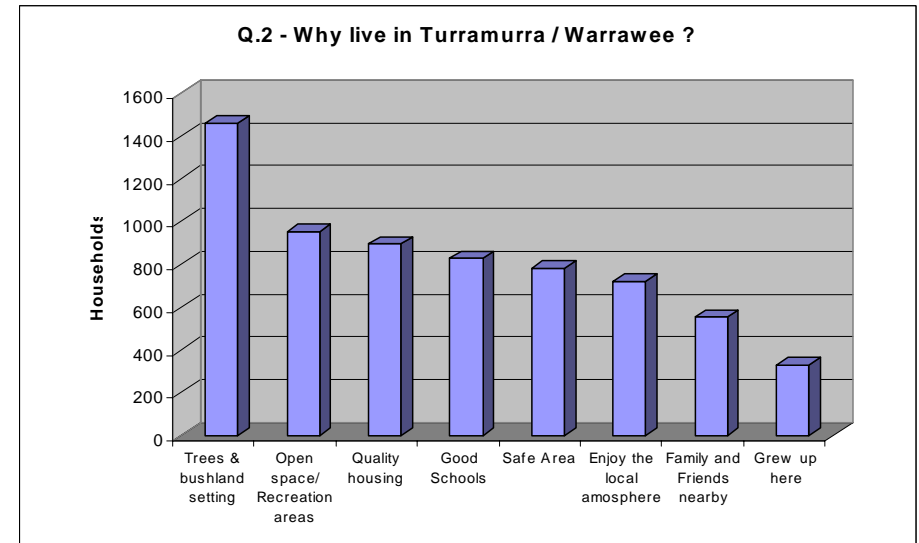
Council appreciates the cooperation of the Chamber of Commerce and Turramurra businesses in finessing questionnaires on local shopping choices, and distributing shopper surveys at the town centre. The latter were mainly qualitative, and are indicated in Consultations below.

A selection of results from the householders' survey is shown below; full details are available on CD ROM from the Turramurra Library:

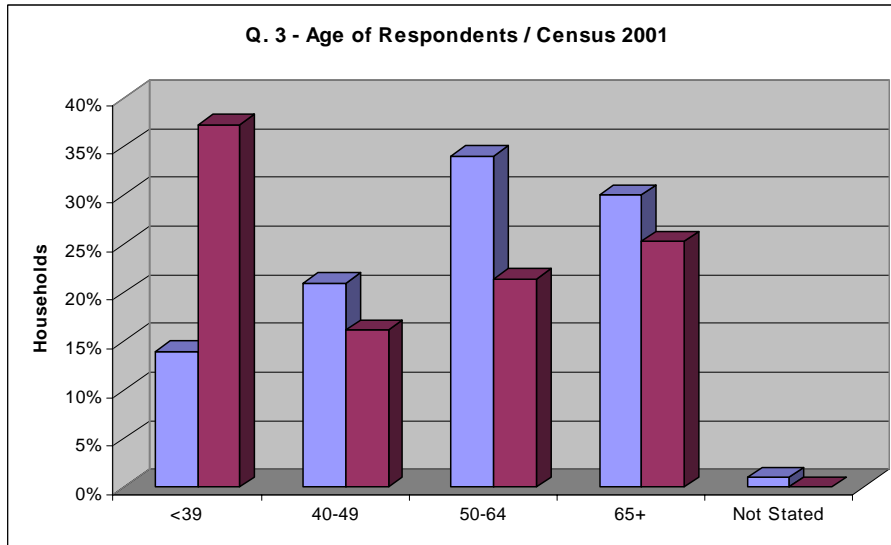
Demographics



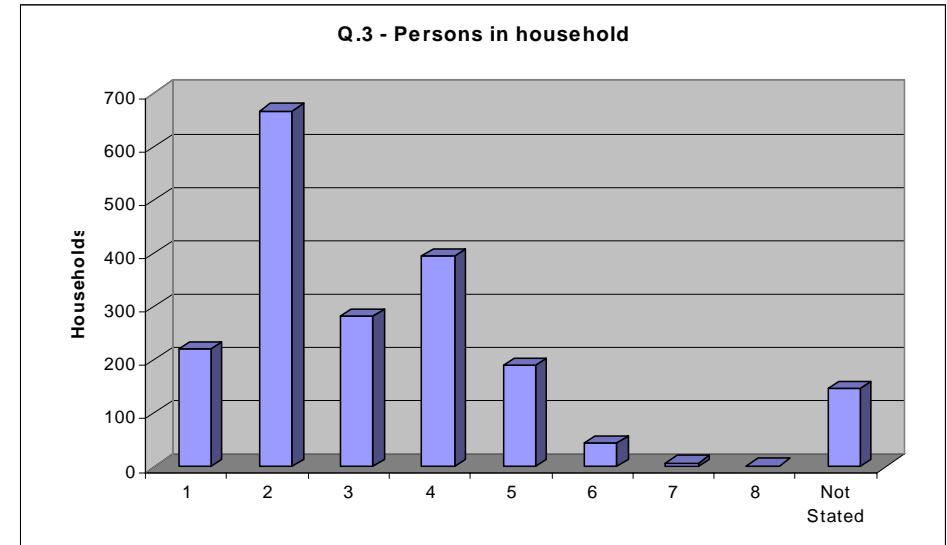
A notable number of people responding indicated they had lived in the area for 10 years or less, but a larger group responded that they had lived there over 20 years. Comparatively few respondents had lived in Turrumurra/Warrawee for 11 to 20 years.



Trees and bushland setting was the reason identified by a notably large number of responses to the 2005 Household Survey question about why they chose to live in Turrumurra/Warrawee. Following and notably less highly ranked reasons were *Open space and Recreation areas*, *Quality housing* and *Good Schools*.

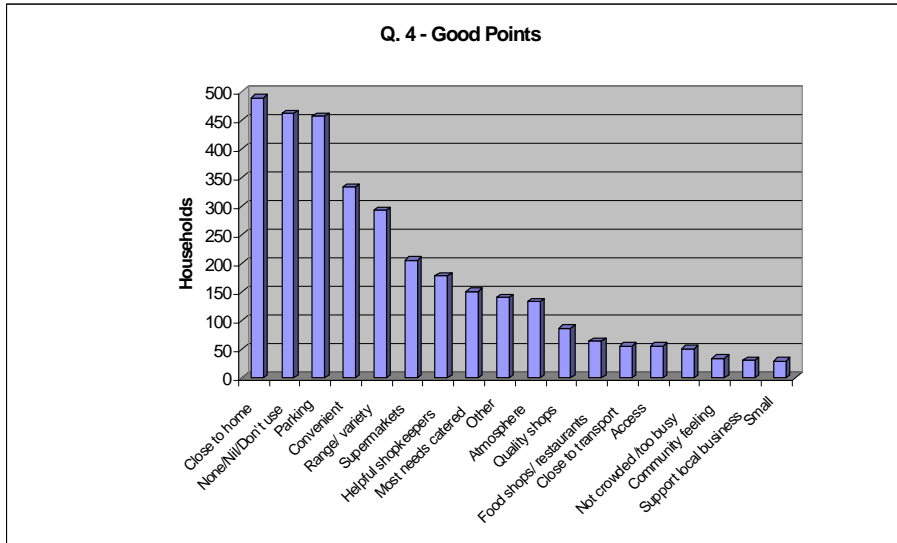


One measure of survey validity is comparison with most recent ABS Census data. While there was notable under-representation of persons below 39 years of age, and some over-representation of 50-64 year olds responding to the survey, this is not unexpected given that real estate prices in the area may mitigate against many householders, as survey respondents, being under age 39.

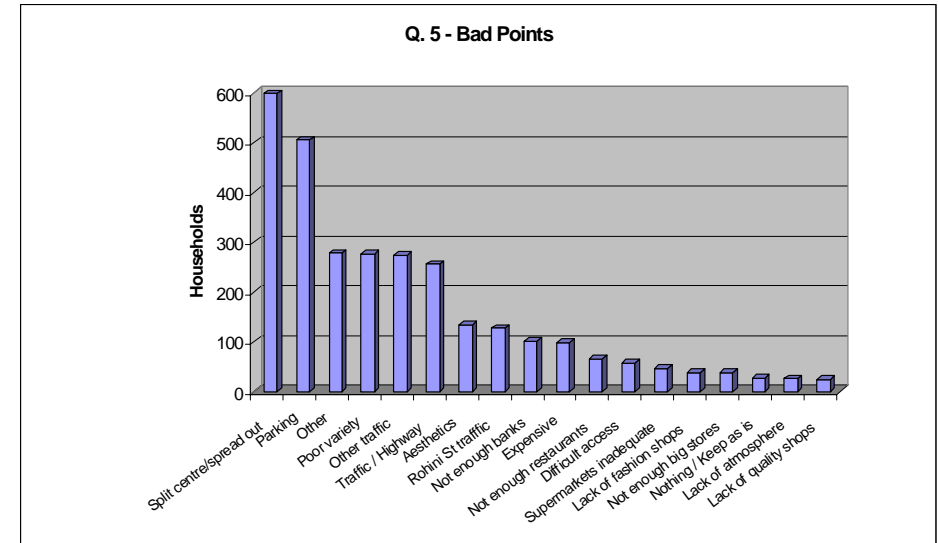


There were large numbers of two-person households responding to the survey; the next highest were 4 person households. This may reflect a large number of older, *empty nest* households. Similarly there is a notable number of households with 4, 3 and 5 persons, indicating younger families in the area.

Opinion on Shops & Businesses

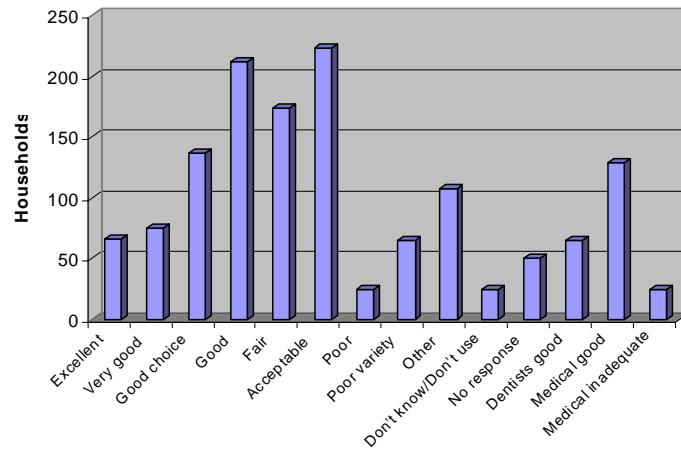


Asked to identify 2 good points about shopping in Turrumurra, the largest group of respondents suggested proximity to home was good. There was a very notable level of *don't know / nil / don't use* responses. *Parking* rated highly as being good there. Less highly noted were *convenient* and *range/variety* of goods for sale.



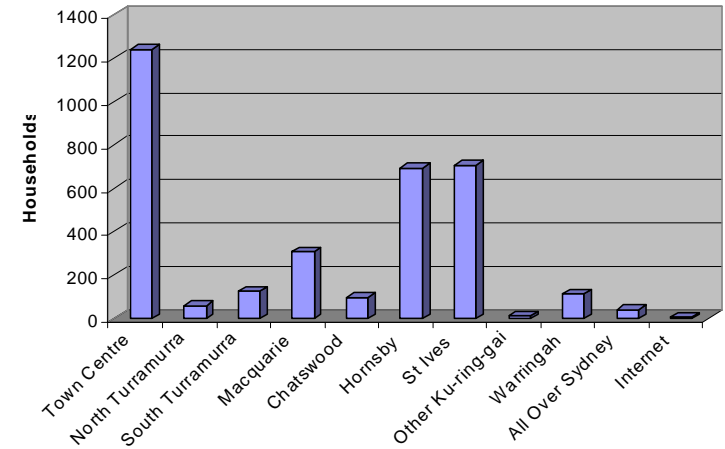
The most noted bad point about the Turrumurra town centre, reported by householders, was that that it is a *split centre/ spread out*. *Parking* was second highest as a bad point. Notably less were *poor variety* of shops/merchandise, general problems with *traffic* in the town centre, and issues of *traffic and highway* access.

Q.6 - Range & quality of professional/ business services



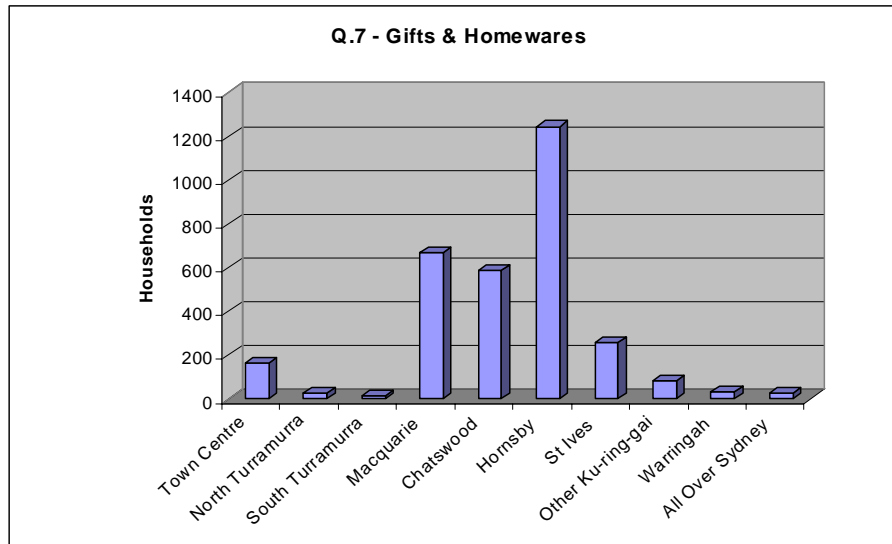
Most common rating by householders for business and professional services at Turrumurra was *acceptable*. This was closely followed by a similar number of *good* ratings. *Fair* ratings and *good choice* were ventured by successively less respondents. *Medical good* and *dentists good* were also notable specific ratings provided in the responses.

Q.7 - Supermarket



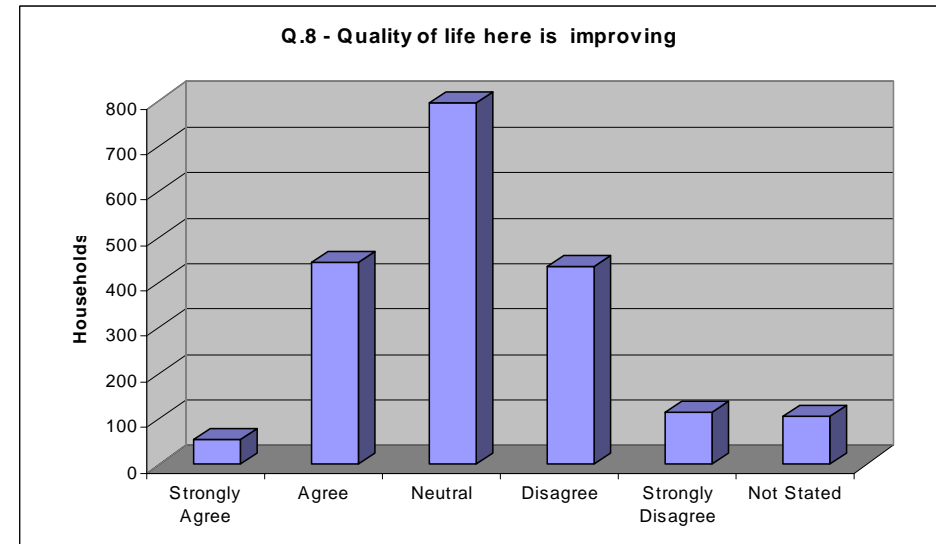
Shopping Location Choices

The very large majority of those responding indicated that Turrumurra town centre was their choice for supermarket shopping. Hornsby and St Ives were equal second in ranking, but each with only half the level of responses indicated for Turrumurra town centre. Butchers, Fruit and Vegetable, Hairdressing, Banks, Post Office, Chemist, Fish/Takeaway, Restaurants, Liquor Shop, Video/DVD Hire, Garden Supplies, followed generally similar patterns of location choices.



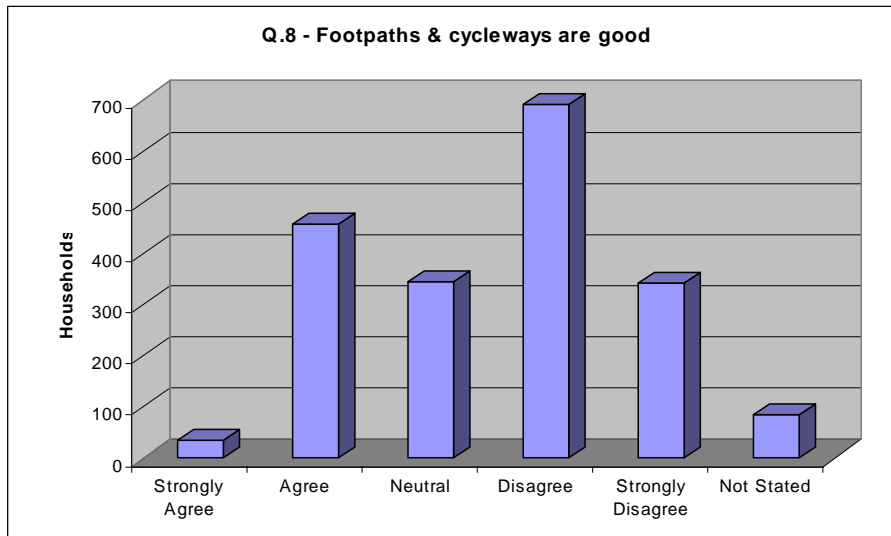
Gifts and homewares shopping location choices were at larger centres; Hornsby predominated, with Macquarie and St Ives ranking next, each at around half the level of support of Hornsby. Turrumurra town centre was very low in destination choice expressed by local householders for these purchases. This pattern of location choice was also apparent for Clothing, Music Shop, Furniture/White-goods and Carpet/Floor Covering.

A more mixed pattern was apparent for Travel Agent, Hardware, and many professional services.

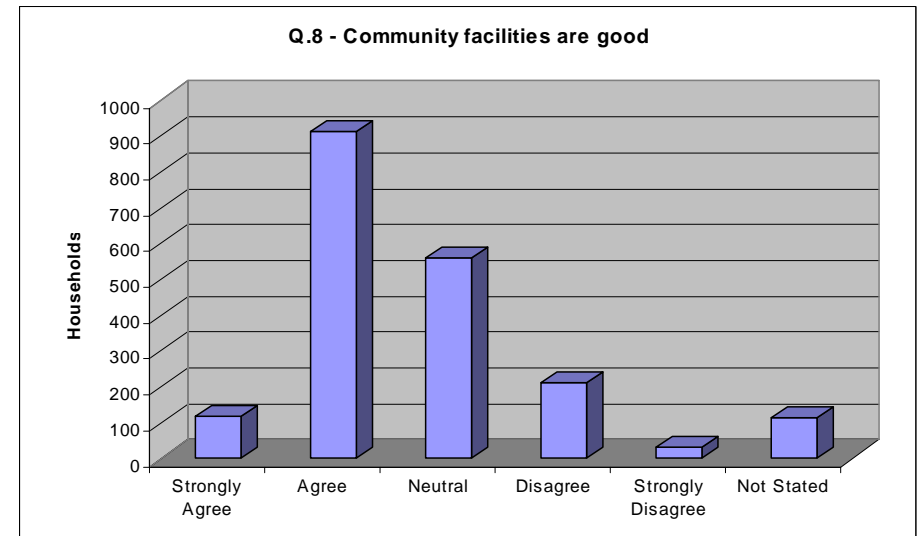


Opinion about Turrumurra

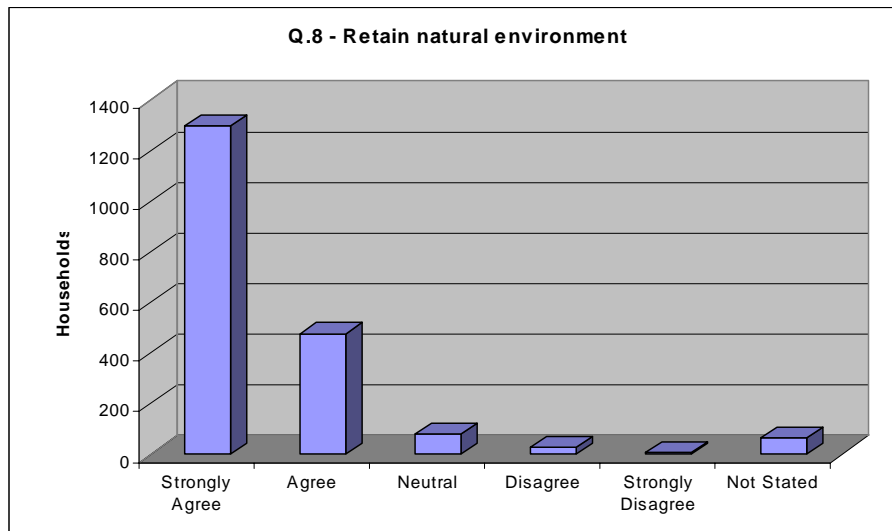
There were equal levels of agree and disagree by Turrumurra/Warrawee households to the proposition that the quality of life here is improving. The largest level of support was for a neutral response, with overall disagreement just slightly ahead of overall agreement. Similar divided agreement/disagreement was apparent to the suggestion *Shops & Professional Services in Turrumurra meet all our Household needs*.



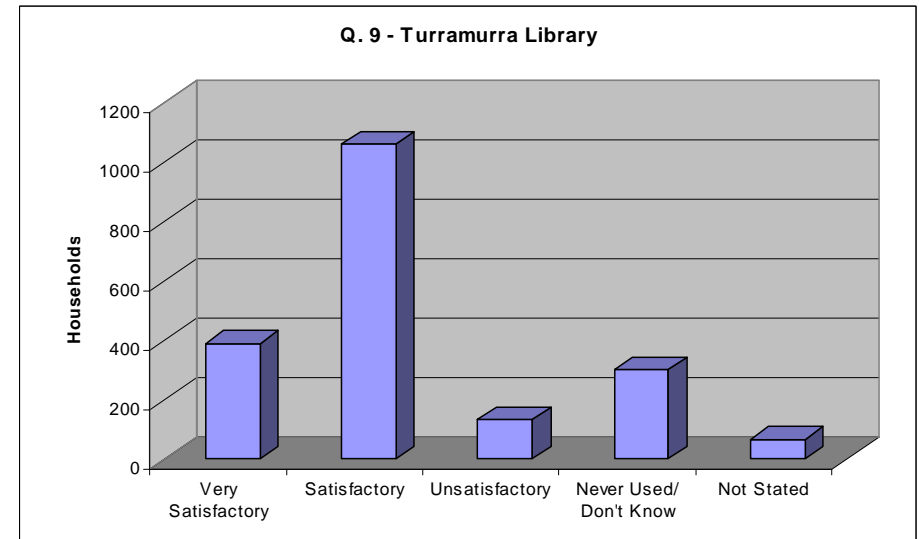
There was a notably higher level of disagreement (and strong disagreement) than agreement to this proposition.



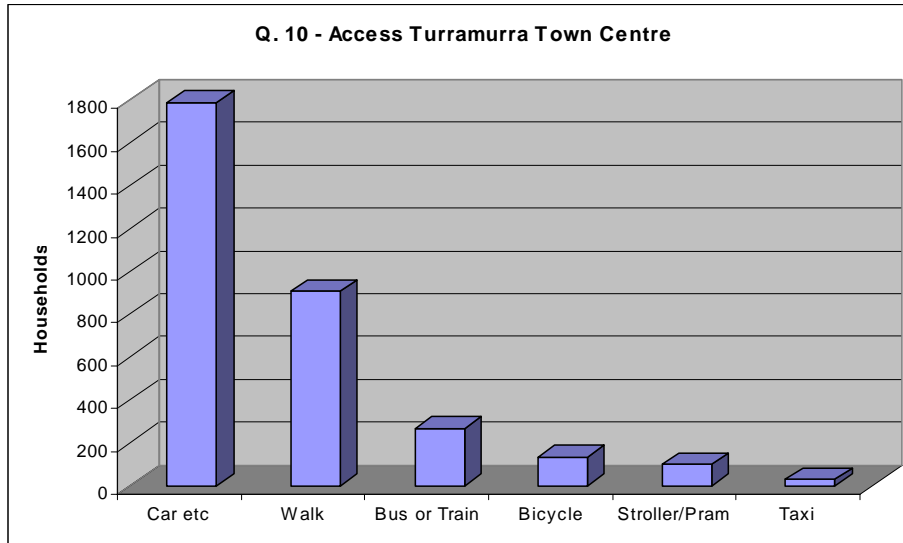
There was a high level of agreement to the concept that local community facilities are good in Turrumurra/Warrawee; this general pattern was repeated in agreement to *sports facilities are sufficient*, and *access to local parks is satisfactory*, *parks have sufficient facilities*, and to a lesser extent *older persons' housing is adequate*, *streets are safe after dark*, and *access to public transport is satisfactory*.



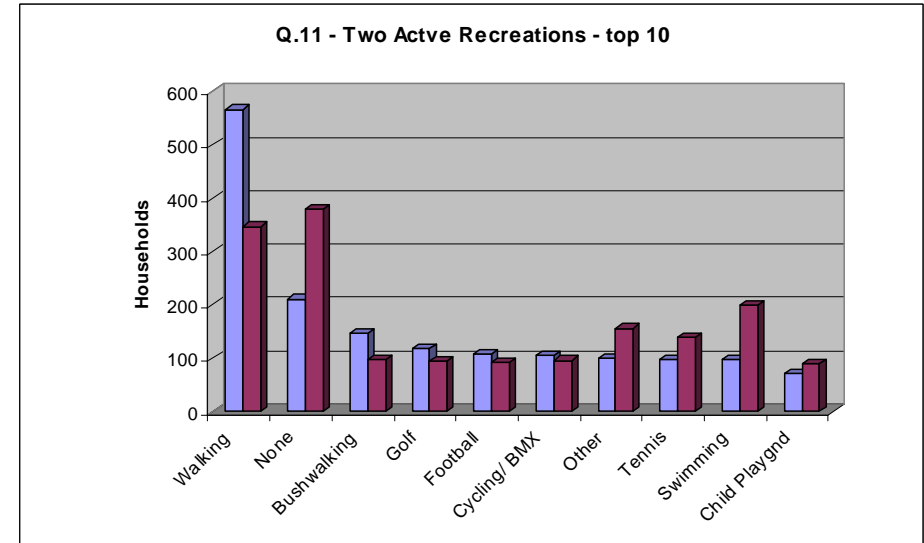
There were very high levels of agreement to the suggestion of *Retaining the Natural Environment*. Even higher levels of agreement were apparent to *Enhancing Bushland Reserves*, and that *Medium Density here is Sufficient*. Lower but notable levels of support were apparent to the suggestion that *Pedestrian and bicycle access to Turrumurra should be improved*.



Turrumurra Library was regarded with high levels of satisfaction by a large number of local householders. By contrast, the other facilities surveyed – the Community Support Activity Centre and Turrumurra Senior's Centre, indicated very high levels of *Never used/don't know*.



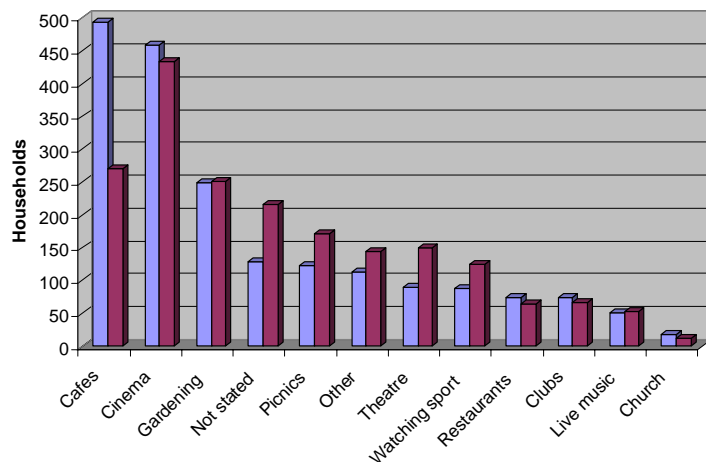
As expected there were very high levels of car use to access the Turramurra town centre. Of particular interest, was the notable level of walking access reported by households responding to the survey. Some 50 households reported accessing the centre on a weekly basis, whilst another 750 used the centre on a daily basis.



Sport & Recreation Choices

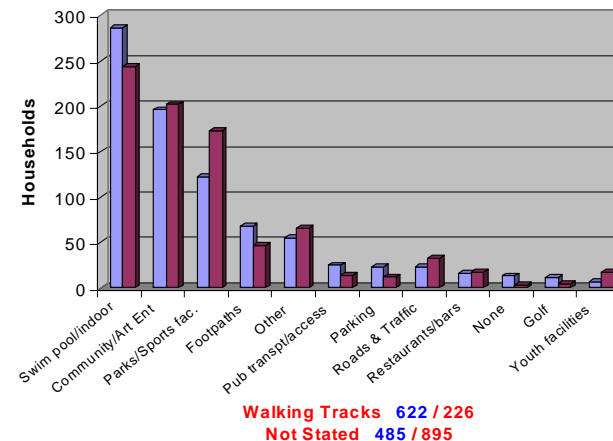
Walking was nominated by the largest number of householders as their choice of active recreation. Notably this was followed by *None*, then with much lower numbers *Bushwalking* and *Golf*. *Tennis* and *swimming* had lower levels of first than second choices expressed.

Q. 13 - Two Passive Recreations



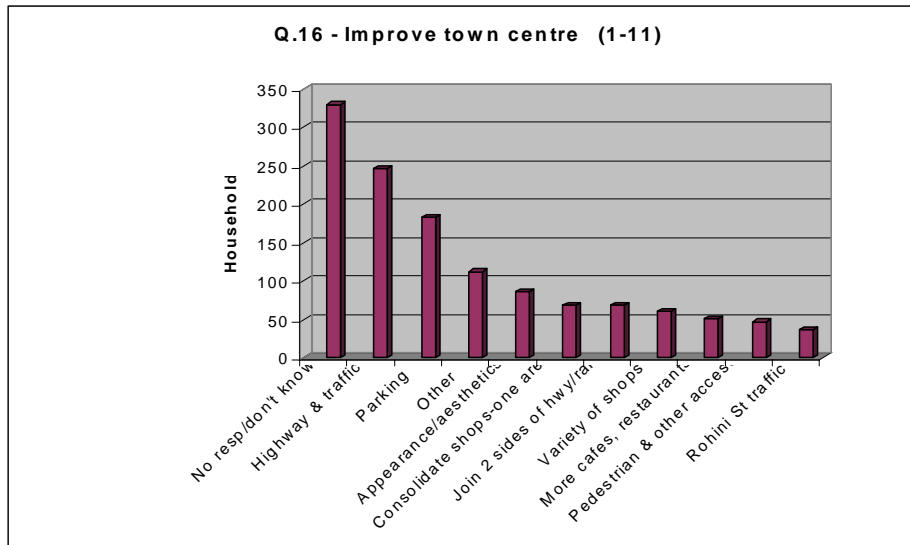
Passive recreations reflected high levels of use of cafes and cinemas. Of interest, are the overall higher levels of use of cinemas reported by householders, compared to cafes, although cafes is a higher first choice. Cinemas use may reflect a choice by numbers of families, and possibly numbers of older single persons.

Q. 14 - Two Public Facilities



Consistent with the high levels of walking as an active recreation reported at Question 11, *Walking Tracks* as a first preference were nominated by the largest group on *what facilities [they] would like to have more of, or have improved in Ku-ring-gai*. *Not stated* was next, at around 80% of the numbers for *Walking Tracks*, then *Swimming pool/indoor* with slightly less than half the level of support for *Walking Tracks*. Second preferences, notably, reported the highest levels of *not stated*.

In a similar vein, there were very high levels of *don't know* (700), and *not stated* (450), in householders' responses to naming local community events or festivals they attended in the last 12 months.



Some of the most comprehensive, qualitative responses were given by residents to this question. Some of these comments are set out in point form below at *Issues Identified*. In summary, whilst the largest numbers made no specific response to this question, the following areas of *highway and traffic*, *parking*, *appearance/aesthetics*, *consolidate shops*, *join 2 sides of Highway/Railway*, each reinforce much of the responses given earlier in the survey.

2.3 Initial consultations

Consultations were held with representatives of the following organisations who kindly expressed interest and opinion on Turrumurra town centre:

- Knox College Student Representative Council
- North Turrumurra Action Group
- Kissing Point Progress Association

- Kissing Point Sports Club
- Turrumurra Chamber of Commerce
- St Margaret's Retirement Village
- Northaven Retirement Village
- Rohini Retirement Village

Questions were kept open to seek the widest possible array of input, and consultations were kept balanced and inclusive so that all participants had opportunity to individually respond to each issue.

2.4 Issues identified

Turrumurra household survey provided a rich source of quantitative and qualitative material. Issues of note and typical comments were:

- **Highway & Traffic issues –**
 - 'Re-route heavy traffic and lower speed on highway'
 - 'Think-tank on traffic problems'
 - 'Reduce traffic congestion'
 - 'Fix traffic so it flows better'
- **Parking –**
 - 'Better parking for shoppers and commuters'
 - 'Better short and long term parking'
 - 'Add a multi-storey car park for commuters'
 - 'Connect parking better to shops'
- **Appearance & Aesthetics –**
 - 'Beautify area and update'
 - 'Keep a higher standard of streetscape – better architecture'
 - 'Make it look cleaner / improve cleanliness in all areas'
 - 'Modernise and clean area'
- **Consolidate into one area –**
 - 'Solve separation of areas of shops across highway/rail problem'

- ‘Don’t go often because its too spread out’
- ‘Amalgamate the three centres’
- ‘Try to make shops more together’
- **Join across highway & rail –**
 - ‘Overpass to connect shops’
 - ‘Covered walkway to connect shops’
 - ‘Over/underpass to unify centre’
 - ‘Access over railway’

Shopper survey typical responses included –

- “divided shopping areas”;
- “noise of traffic”;
- “restaurants/cafes limited”
- parking and traffic problems – frequently mentioned;
- “more fashion stores needed”;
- “village atmosphere needed”;
- “modernise shopping area”;
- “poorly maintained shop fronts”
- “highway dissecting shopping areas”.

Complementary consultations produced the following indicative issues for Turrumurra town centre planning:

Youth responses - included

- concerns that Turrumurra was “old and tired ...not like Chatswood”;
- “it needs more restaurants, a surf shop and gymnasium”
- “not convenient, parking and access are poor”
- “good centre with close parking off highway for little strip shops”;
- “food and fast food would be good for young and retirement village people”.

Retirement village residents – included responses such as a

- “Double Bay solution – turn the Highway shops around”;
- “look at repairs to footpaths and a new seat near Thai restaurant”;
- “Banks have reduced from 5 to 3 now”;
- “Ku-ring-gai art society should look at something like Mosman Gallery here”;
- “Senior Citizens Centre should include a *men’s shed* – like Lane Cove”.

Resident groups - suggested

- better access to Coles,
- Rohini Street traffic problems,
- “going to Franklins is easy”,
- “geographically dispersed”
- “MainStreet plans show rail bridge underpass options”,
- problems with access across the Highway, and
- colour scheme needed for town centre plants,
- “centre is divided by highway & railway”,
- “redesign Kissing Point Road to work with Ray Street”,
- “Supermarket car parks are sloping and unfriendly for people with children”.

Business-owners –

- “need for more parking like Gordon”;
- “we are divided into three parts”;
- “We are not an attractive village like Wahroonga for business”,
- “limited shopping range – Coles is a magnet”,
- “north Turrumurra people shop at St Ives, central Turrumurra people shop locally and south Turrumurra people shop at south Turrumurra”;
- “Village style – include a Town Square”;
- “Needs a facelift”;
- “Turrumurra needs a strategy – not bandaid solutions”;
- “Don’t ruin it with redevelopment – try to keep character”.

The full notes from each of the initial consultations are in Appendix C – H.

3.0 VISION WORKSHOP & SURVEY

A workshop was convened in central Turrumurra on Thursday 5 May 2005. It included 50 Turrumurra & Warrawee householders who had volunteered their availability to attend consultations when they completed the above resident survey. These householders were invited as a sample to range across age, time lived in the locality and gender, so as to provide a broad array of contributions to the workshop. (Collectively, those attending had some 1000 years of experience of life in Turrumurra!) The workshop commenced with each person giving a brief perspective on an important point about Turrumurra town centre, discussing features of a vision, then working in small groups with a member of Council's planning staff to document key elements of a Vision for Turrumurra. A summary of the outcomes and evaluation of the outcomes is in Appendix I.

Each of the themes identified in the Vision workshop were used to build a sentence or phrase to describe the desired outcome. A survey of their opinion about the distilled results from the above workshop was then emailed to the 50 above participants, plus another 150 householders who had provided their email address for such purpose. Responses were sought within 7 days and some 75 out of a possible 200 were received.

3.1 Vision outcomes

The Vision survey responses from 75 Turrumurra/Warrawee householders gave very strong support (over 60 out of a possible 75) to each of the vision elements proposed:

- ***Village focus***

Turrumurra centre will have a strong village atmosphere with a focus on people rather than cars. A new centrally located village square, surrounded by cafes and shops, will provide a meeting place for the community.

- ***Shopping mix***

The centre will offer a mix of uses including shop-top housing, offices, open space, shops, cafes and restaurants to encourage viability and night time vitality. The centre will also offer a comprehensive range of community services including a library and youth facilities, plus health services and facilities for aged persons, children and youth.

- ***Redevelopment themes***

Turrumurra centre will redevelop with shops and housing predominantly facing new pedestrian spaces on the northern side of the centre, while minimising exposure to the highway. Heritage items and significant buildings will be protected and re-used. New development will be setback along the Pacific Highway frontage to allow for the widening of the road.

- ***Town centre access***

Pedestrian and cycle routes in the centre will provide strong connections between the main shopping areas, to minimise the impediments of the highway and railway. The bus interchange and Turrumurra Station will be upgraded to operate efficiently, be user-friendly and accessible to all.

- ***Traffic & parking***

The local road network will have improved traffic flows and reduced delays, and where possible Council's car parks will be relocated underground to provide more public space and greater pedestrian amenity within the town centre.

3.2 Surveys and consultations evaluation

Evaluations of the surveys and consultations have been kept informal in order to allow planning issues to take priority. The high level of stakeholder participation in the process indicates a keen interest in its inclusive, open methods. No notable level of criticism has been apparent, with many people noting positively about being kept informed and involved in a very complex, but equally important, planning process. Many said it was a once in a lifetime opportunity to get it right for Turrumurra. Others said that without planning, Turrumurra would continue to die, with empty shops and uninviting spaces.

Chronology of Surveys & Consultations

Turrumurra Chamber of Commerce - Executive
December 2004/ January 2005
Turrumurra Household Survey
1 February 2005
Rohini Retirement Village
18 February 2005
Northaven & St Margaret's Retirement Villages
18 February 2005
Turrumurra Chamber of Commerce
7 & 14 March 2005
Pymble Ladies' College – survey
10 March 2005
North Turrumurra Action Group
13 March 2005
Knox College Student Representative Council
7 April 2005
Kissing Point Sports Club
27 April 2005

Residents' Vision Workshop
5 May 2005
Kissing Point Progress Association
31 May 2005
Turrumurra Business Consultation
6 June 2005
Turrumurra Vision Survey
24 June 2005
Mail out of The Turrumurra News 8000 - postcode 2074
August 2005
Turrumurra Web-site Options Display and on-line Survey
August/ September 2005
Turrumurra Library Options Display and Survey
August/ September 2005
Turrumurra Commercial Owners' Options Workshop
10 August 2005
Turrumurra Residents & Business Options Workshop
10 August 2005
Coles Turrumurra - Options Display & Survey
20 August 2005
Franklins Turrumurra - Options Display & Survey
20 August 2005
Cameron Pk Turrumurra - Options Display & Survey
24 August 2005
Meal on Wheels Centre Turrumurra - Options Display & Survey
28 August 2005
Turrumurra Residents Options Workshop
15 September 2005
Turrumurra Uniting Church Council consultation
17 November 2005
Turrumurra Chamber of Commerce Options Presentation
21 November 2005

4.0 PLANNING PRINCIPLES

The planning principles for Turrumurra have been developed from information gained from a series of workshops involving staff, Councillors and consultants. Information gained from preliminary consultation has also assisted with the development of planning principles.

4.1 COUNCILLOR ISSUES CONFERENCE – SUMMARY OF OUTCOMES

A Councillor Issues Conference identified the following set of key issues to be considered.

Natural Environment – Landscape Character

- The landscape character of the centre is characterised by greenness and a large number of trees. This is an important community value.
- Railway gardens should be open to the public. Also consider the importance of the views to the garden from the station.
- Storm water flowing off the Franklins site is largely untreated. It is common to see washing-off of vehicles and the water goes straight into the adjoining creek and reserve
- Landscape – trees and landscape works in Rohini Street around the pedestrian crossing are relatively new and liked by the community and should be kept
- The Pot Shop on the corner of the Pacific Highway and Rohini Street is highly visible
- How to reinforce and strengthen bio-linkages? Utilise council policies regarding tree replenishment. Also utilise conditions of consent
- Most trees on the east side of Turrumurra are within the public domain (including streets) and public spaces. This is very different to St Ives.
- Turrumurra Village Park on the highway is a waste of space and would consider relocating it.

Circulation and Traffic

- Turrumurra has lots of laneways. These are part of the character of the town centre. However many are very narrow and poorly lit.
- Consider option of using Hill View to locate a cycleway from the town centre to Kissing Point Road.
- Do not agree with splitting bus stop into two – keep it on one side. Bus companies agree.
- Buses need to be improved. Currently the service is so slow along Rohini Street that people get off the train and walk across the highway to catch bus as it is quicker than catching it from Rohini Street.
- Turrumurra Avenue will have a lot of 5 storey apartment development which will lead to a lot of traffic on Turrumurra Avenue.
- Consider option of closing Rohini Street to make a plaza. This area is aesthetically the best in the Local Government Area.
- Do not want Rohini Street redeveloped.
- Investigate walkway under railway to link cycleway.

Public Spaces

- What do we do with the public toilets?
- Consultation with residents has shown a need for a town square that is attractive and useable. Turrumurra needs a heart.
- Prefer one decent town square on the east side rather than a number spread around if there is a need to make choice.
- Cameron Park has a poor street address, safety issues, is not well used as it largely fenced off. It has very good mature trees
- Turrumurra Village Park on the highway is problematic and not well used
- Look at all the open space in terms of location and configuration – keep an open mind.

Residential and Retail Development

- There is a lack of interest in shopping in Turrumurra. The planning studies for the 6 town centres is an opportunity to balance and improve all centres so that local residents shop in their local centre and reduce the need to travel.
- Have we included extra demand created in Wahrenonga?
- Have we looked at all other local centres including the smaller neighbourhood centres?

Community Facilities

- The HACC facility is relatively new and demolishing it would be seen as a waste by the community and would not be supported.
- Library does need to be bigger.
- Library could be moved somewhere else. If the library was located on the Franklins site it would be a better neighbour to the Turrumurra Forest. Alternatively over near the HACC facility.
- Coles and library together works well.
- Additional 1700sqm of facilities required?

OPPORTUNITIES

What are Important Characteristics of Turrumurra Centre

- The landscape character of the centre is characterised by greenness and a large number of trees. This is an important community value.
- Turrumurra has lots of laneways. These are part of the character of the town centre.
- Rohini Street is aesthetically the best in the Local Government Area.
- The HACC facility is relatively new and demolishing it would be seen as a waste by the community and would not be supported.

Retail/commercial – Consolidate or Spread

- Investigate what slack is currently available in the commercial zones. Have all areas zoned for retail been taken up?
- Explore option of removing the retail area (zone 3) on the southern side of the highway
- Provide option which retains Zone 3 as a retail precinct which serves south Turrumurra
- Investigate opportunity for large commercial uses related to education.

Transport and Links

- Investigate traffic travelling from St Ives. Avoid through traffic in the town centre and minimise rat runs.
- Minimise through traffic moving north and south.

Residential Development

- The west side has good views to the south
- The east side of Turrumurra is flatter and less visible so is more suited to taller buildings than the west side which is on a ridge and is highly visible from the south
- Have we any figures for future population of Turrumurra based on current zonings?
- Opportunity for RTA corridor adjoining Hill View for park land and community facilities.

Future Character

- Turning shops back away from the highway facing Gilroy Lane on the east side of the railway.
- Widening of the highway so that there is no tidal flow.
- Retain small shop character
- Improve linkages to the north and south – consider a road bridge over rail from Rohini Street to Ray Street.
- The least attractive parts of Turrumurra are the areas facing the highway. It is preferable to let these areas change and be improved and protect some of the attractive areas such as Rohini Street.

- Fine grain retail – not a Target not larger shops on street frontages

Vision

- The plan should reflect a BALANCE between other centres. The planning studies for the 6 town centres is an opportunity to balance and improve all centres so that local residents shop in their local centre and reduce the need to travel. Increases in retail space in Turrumurra should be to service the local residents' needs only.

4.2 SUMMARY OF ISSUES - STAFF AND CONSULTANTS

A number of specialist consultants were engaged to evaluate traffic and transport issues, retail and economic factors. The following is a summary of the key issues, opportunities and constraints identified by the consultants and staff in their issues papers.

1. Community perspective

The findings of the Turrumurra resident's survey indicate the following are key issues:

- Split centre is a clear bad point with 600 people voting
- Parking second bad point but was also later a good point
- In terms of shopping Turrumurra has a much closer link to St Ives and Hornsby for bigger items. Most people shop in the town centre for day to day needs
- A large number of people answered don't know or not stated for the question about events attended in Turrumurra. This reflects a lack of a sense community and a lack of a place or event to bring people together.

Summary:

- Turrumurra is obviously different to St Ives
- Appears to be a more passive demographic
- Large % of people did not know or did not state how to improve the town centre.

- A large % of people keen to see change. A certain number said to start again ie. rebuild
- Main issues:
 - o Difficulties of a divided town centre
 - o Traffic and parking
 - o The need to turn the shops around

2. Urban Design Analysis

The following are the key urban design issues:

- historical development from farms and forestry to residential subdivision
- pedestrian and cycle access in the centre is generally poor with major barriers of rail and highway
- Turrumurra located on the ridge west side very steep and
- East side flat which effects the development capability of the areas and the impacts on drainage
- Turrumurra has good local views to the north and panoramic views to the south
- zoning
- lack of open space in or near the centre
- built form is generally poor in the commercial areas with a few good quality buildings and heritage items

3. Landscape analysis

The key landscape characteristics:

- Different landscape character on the eastern and western side of the highway
- East side earlier development and reflects the garden suburb character with few remnant trees
- West side very steep and retains tall and heavy canopy cover of remnant trees with gardens underneath
- Recommends enhancing different characters
- Gardens on the east side conflict with idea of bio-linkages
- General lack of street trees within the commercial area

4. Traffic analysis

The key traffic issues are:

- Generally good levels of flow/level of service on the Pacific Highway for through traffic.
- Updated modelling shows long delays and poor levels of service at the Ray Street/Pacific Highway intersection and Rohini Street/Pacific Highway intersection.
- Very limited off-street commuter parking. A total of 80 unrestricted spaces of which 35 are City Rail. Lack of commuter parking means that cars are parked on local streets with 100% occupancy by 8am.
- Plenty of off street parking for shoppers with peak occupancy about 70%.
- No on-road bicycle lanes and poor bicycle parking.

Summary

- There is currently capacity within the road network
- Adequate parking for shoppers
- Lack of off-street unrestricted commuter parking. However funding difficult

5. Retail/economic analysis

The retail context for Turramurra centre is based on the retail hierarchy for Ku-ring-gai LGA:

- Regional centres - 80,000sqm retail including one department store, two discount department store and 3 supermarkets, cinemas and 200+ speciality retail. Also includes banks and Medicare etc. These area Hornsby and Chatswood
- Sub-regional centre – 40,000-80,000sqm retail. Ku-ring-gai does not have one of these
- District 20-40,000sqm retail eg St Ives
- Neighbourhood
- Local centres

Summary

- 5sqm of retail space per household typical however in Turramurra this is 6.2sqm due to higher income levels
- Ku-ring-gai LGA currently has no DDS at all
- Turramurra and Lindfield similar scale with 10-15,000sqm retail equivalent to neighbourhood centre
- \$100m approx expenditure in Turramurra. Food and grocery retailers (supermarkets and specialty food retailers) are averaging \$8,000/sqm
- Centre has about 4-5 vacant shops which is OK (20% vacancy implies trouble)
- Franklins is in a very good location capturing shoppers from south Turramurra
- Approx. 3,200sqm extra retail required with LEP 194 + 1,000sqm non-retail + extra for Residential Development Strategy (RDS) Stage 2 development

6. Open space analysis

Key open space considerations are:

- A lot of open space within close proximity.
- Potential for improving pedestrian and cycle linkages to Sheldon Forest and Karuah Park.
- Need community gardens where older people can be involved ideally linked to aged care – Queens Park is a good option however topography is a major barrier for aged and others.
- Youth play facilities are lacking in the area.

7. Community services and facilities

Summary of the existing community facilities and required improvements:

- Existing library is 700sqm consultants recommending 1500sqm is required.
- Current library site is good as it is close to shops, parking, transport and it has a street frontage.
- Library could relocate but requires same criteria

- Hornsby and Ku-ring-gai support services target older people to help them stay in their home.
- Anticipated additional demand in the future. 727sqm is the existing area 2200sqm required to meet current and future demand
- Home and Community Care includes Easy Care Gardening, Community Transport, Senior's Centre, Meals on Wheels, Volunteers Service and a dining room off Gilroy Lane.
- A lot of work is car based and parking and garaging (for buses) could be triple the size.
- Most of the HACC facilities are converted houses + a small purpose built hall (built at a cost of \$550,000). If in the past there was more money Council would have knocked everything down and started again.
- Turrumurra is the ideal location for the HACC facility as it is close to Hornsby. Co-location of facilities is important and provides many benefits to services and clients.
- Turrumurra is a major bus interchange as a result there is a lot of kids hanging around in the afternoon. There is a need for youth activities centre with internet and video games.
- Life Start at Cameron Park ideally located next to the park however demand is growing and they have outgrown their current facility.
- In the current S94 plan Council is currently levying developers for \$3.5m to build a new long day care centre somewhere in the LGA.
- Ku-ring-gai's ageing population will result in increasing demand for home support services to assist older residents to stay in their homes longer. A further increase in population will place further strain on existing services.
- There is a desperate need for additional administrative office space and storage space for services catering for the needs of frail older people and people with disabilities.
- Hill View is owned by the Dept of Health offers a range of specialist services. They are not necessarily committed to staying in Hill View due to maintenance costs and heritage restrictions.

- Council has funding available for youth facility upgrade in St Ives or Gordon
- Council funding also available for senior's facility upgrade.
- Council has discussed the potential for combined State government and Council health and community related facilities in one new building in Turrumurra (location not determined).
- Consider \$\$ for public art – in new Section 94 Plan.

4.3 DESIGN PRINCIPLES

The design principles for the centre are set out below. These principles have been developed in response to a range of parameters which have been discussed above in this report. In summary these are:

- The community aspirations identified through stakeholder consultation;
- The community vision
- Councillors issues and opportunities
- issues, constraints and opportunities identified by Council staff and consultants

Turramurra Centre Planning Principles

1. Create a pedestrian oriented centre calm traffic reduce area of surface car parking
2. Planning will minimize the inconvenience of 3 separate retail centres
3. Increase retail by 4000sqm to cater for existing and new residents under current LEP 194 zoning
4. Provide additional retail to cater for RDS stage 2 residents at an appropriate rate per person
5. Improve traffic circulation in the area
6. Create new opportunities for open space in and around the town centre
7. Provide two new public spaces on the eastern and western sides of the town centre either side of the railway
8. New public spaces should be largely green with trees to respond to garden character of the area
9. Provide a strong pedestrian link between the two public spaces via improved and widened pedestrian bridge over railway
10. Provide other incidental places within the centre for people to sit and eat, relax and rest.
11. Provide improved community facilities in a centralised location
12. Retain and extend the tall tree character on the western side of the town centre
13. Retain items of heritage significance and other significant buildings
14. Buildings heights adjoining public spaces to be lower generally stepping up in height adjoining the highway and railway to minimise overshadowing and overlooking impacts
15. Retain and upgrade existing bus interchange.
16. Provide building setbacks along the highway frontage to allow for widening of the highway and for wider pedestrian footpaths.
17. Improve Rohini Street amenity and safety by reducing traffic flows and expanding and upgrading the public domain.
18. Retain Cameron Park.
19. Investigate opportunities for reconfiguring roadways to improve pedestrian access and traffic flows including a new through link between Eastern Road and Turramurra Road to take through traffic out of the town centre.
20. Investigate realignment of William Street with Kissing Point Road to improve linkages across the highway

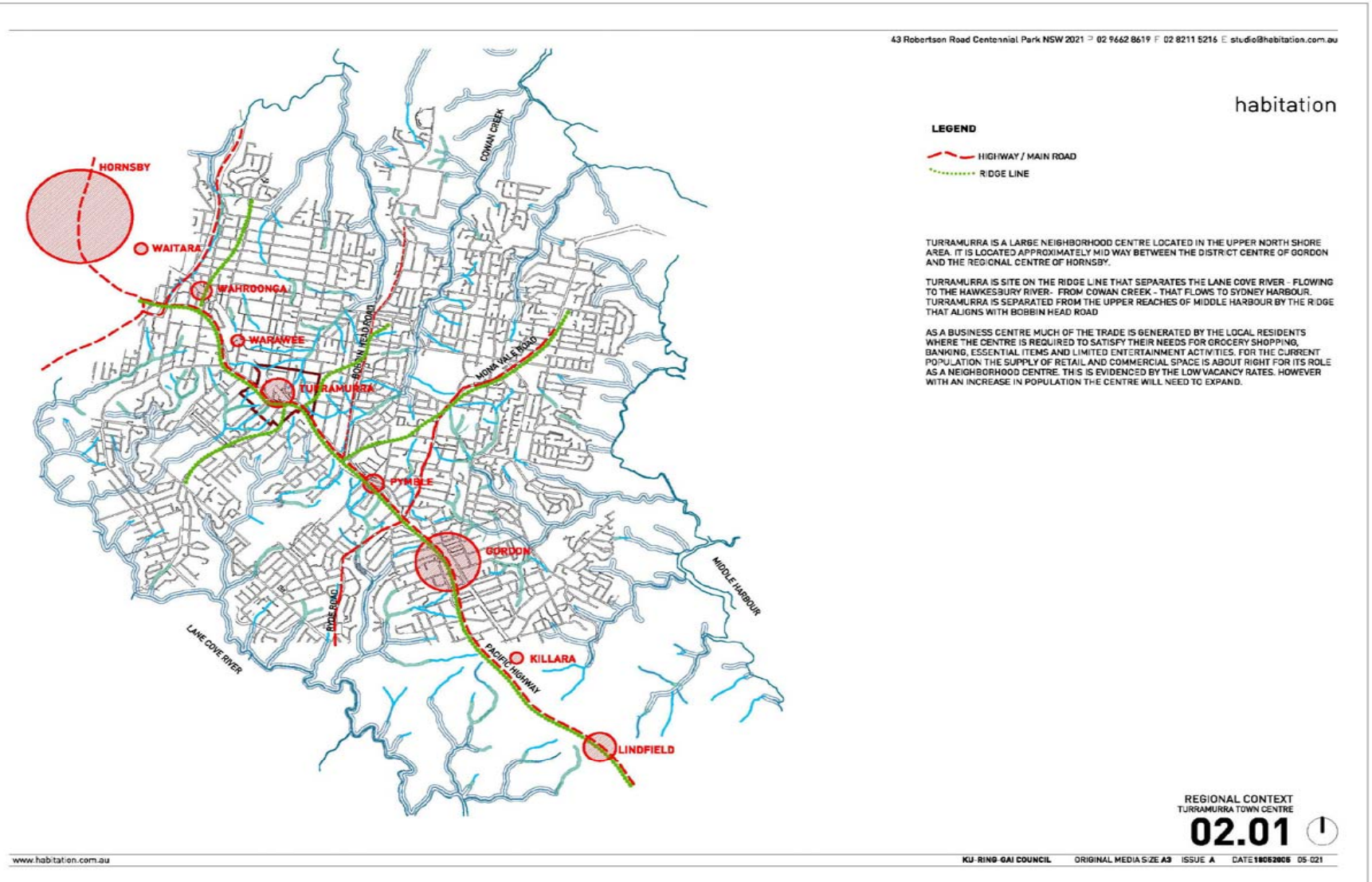
5.0 ANALYSIS

Site analysis is this first component of the urban design process. The purpose of analysis is to understand the constraints that may inhibit development, as well as to highlight the positive aspects of the site that may be incorporated into the concept plans. The analysis also sets out clearly the assumptions on which the design of the concept plans will be based.

In analysing the existing site conditions particular emphasis was given to key issues such as the physical context, urban structure, public domain and built form topography and street layout, entry points, traffic, transport and parking, building types and siting characteristics, and historical context. Growth potential and demand, public open space, macro (national, state, regional) issues, micro (local) issues, community structure and expectations, topographic characteristics, environmental goals, land use and development expectations and regulatory systems are all taken into account.

The following drawings are presented for the study area:

- regional context
- zoning plan
- regional context
- topography and outlook
- water courses
- historical development
- figure ground plan - current
- current items of heritage significance
- land ownership
- public space
- vegetation systems
- significant vegetation
- street tree analysis
- access and circulation
- pedestrian access



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STUDY AREA
TURRAMURRA TOWN CENTRE
01.01

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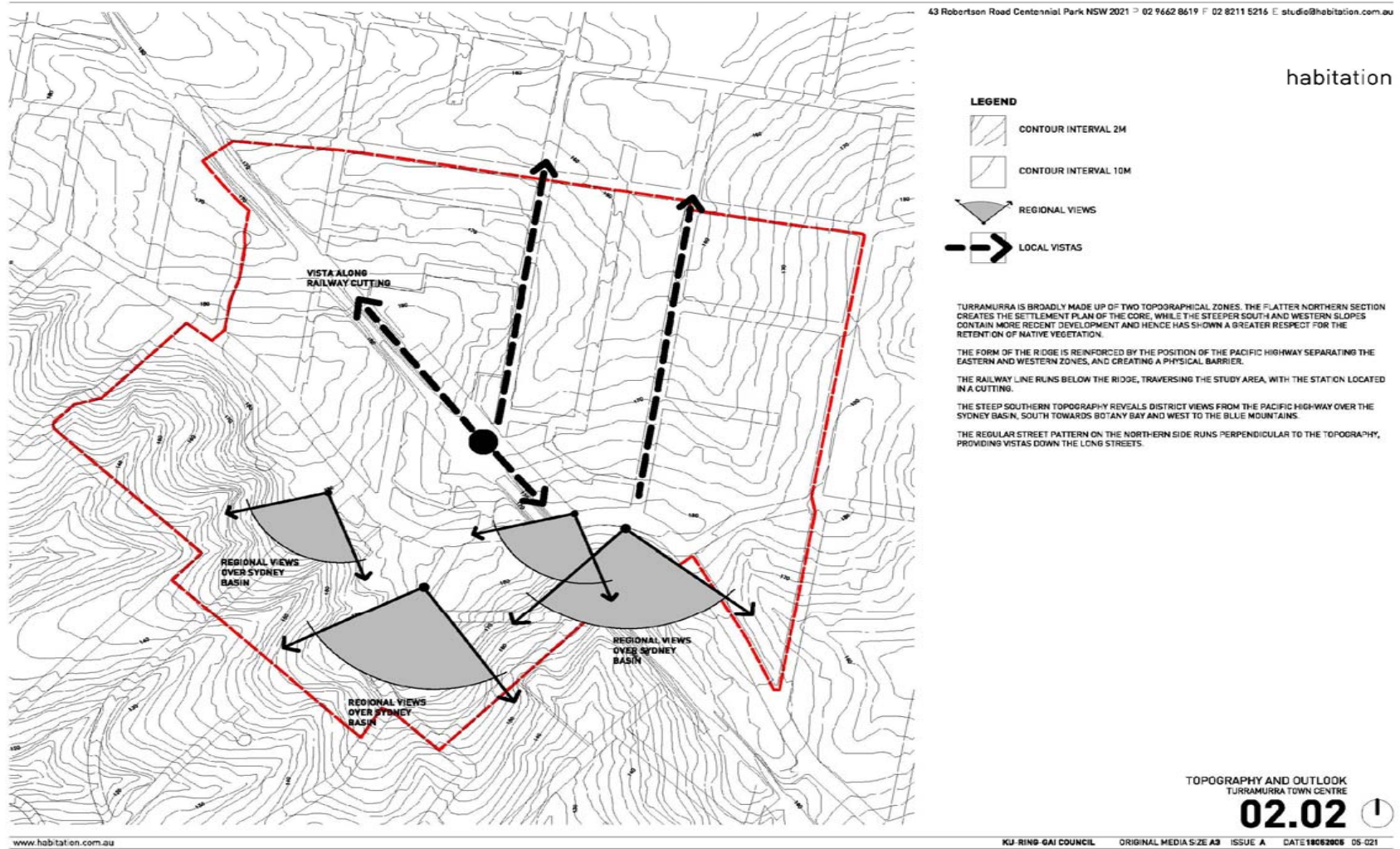
LEGEND

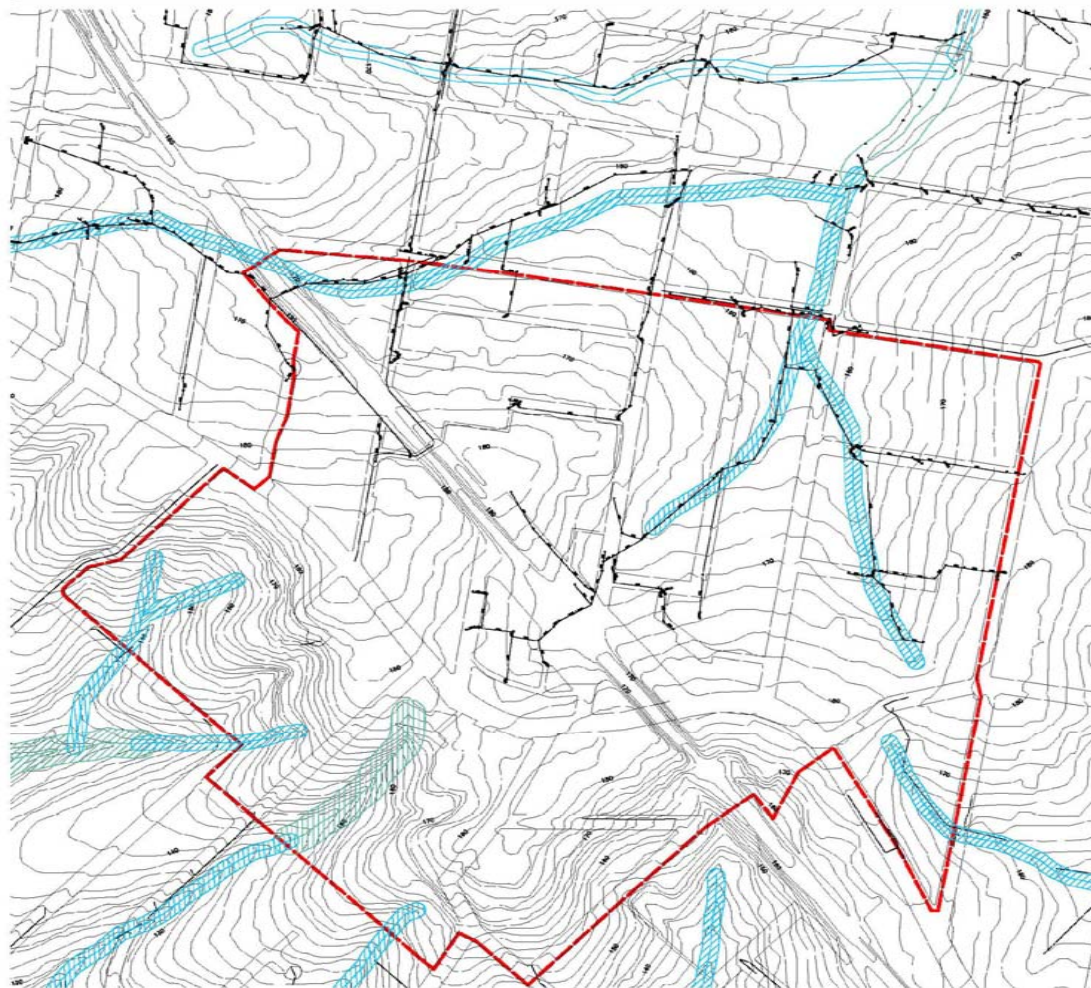
- Business 3 (a) (A2)
- Business 3 (a) (B2)
- Recreational Existing (a)
- Residential 2(c)
- Residential 2(c)1
- Residential 2(c)2
- Residential 2(c)3
- Residential 2(c)4
- Residential 2(c)5
- Special Uses (a) (Schools etc)

THE TURRAMURRA CENTRE AREA CONTAINS A VARIETY OF ZONES. THE DIFFERENT ZONES HAVE BEEN CREATED OVER A LONG PERIOD OF TIME. AS A RESULT THE ZONING IS A RESULT OF MANY INCOMPLETE OR CHANGED STRATEGIES. THIS CREATES TENSION AT THE BOUNDARIES OF THE ZONE RESULTING IN POOR PLANNING OUTCOMES.

THE TURRAMURRA TOWN CENTRE STUDY HAS A MANDATE TO LOOK AT AREAS ZONED 3(A), 3(B), 2(D), 2(D3), AND 2(E).

QUITE A LARGE PROPORTION OF THE STUDY AREA CONTAINS 2(C)1 AND 2(C)2 ZONED SITES. AS A RESULT POTENTIAL FOR IMPROVEMENT MAY BE CONSTRAINED TO THE CORE AREA IMMEDIATELY ADJACENT THE HIGHWAY.





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THE TURRAMURRA TOWN CENTRE IS LOCATED ON A RIDGE THAT SEPARATES THE LANE COVE RIVER FROM COWAN CREEK.

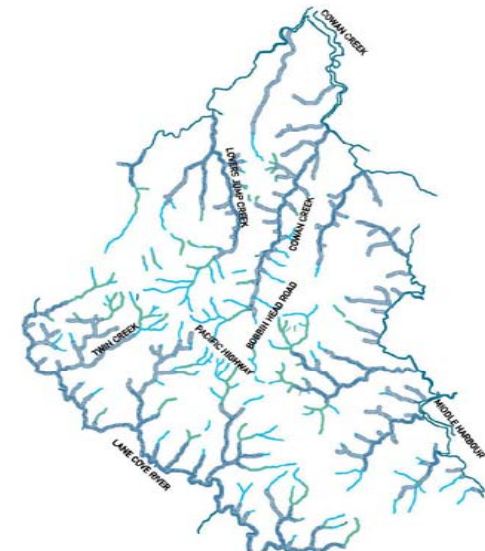
BOBBIN HEAD ROAD MARKS THE EAST WEST RIDGE THAT SEPARATES MIDDLE HARBOUR FROM THE COWAN CREEK CATCHMENTS

GENERALLY LAND TO THE NORTH OF THE HIGHWAY FALLS TOWARDS COWAN CREEK, AND LAND TO THE SOUTH FALLS TOWARDS THE LANE COVE RIVER.

OFTEN THE WATERCOURSES CREATE SHARP DEPRESSIONS WITHIN THE LANDSCAPE AND AS A RESULT IN ALL BUT THE MOST POPULATED AREAS THEY HAVE BEEN RETAINED AS OPEN CHANNELS RATHER THAN PIPED.

THE RESULTING TOPOGRAPHY HAS ALSO INFLUENCE THE SUBDIVISION PATTERNS, WHERE THE BLOCKS TEND TO RUN PARALLEL TO THE WATER COURSES.

WITHIN THE TURRAMURRA TOWN CENTRE IT IS COMMON FOR THE WATERCOURSES TO RUN MID-BLOCK ON THE BACK BOUNDARIES OF THE PROPERTIES. AS A RESULT SUBSTANTIAL (OFTEN INDIGENOUS) VEGETATION HAS BEEN RETAINED IN THESE AREAS.

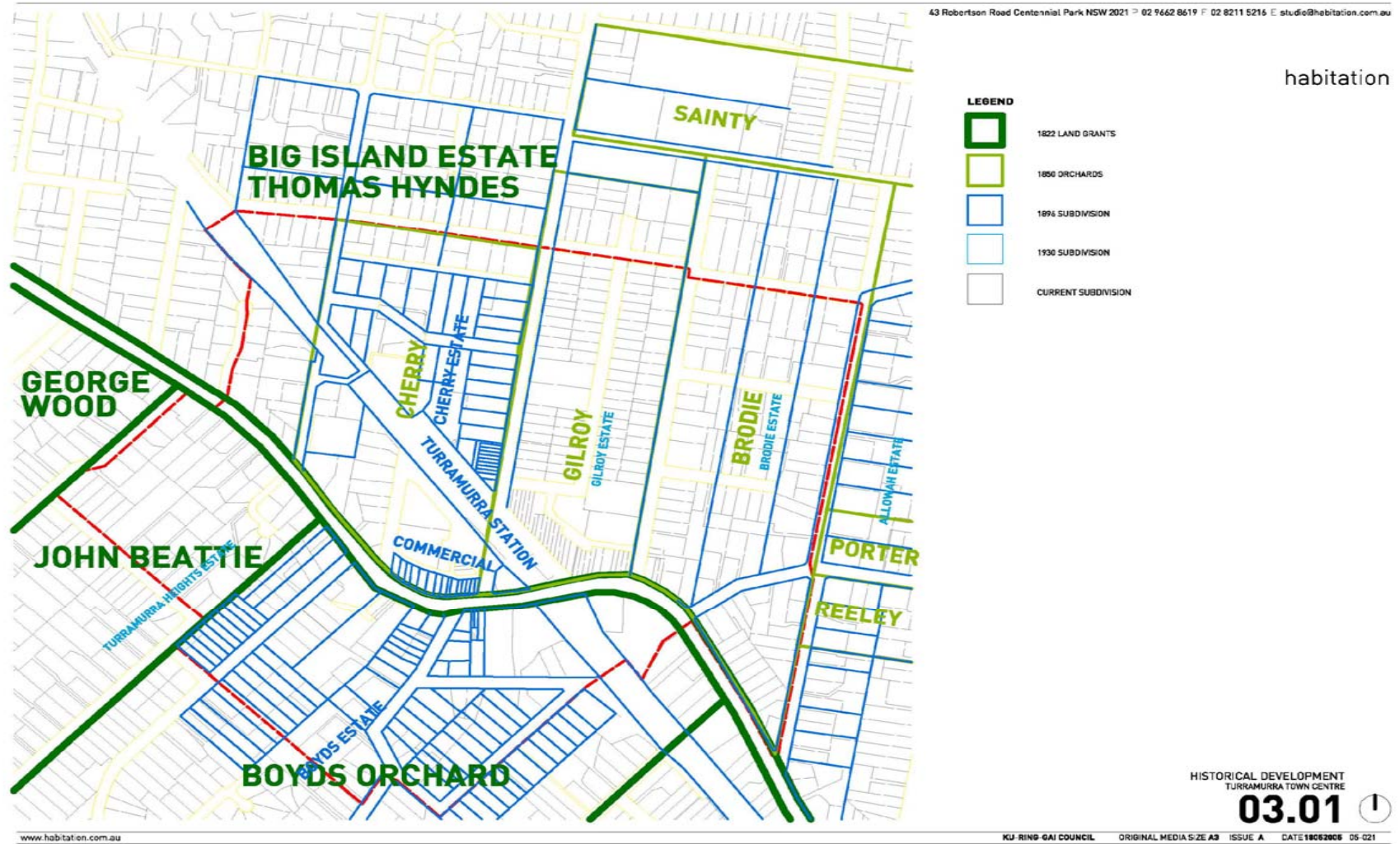


WATER COURSES
TURRAMURRA TOWN CENTRE

02.03



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FIGURE GROUND PLAN - CURRENT
TURRAMURRA TOWN CENTRE

03.02





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LEGEND

-  Heritage Items under KPSO
-  POTENTIAL HERITAGE ITEMS UNDER INVESTIGATION
-  POTENTIAL HERITAGE ITEMS UNDER FUTURE INVESTIGATION
-  Culturally Significant Landscape Items
-  DRAFT CONSERVATION AREA (Draft Conservation Area LEP21)
-  DRAFT HERITAGE ITEM (Awaiting Gazetteal)

KU-RING-GAI IS TYPIFIED BY ITS COLLECTIONS OF 20TH CENTURY DOMESTIC ARCHITECTURE, AND TURRAMURRA IS NO EXCEPTION TO THIS - SIGNIFICANT DOMESTIC ARCHITECTURE PRECINCTS EXIST ON KU-RING-GAI AVE AND BRENTWOOD AVE. THUS FAR, KU-RING-GAI AVE AREA BEEN NOMINATED BY THE NATIONAL TRUST AND LISTED AS A DRAFT CONSERVATION AREA, AND BRENTWOOD AVE WOULD BENEFIT FROM BEING VIEWED AS A PRECINCT.

SUBDIVISION TO THE WESTERN SIDE OF THE PACIFIC HIGHWAY DURING THE 1960S RESULTED IN SUBSTANTIAL HARDWOOD STANDS BEING MAINTAINED, A SIGNIFICANT EXAMPLE OF WHICH IS PRESERVED WITHIN THE BLOCK BOUNDED BY DUFF ST, PACIFIC HIGHWAY, AND KISSING POINT ROAD.

CURRENT ITEMS OF HERITAGE SIGNIFICANCE
TURRAMURRA TOWN CENTRE

03.03



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LEGEND

-  Multiple adjacent block Ownership
-  State Government Ownership
-  Local Government Ownership
-  Church Ownership

LAND WITHIN THE TURRAMURRA TOWN CENTRE STUDY AREA IS SUBSTANTIALLY UNDER PRIVATE OWNERSHIP WITH MINIMAL MULTIPLE ADJACENT LAND OWNERS.
THE MOST SIGNIFICANT LAND OWNER WITHIN THE CORE CENTRE IS KU-RING-GAI COUNCIL

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LAND OWNERSHIP
TURRAMURRA TOWN CENTRE

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LEGEND

Public Open Space

Open Space Links

Links to strengthen

THE TURRAMURRA AREA IS NOT PARTICULARLY WELL SERVED BY PUBLIC OPEN SPACES.

TWO SMALL POCKET PARKS AT THE CENTRE OF THE CORE ARE DIFFICULT TO ACCESS AND GENERALLY NOT USEFUL IN PERFORMING A ROLE IN EITHER PASSIVE OR ACTIVE RECREATION.

PART OF THE REASON FOR THE SMALL AMOUNT OF PUBLIC OPEN SPACE WAS THAT THERE WAS LESS NEED FOR THEM - THE GROUNDS OF PRIVATE GARDENS WERE LARGE ENOUGH TO SERVE GENERAL RECREATION, AND MAY INCLUDE TENNIS COURTS AND POOLS. ANOTHER SIGNIFICANT FACTOR MAY HAVE BEEN THAT MUCH OF THE SUBDIVISION THAT OCCURRED WITHIN TURRAMURRA WAS AT THE END OF THE GARDEN CITY MOVEMENT, WHEN MUNICIPAL COUNCILS WERE BEGINNING TO FOLLOW 'MODERN' TRENDS.

THE PUBLIC URBAN PARKS ARE GENERALLY OF LOW AESTHETIC QUALITY.

THE SOUTH SIDE OF THE HIGHWAY WAS DEVELOPED MUCH LATER AS A RESULT MORE OF THE INDIGENOUS BLUE GUM HIGH FOREST HAS BEEN RETAINED THESE HAVE BEEN RECENTLY SET ASIDE AS RESERVES

TURRAMURRA LOOKOUT WAS ORIGINALLY PURCHASED IN 1924, TO OFFER A GRAND VIEW TOWARDS THE SEA. THAT VIEW HAS NOW BEEN OBSCURED BY TREES.

DOMINANT FORMALLY PLANTED AVENUES ARE NOT AS COMMON HERE AS THEY ARE IN PYMBLE OR WAHROONGA. THE PUBLIC DOMAIN GENERALLY CONSISTS OF STRIP CONCRETE FOOTPATH WITH TREES PLANTED IN THE GRASS VERGE. IN THE SHOPPING DISTRICT, PRESSED BRICKS SURROUND STANDARD CONCRETE PAVEMENTS CONSISTENT WITH COUNCILS CURRENT POLICY.



REGIONAL PUBLIC SPACE

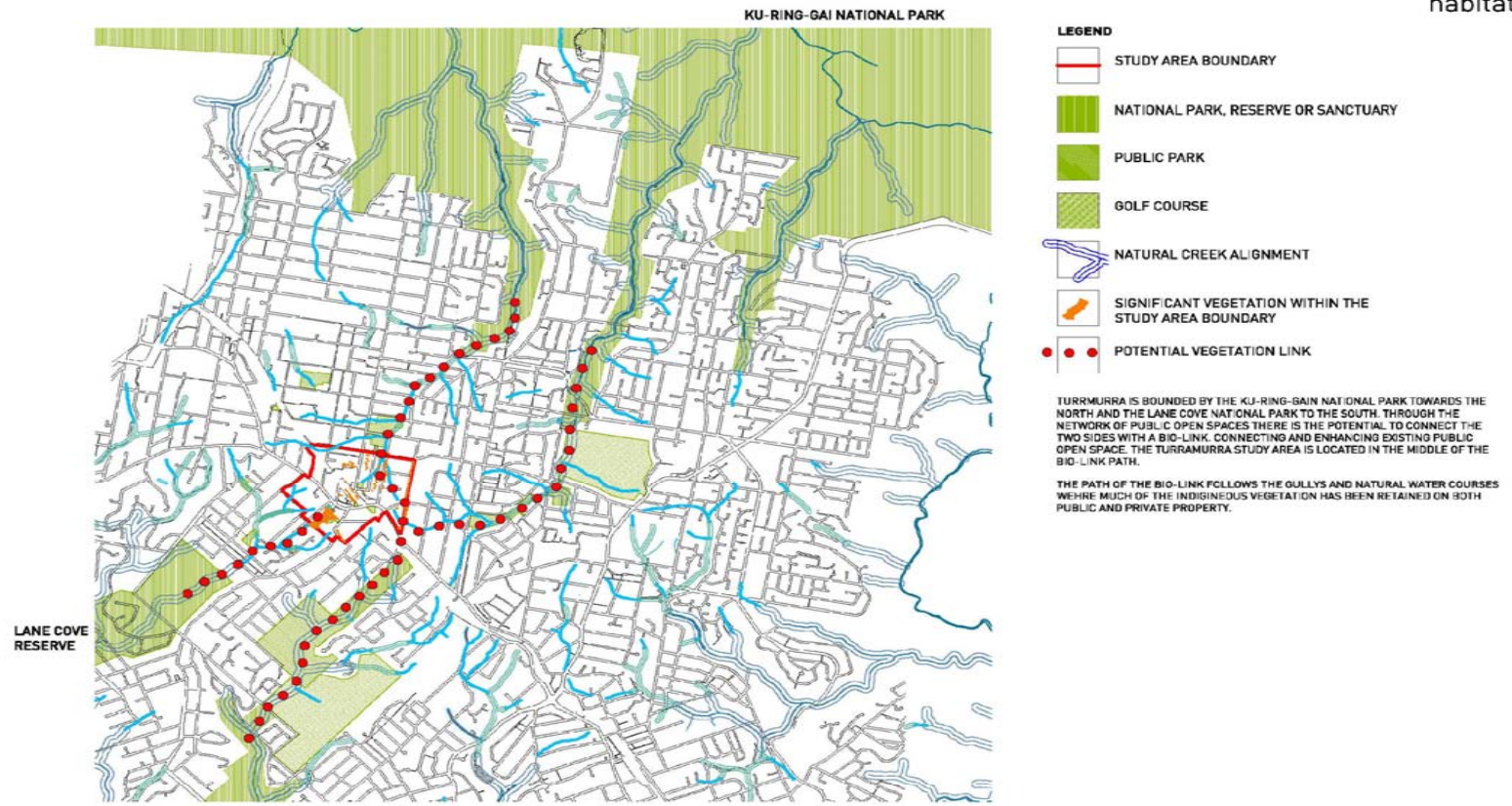
PUBLIC SPACE
TURRAMURRA TOWN CENTRE

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VEGETATION SYSTEMS REGIONAL
TURRMURRA TOWN CENTRE

05.01



LEGEND

- Study Area Boundary
- Vegetation of High Heritage Significance (Defined in: "Ku-ring-gai Heritage and Neighbourhood Character Study" by Godden Mackay Logan, 2001)
- Significant Tree Blue Gum High Forest spp.
- Significant Tree Exotic Species
 - *Lophostemon confertus*
 - *Cinnamomum camphora*
 - *Quercus* spp.
- Significant Tree Exotic Species
 - *Arucaria cunninghamiana*
 - *Arucaria heterophylla*
- Significant Tree Pine Species

- Vegetation of Heritage or Ecological Value
 - Significant Tree Blue Gum High Forest spp.
 - Significant Tree Exotic Species
 - Significant Tree Exotic Species
 - Significant Tree Pine Species
- Vegetation Canopy

LANDSCAPE CHARACTER NOTES

SOUTH OF THE PACIFIC HIGHWAY

- A MIXTURE OF UNDULATING AND STEEP TOPOGRAPHY.
- STREETS CONSIST OF 3 LANES, HARD EDGE KERBS AND GRASSED VERGES.
- WELL ESTABLISHED CANOPY TREE PLANTINGS.
- BLUE GUM HIGH FOREST DOMINATE THE SKYLINE. TALL TURPENTINE SPECIMENS ARE SCATTERED AMONGST REMNANT VEGETATION.
- THERE IS A LAYERING OF LANDSCAPE TYPOLOGIES. THE HIGH CANOPY REMNANT VEGETATION OVER ORNAMENTAL GARDEN PLANTINGS.
- LANDSCAPE EXHIBITS A RESPECT FOR NATIVE VEGETATION AND OVERALL BUSHLAND CHARACTER.
- THERE ARE NUMEROUS SIGNIFICANT EUCALYPTS SPOTTED THROUGHOUT THE SUBDIVISION LOTS.
- NATIVE VEGETATION BULKS ARE MORE DOMINANT ON THIS SIDE OF THE HIGHWAY AND LINKAGES WITH THE LANE COVE RESERVE ARE MORE EASILY INTERPRETED.
- PLATEAU RIDGE TO WHICH THE PACIFIC HIGHWAY FOLLOWS IS LINKED TO VARIOUS AREAS WHERE FRAGMENTED VISTAS TO THE STONEY BASIN ARE CAPTURED.
- THE "LOOKOUT PARK" IS THE LARGEST LANDSCAPE FEATURE AREA ALONG THIS SIDE OF THE PACIFIC HIGHWAY.

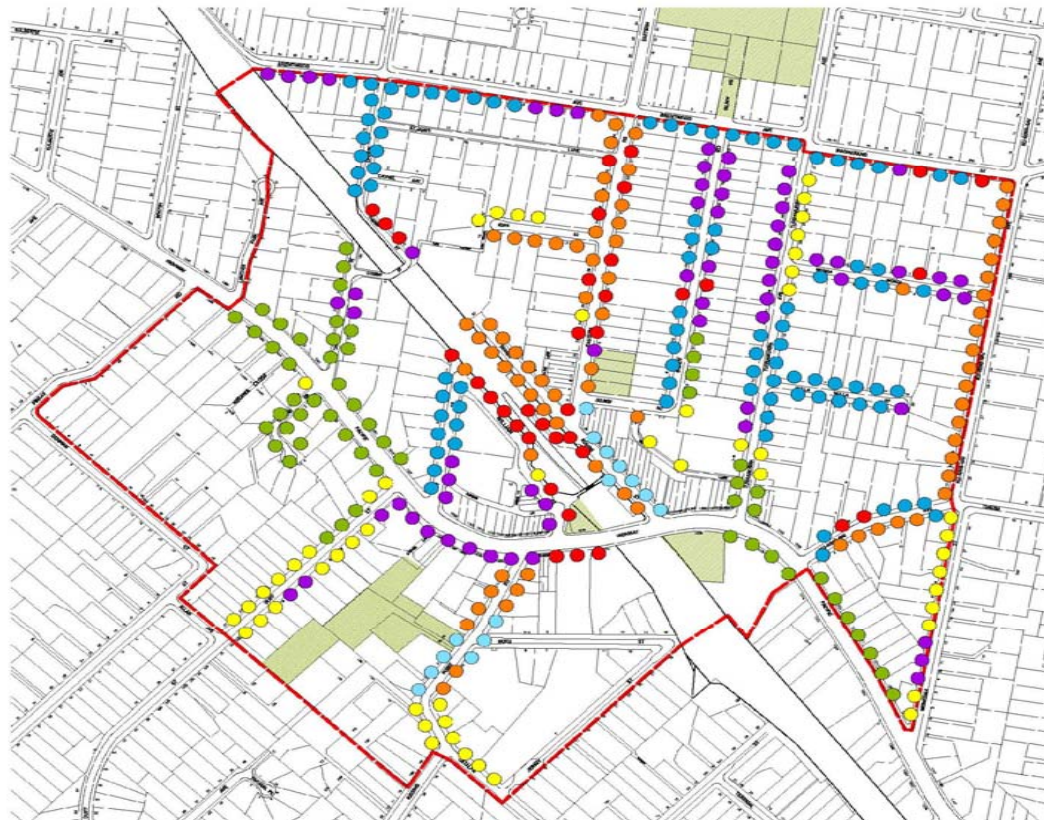
NORTH OF THE PACIFIC HIGHWAY

- TOPOGRAPHY IS GENERALLY MORE LEVEL AND EVEN THAN THE SOUTHERN SIDE OF THE PACIFIC HIGHWAY.
- BUILDING FORMS HAVE LARGE SETBACKS FROM THE STREET. THIS ALLOWS FOR A MAJORITY OF THE HOMES HAVING LARGE ORNAMENTAL GARDENS TO THE FRONT.
- MATURE CULTURALLY SIGNIFICANT EXOTIC TREES DOMINATE THE STREETS.
- THERE IS A GARDENESQUE NEIGHBOURHOOD CHARACTER THAT HAS BEEN CLEARLY INFLUENCED BY THE GARDEN CITY MOVEMENT OF 1920.
- GARDENS AND STREETS ARE DOMINATED BY COLOURFUL PLANTINGS AND DECIDUOUS TREES.
- OLDER RESIDENCES CONTAIN SIGNIFICANT CULTURAL PLANTINGS WITHIN THE PRIVATE GARDENS. SOME OF THESE TREE AND SHRUB PLANTINGS MAKE AN IMPORTANT CONTRIBUTION TO THE OVERALL CHARACTER OF THE PRECINCT.
- NORTHERN SIDE OF THE PLATEAU / RIDGE THAT DEFINES THE PACIFIC HIGHWAY HAS SIGNIFICANT SOLAR EXPOSURE TO THE NORTH.
- TURRAMURRA STATION LANDSCAPE CONTAINS SIGNIFICANT POCKET GARDENS.
- AVENUES ARE DEFINED WITH RHYTHMS OF STREET TREES OF VARYING SHAPES, COLOURS AND SIZES.
- THE ECLECTIC MIX INCLUDES BRUSHBOX, GORDONIA, CAMELLIA, JACARANDA, MAPLES AND OAKS.
- STREETS IN THE NORTHERN PRECINCT ARE OF VARYING WIDTHS WHICH IS A CONTRIBUTING FACTOR TO STREET TREE CHOICES IN THE AREA. EG. WOMERAI ST. IS A WIDE STREET THEREFORE ALLOWING SUCCESSFUL RETENTION OF A BLUE GUM HIGH FOREST POCKET. KU-RING-GAI AVE IS ALSO A WIDE STREET THAT ALLOWS BRUSHBOX TO GROW EFFECTIVELY.
- THE REAR YARDS OF THE AREA CONTAIN A MIXTURE OF EXOTIC AND NATIVE CANOPY TREES. THESE CLUMPS OF VEGETATION IN PRIVATE PROPERTY HELP FORM CANOPY LINKAGES BETWEEN STANDS OF VEGETATION THROUGHOUT THE STUDY AREA. WHERE NATIVE VEGETATION IS DOMINANT BOLD LINKS CAN BE TRACED TO THE VEGETATION ADJOINING TURRAMURRA MEMORIAL PARK AND FURTHER THROUGH REGIONAL LINKAGES TO THE KU-RING-GAI NATIONAL PARK.

SIGNIFICANT VEGETATION
TURRAMURRA TOWN CENTRE

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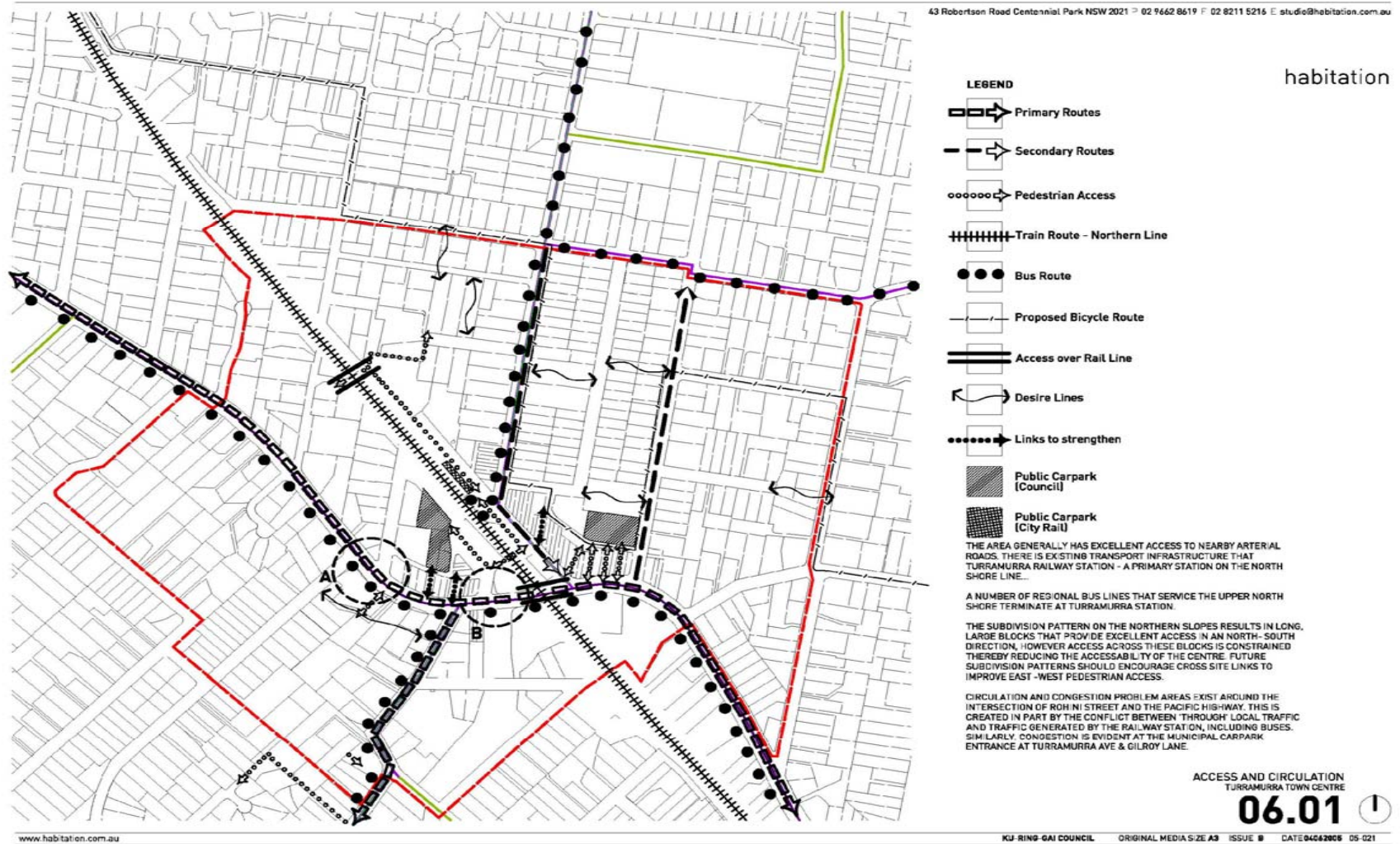


- LEGEND**
- Study Area Boundary**
 - Brush Box**
Lophostemon confertus
 - Camphor laurel**
Cinnamomum camphora
 - Jacaranda**
Jacaranda mimosifolia
 - Crepe Myrtle**
Lagerstroemia indica
 - Blue Gum Forest Species**
Angophora costata
Corymbia gummifera
Eucalyptus haemastoma
Eucalyptus pilularis
Eucalyptus saligna
Eucalyptus scoparia
Syncarpia glomulifera
 - Exotics Species**
Acer palmatum
Camellia spp.
Franklinia axillaris
Gordonia spp.
Lagerstroemia indica
Liquidambar spp.
Nyssa sylvatica
Pistacia chinensis
Platanus x hybrid
Prunus spp.
Quercus spp.
Schinus molle
Sapium sebiferum
Ulmus spp.
 - Other Species**
Banksia serrata
Callistemon spp.
Elaeocarpus reticulatus
Leptospermum spp.
Tristania laurina

STREET TREE ANALYSIS
TURRAMURRA TOWN CENTRE

05.03







6.0 OPPORTUNITIES

The opportunities for the town centre are important considerations that give an indication of the potential or positive aspects to balance the limiting factors, or issues, addressed above.

In analysing opportunities particular emphasis was placed on identifying potential for public benefit including new open space infrastructure improvements, new facilities among others particularly for public benefits and infrastructure improvements. The analyses have also looked at opportunities for new housing as required under the Minister's Direction.

The following diagrams explore the range of opportunities within the centre:

- Study area
- Retail opportunities (3)
- Urban structure
- Landscape - urban spaces
- New residential opportunities (2)
- Community facilities opportunities (3)
- Traffic improvement opportunities (8)





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No. 1
THREE RETAIL CENTRES
ENLARGE EXISTING CENTRES

STRENGTHEN LINK ACROSS
RAILWAY

IMPROVE PEDESTRIAN LINK
ACROSS RAILWAY

FRANKLINS SITE TREATED AS
DETACHED CENTRE

AVOID BRIDGE OVERPASSES OR
TUNNELS

04

RETAIL

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005

No 2:
RETAIL TWO CENTRES
ENLARGE EXISTING CENTRES
STRENGTHEN LINK ACROSS
RAILWAY

INCREASE SPECIALTY STORES

INVESTIGATE SMALL INCREASE IN NORTH AND SOUTH TURRAMURRA CENTRES

05

RETAIL

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005

habitation



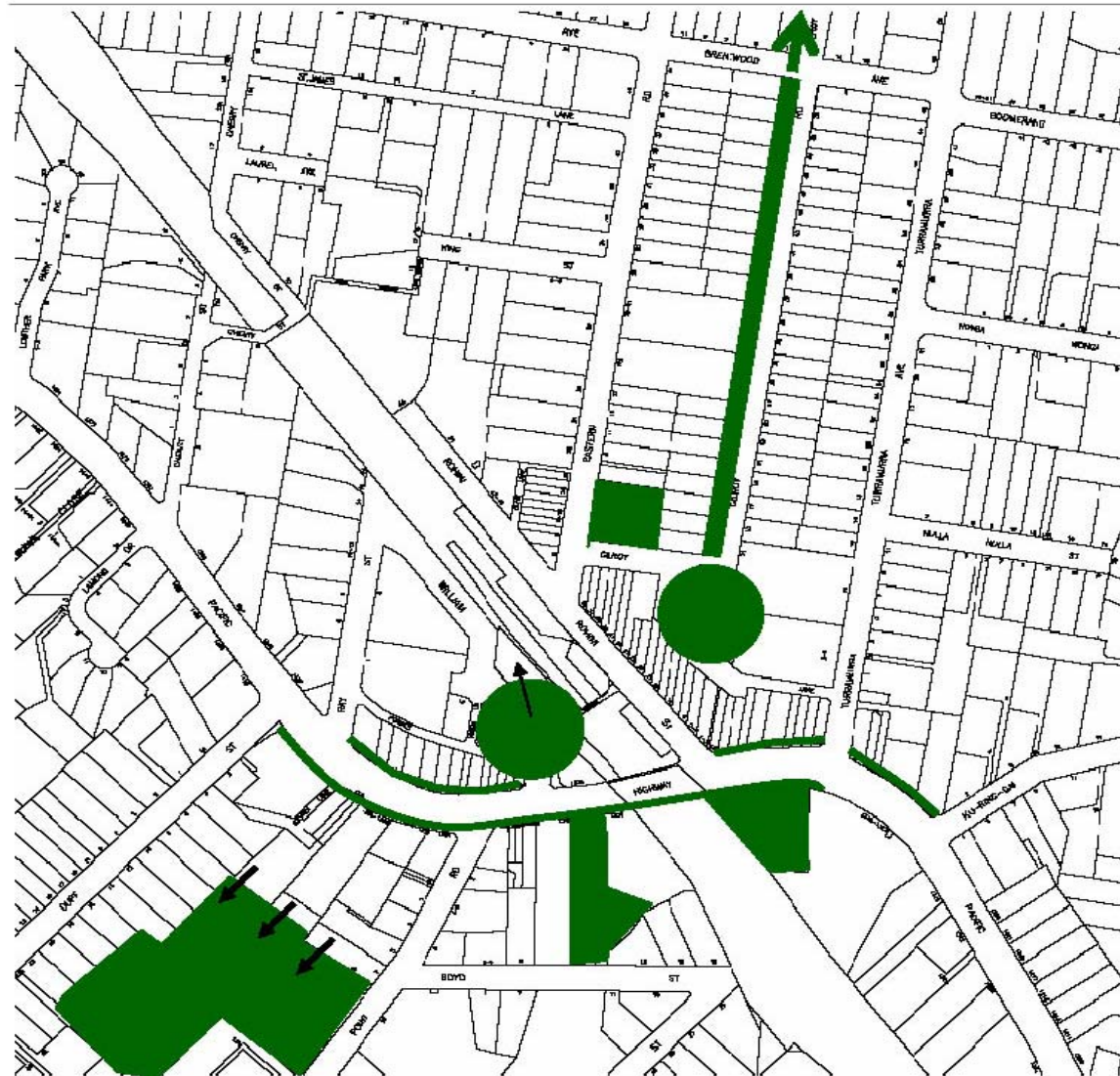
STRENGTHEN CONNECTIONS:

- FROM KISSING POINT ROAD TO RAILWAY
- FROM WILLIAM ST TO GILROY
- RAY ST TO WILLIAM ST
- GILROY ST TO TURRAMURRA AVE
- BUSHLAND BEHIND FRANKLINS
- CREATION OF NEW PUBLIC SPACES AT INTERSECTION OF CONNECTIONS
- MID BLOCK LINKAGES

06

URBAN STRUCTURE
OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

LANDSCAPE ELEMENTS
DEVELOPMENT AROUND NEW
CONNECTIONS

NEW URBAN SQUARES AT THE
INTERSECTION OF NEW
CONNECTIONS

BETTER ACCESS TO CAMERON
PARK

BETTER ACCESS TO
BUSHLAND BEHIND
FRANKLINS

WIDER FOOTPATHS TO
HIGHWAY (INC TREE
PLANTING)

WIDER FOOTPATH TO GILROY
TO CREATE LINK TO KARAUH /
MEMORIAL PARK

07

LANDSCAPE – URBAN SPACES

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

 TRANSITIONAL ZONE

 URBAN CORE

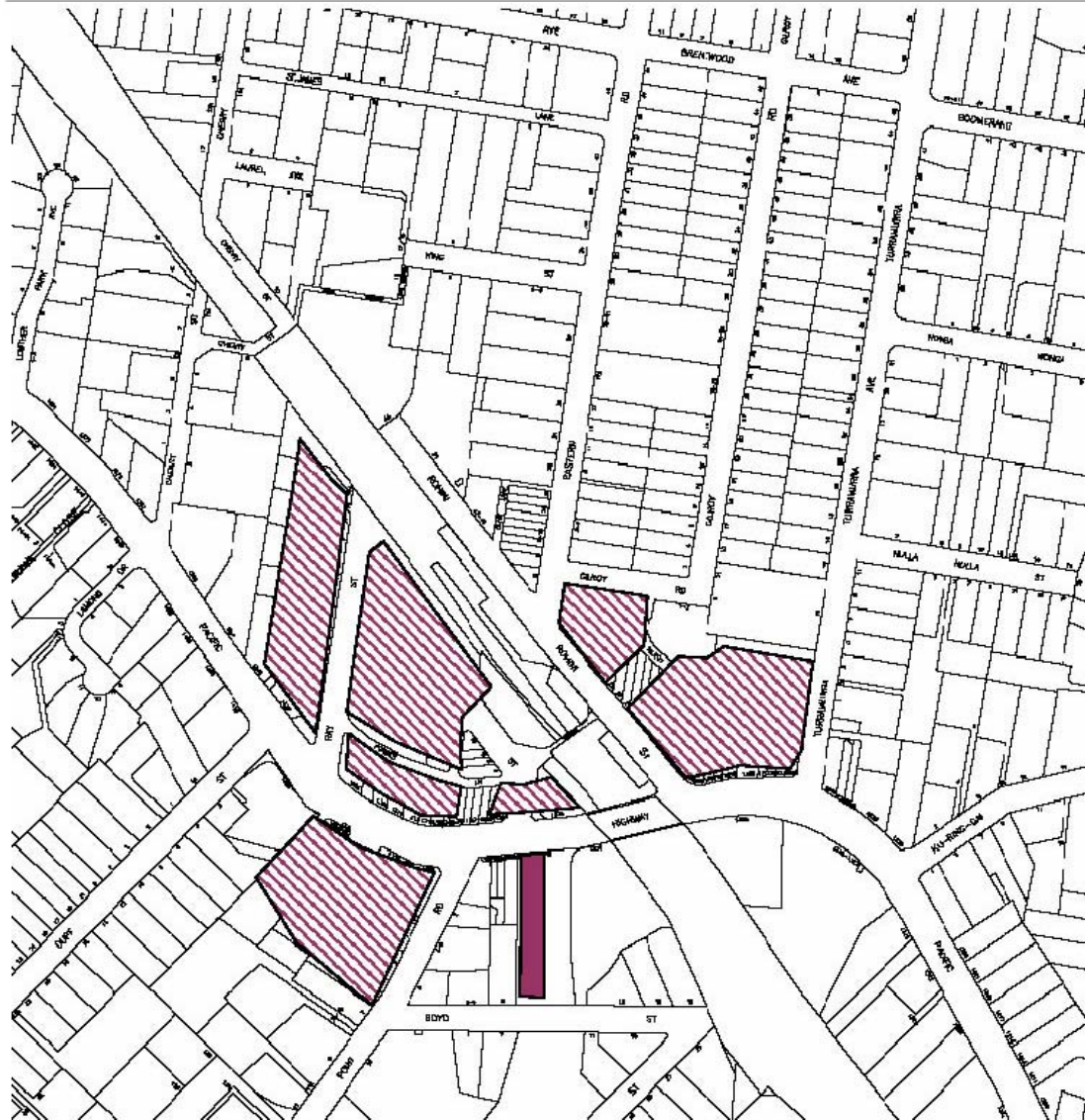
No. 1
TRANSITIONAL ZONE TO 2(D3)
AND RESIDENTIAL AREAS
IE. PREDOMINANTLY
RESIDENTIAL BUILDINGS
WITH LANDSCAPED
SETBACKS FROM STREET
AND REAR.

CONCENTRATION OF DENSITY
IN URBAN CORE
RESIDENTIAL ABOVE RETAIL /
COMMERCIAL – BUILT TO
STREET EDGE

08

**NEW RESIDENTIAL
OPPORTUNITIES**

TURRAMURRA TOWN CENTRE 21062005



habitation

 TRANSITIONAL ZONE

 URBAN CORE

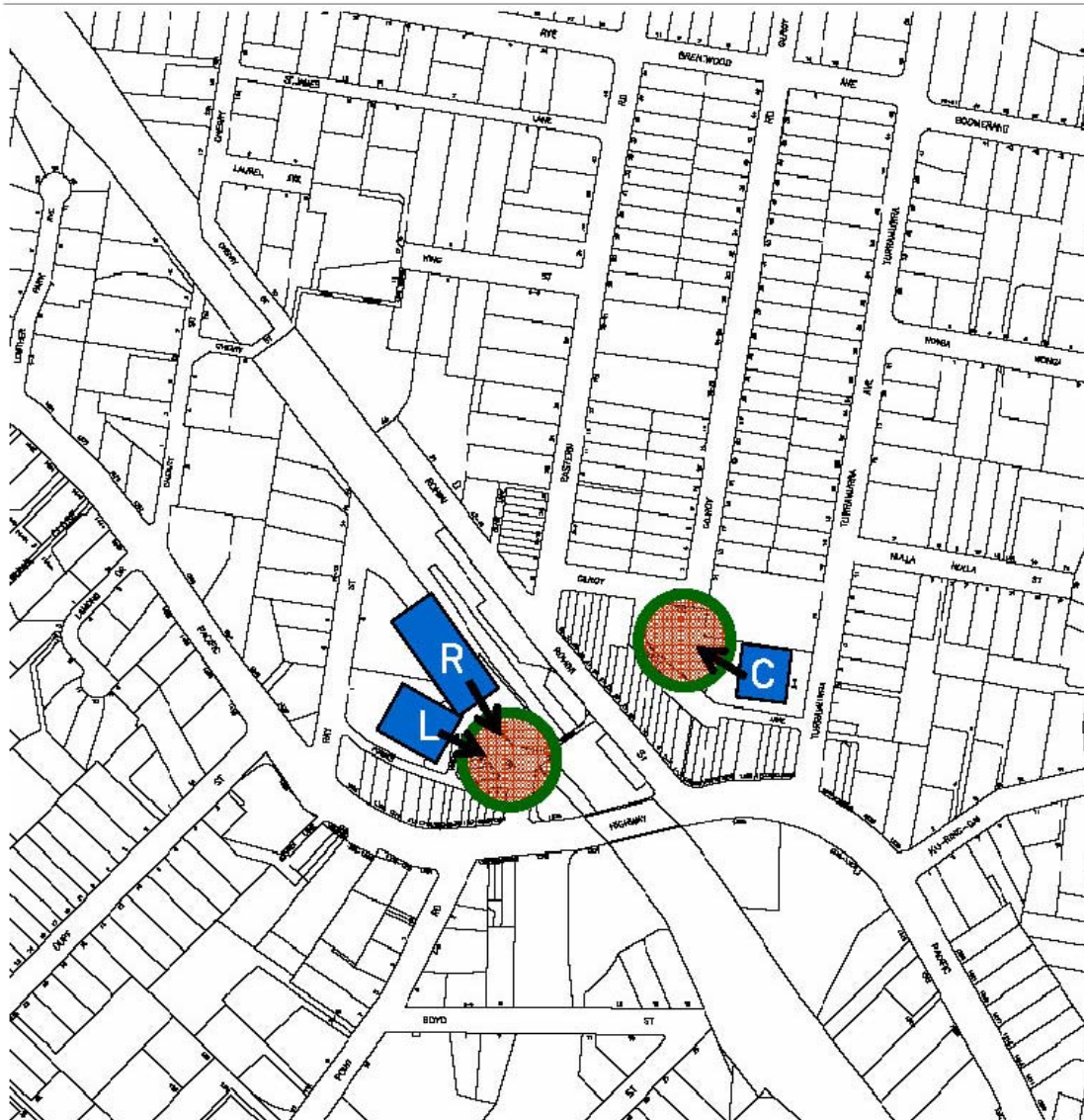
No. 2
STRONG URBAN CHARACTER

URBAN FORM
IE. MIXED USE RESIDENTIAL
BUILDINGS WITH RETAIL /
COMMERCIAL ON GROUND
FLOOR. BUILDINGS BUILT TO
STREET EDGE

DENSITY SPREAD OUT EVENLY
THROUGHOUT TOWN CENTRE

09

**NEW RESIDENTIAL
OPPORTUNITIES**
TURRAMURRA TOWN CENTRE 21062005



EAST:

ENLARGE EXISTING LIBRARY
AT EXISTING LOCATION

POSSIBLE LOCATION OF NEW LEISURE CENTRE

WEST:

RELOCATE EX. COMMUNITY FACILITIES

CO-LOCATE WITH HILL VIEW

10

COMMUNITY FACILITIES
OPPORTUNITIES
TURRAMURRA TOWN CENTRE 21062005



EAST:

POSSIBLE LOCATION OF NEW
LEISURE CENTRE

WEST:

NEW LARGER LIBRARY
AROUND NEW SQUARE
RELOCATE EX. COMMUNITY
FACILITIES

CO-LOCATE WITH HILL VIEW

1

COMMUNITY FACILITIES
OPPORTUNITIES
TURRAMURRA TOWN CENTRE 21062005



EAST:

ENLARGE EXISTING LIBRARY
AT EXISTING LOCATION

POSSIBLE LOCATION OF NEW LEISURE CENTRE

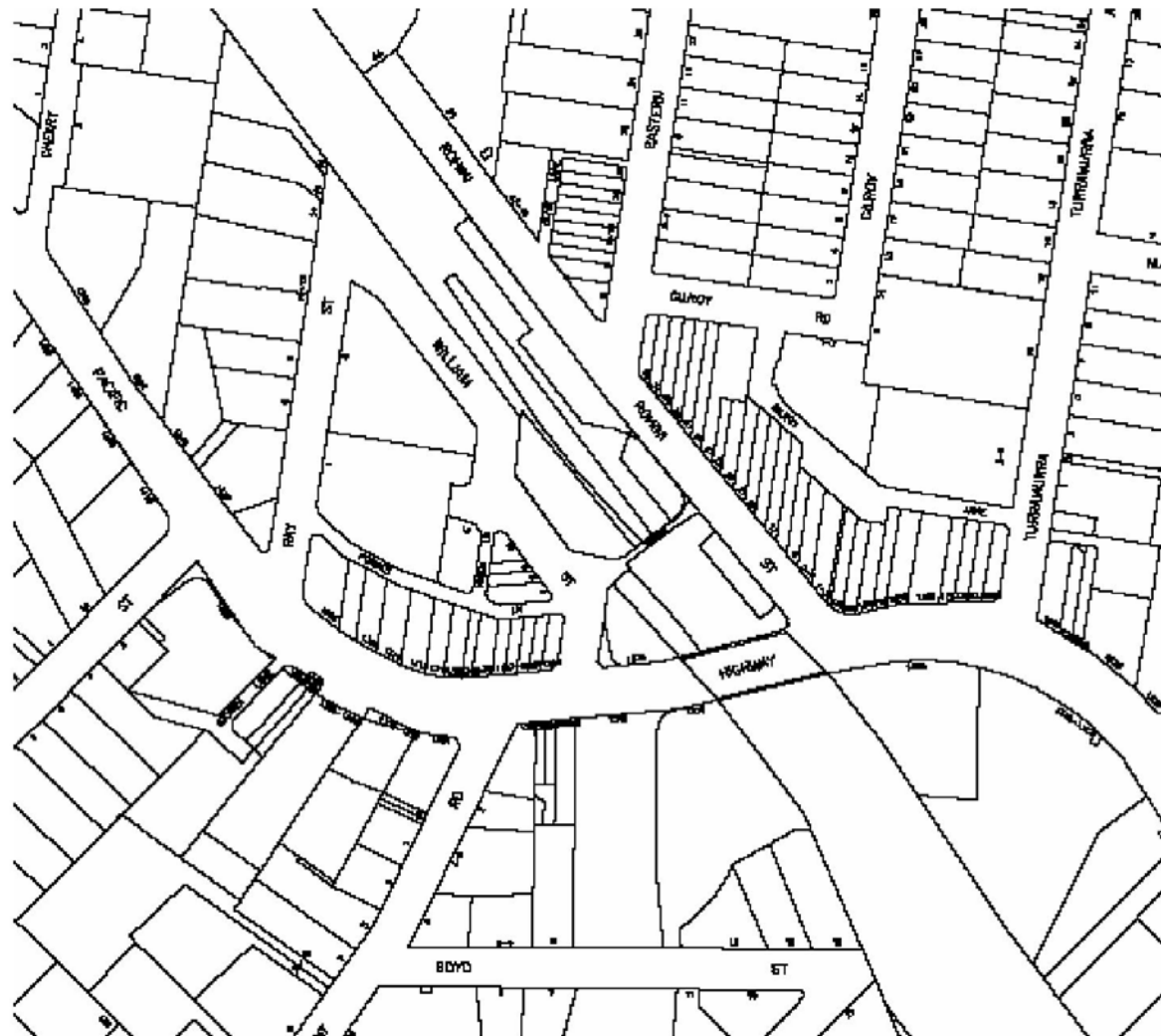
WEST:

RELOCATE EX. COMMUNITY FACILITIES

CO-LOCATE WITH HILL VIEW

12

COMMUNITY FACILITIES
OPPORTUNITIES
TURRAMURRA TOWN CENTRE 21062005



habitation

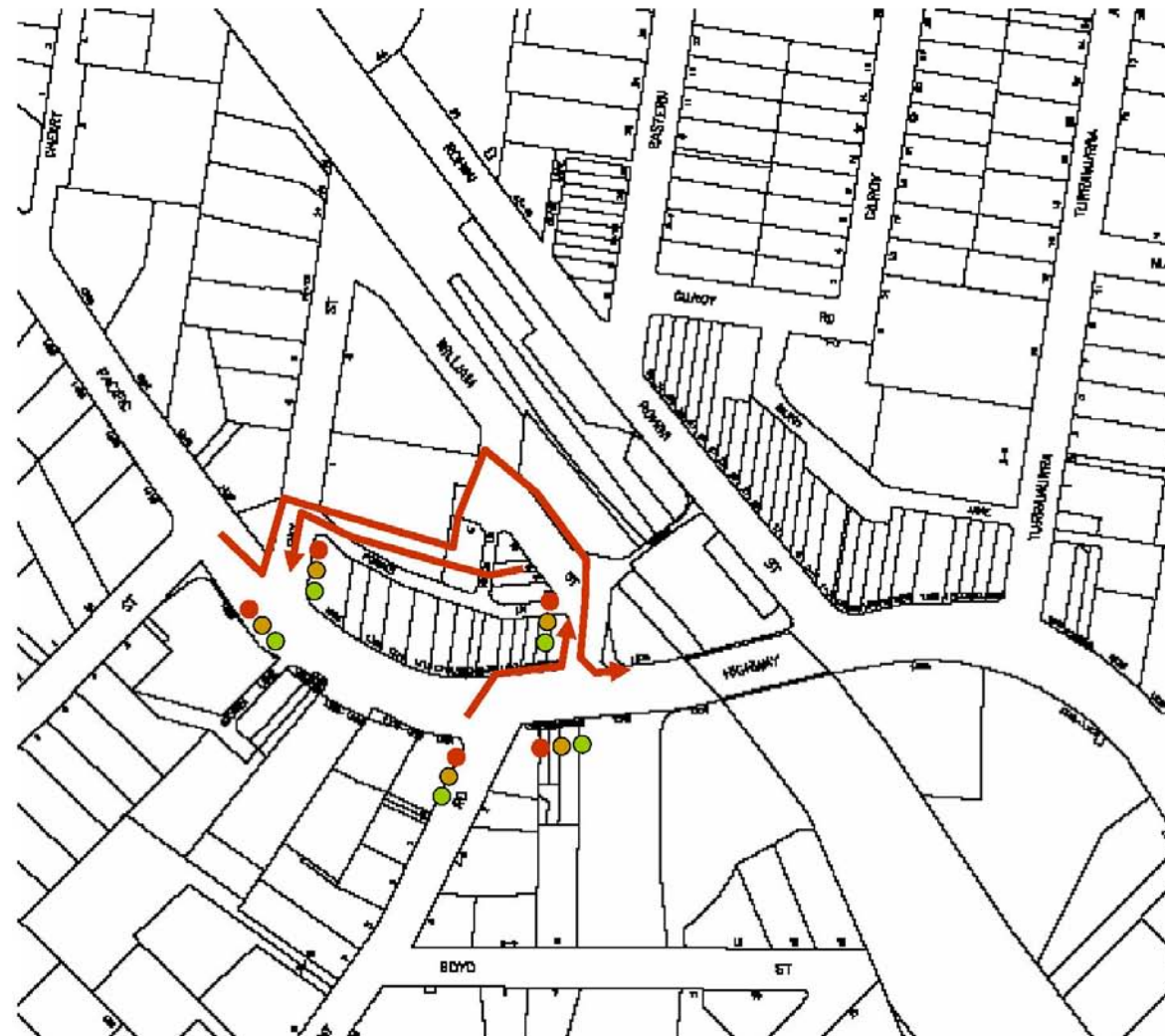
ISSUES:
REDUCE CONGESTION IN
ROHINI ST.
IMPROVE ACCESS TO RAILWAY
STATION
IMPROVE CONNECTION
ACROSS HIGHWAY
AVOID 'RAT RUN' SHORTCUT
ROUTES
RETAIN STATUS FLOW FOR
HIGHWAY TRAFFIC

13

TRAFFIC

OPPORTUNITIES

TURRUMURRA TOWN CENTRE 21062005



habitation

No. 1 - WEST
STATUS QUO

WIDEN FORBES LANE TO
PROVIDE BETTER
CONNECTION TO RAY STREET

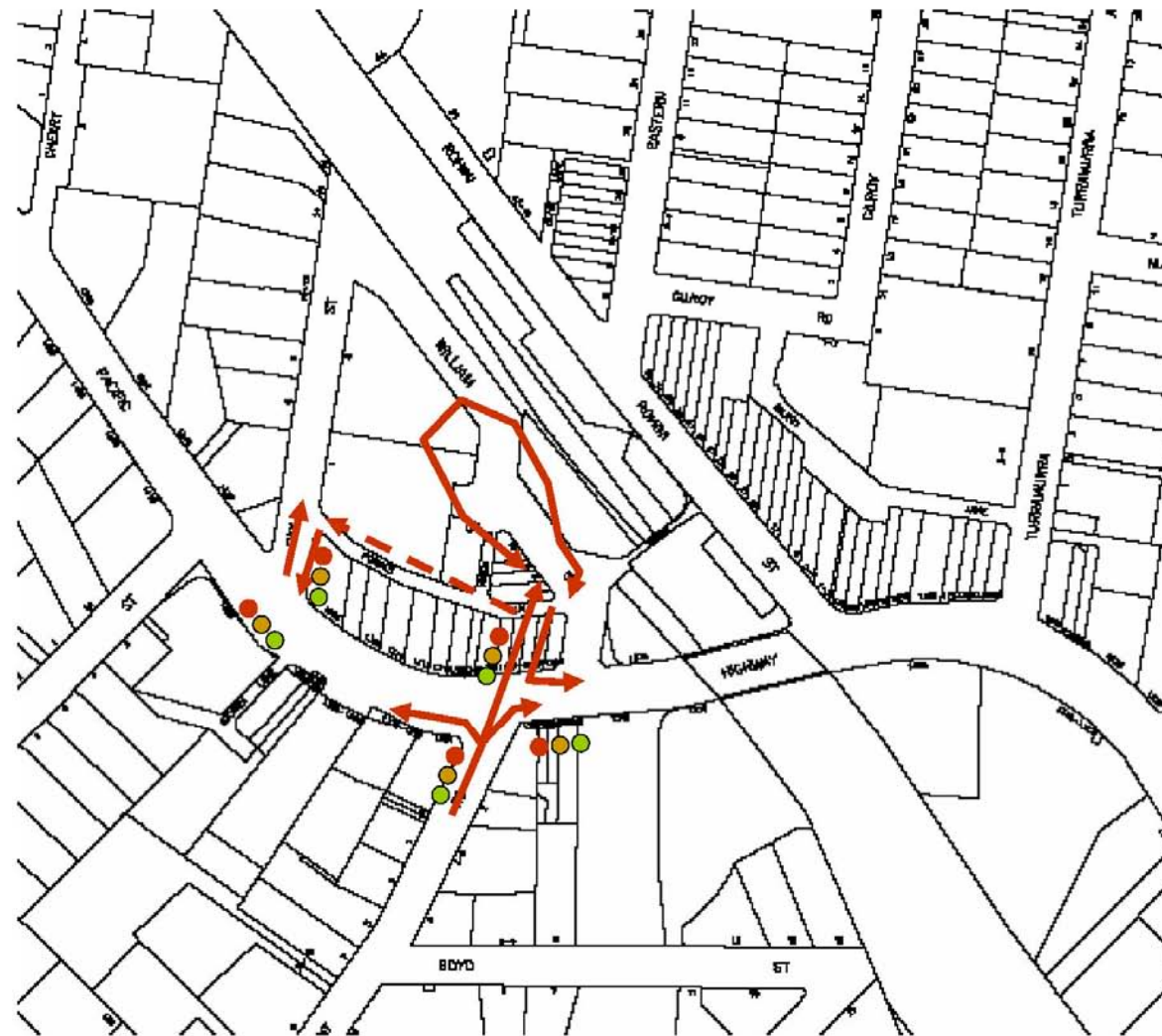
ENLARGE 'KISS AND RIDE'

14

TRAFFIC

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

No. 2 - WEST
RE-ALIGN WILLIAM STREET
WITH KISSING POINT ROAD

LOOP FOR 'KISS AND RIDE'

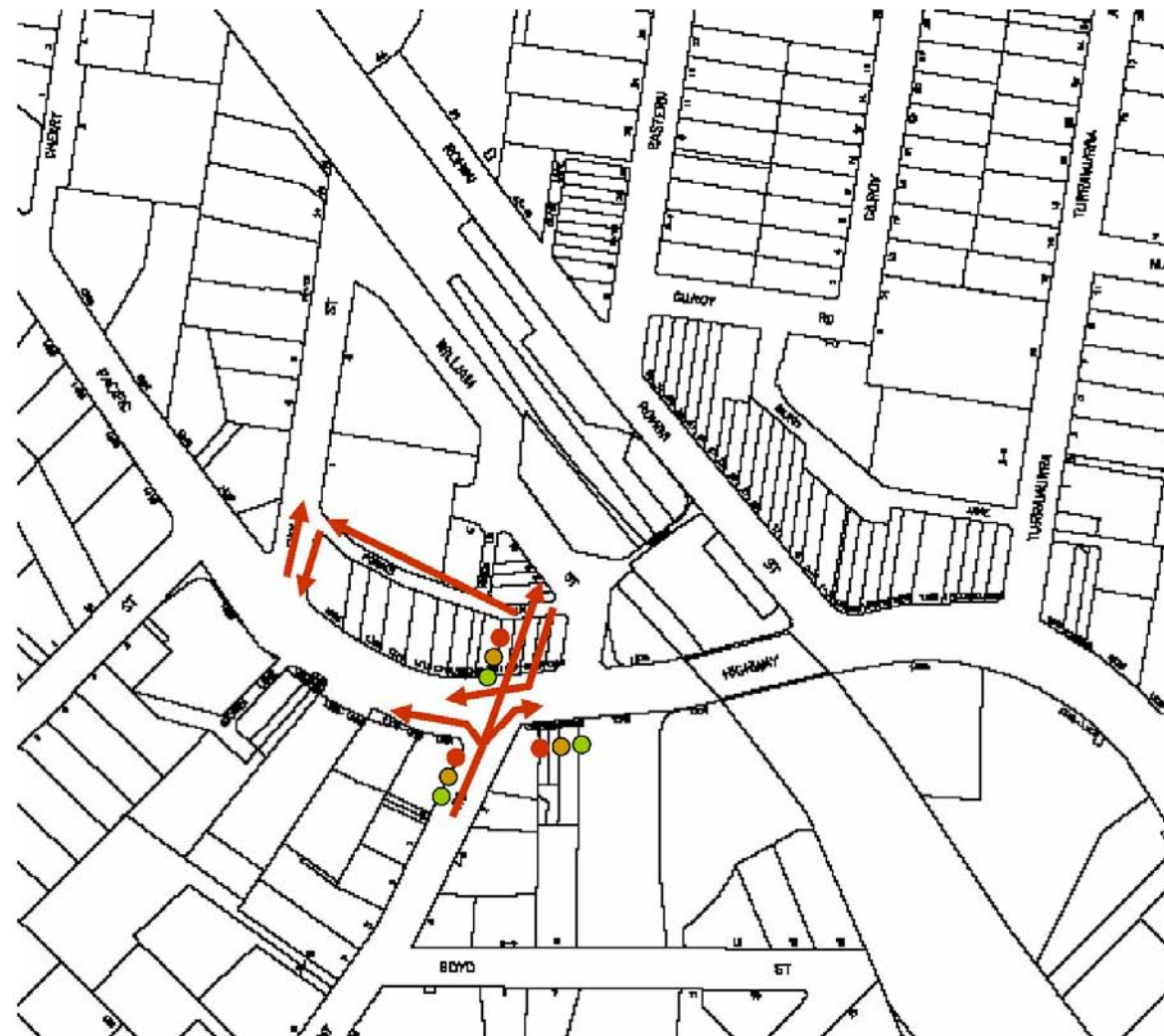
WIDEN FORBES LANE – MINOR
LINK

15

TRAFFIC

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

No. 3 - WEST
RE-ALIGN WILLIAM STREET
WITH KISSING POINT ROAD

LOOP FOR 'KISS AND RIDE'

WIDEN FORBES LANE

MINIMISE CIRCULATION
AROUND STATION

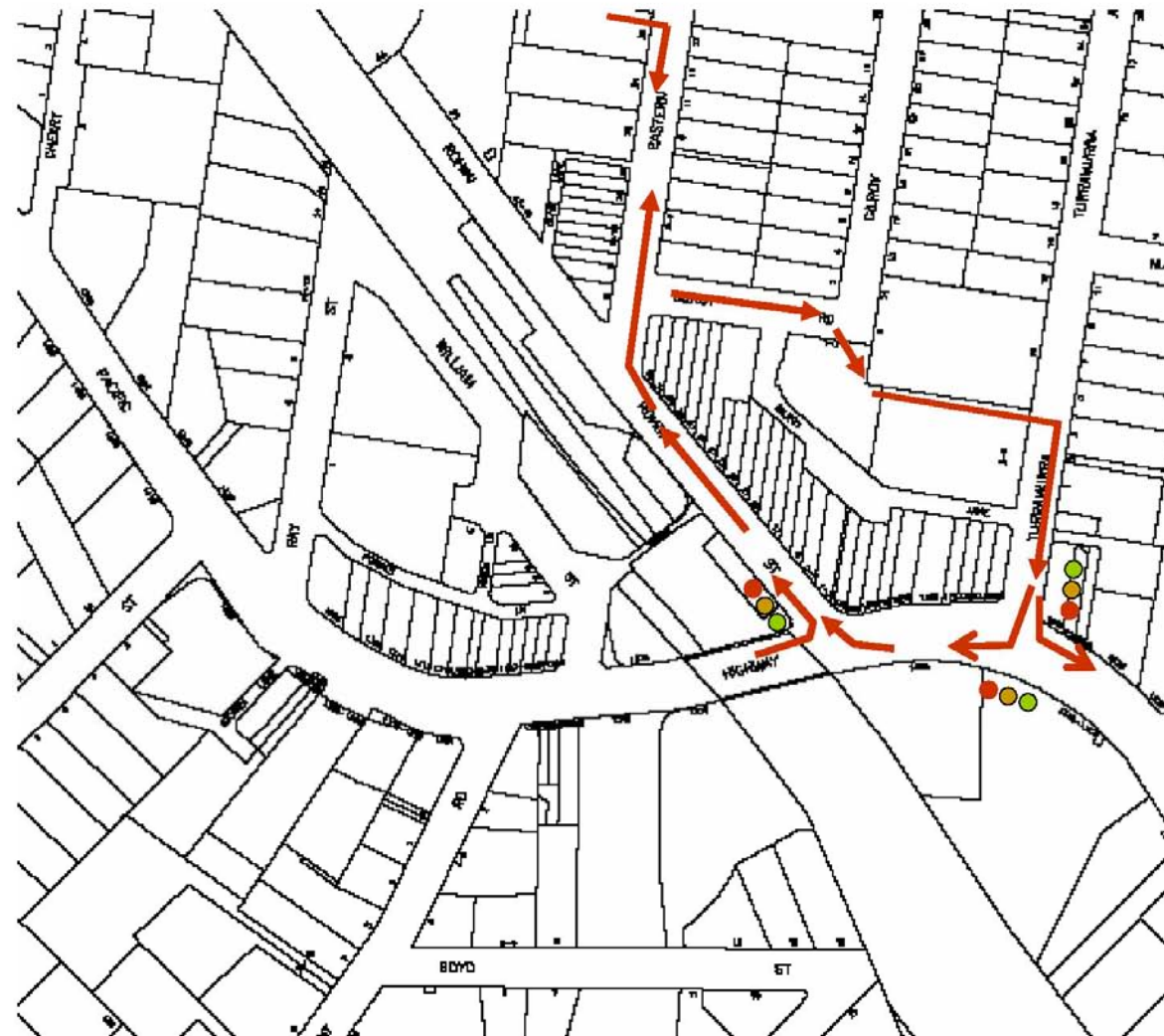
REMOVE LIGHTS AT RAY ST

16

TRAFFIC

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

No. 1 - EAST
ONE WAY CIRCULATION -
ROHINI - GILROY -
TURRAMURRA

CROSS LINK TO SOUTH OF
CHURCH

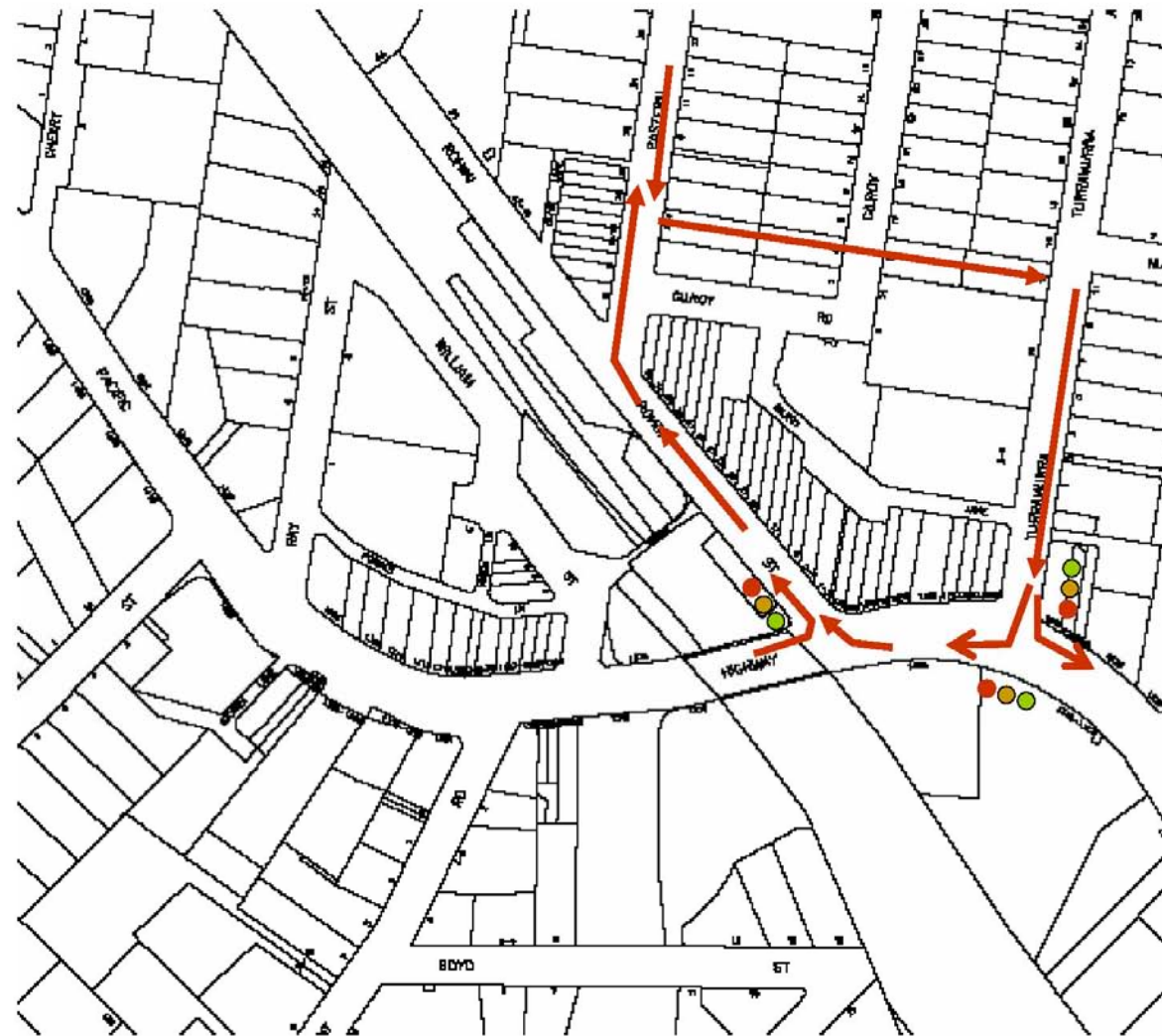
NEW LIGHTS FOR EXIT AT
TURRAMURRA AVE

17

TRAFFIC

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

No. 2 - EAST
ONE WAY CIRCULATION -
ROHINI - GILROY -
TURRAMURRA

CROSS LINK TO NORTH OF
CHURCH

RELOCATE CAMERON PARK -
COMBINE ADJACENT TO
SHOPS

NEW LIGHTS FOR EXIT AT
TURRAMURRA AVE

18

TRAFFIC

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

No. 3 - EAST
TWO WAY CIRCULATION -
ROHINI - GILROY -
TURRAMURRA

CROSS LINK TO NORTH OF
CHURCH

RELOCATE CAMERON PARK -
COMBINE ADJACENT TO
SHOPS

NEW LIGHTS FOR RIGHT TURN
INTO TURRAMURRA AVE

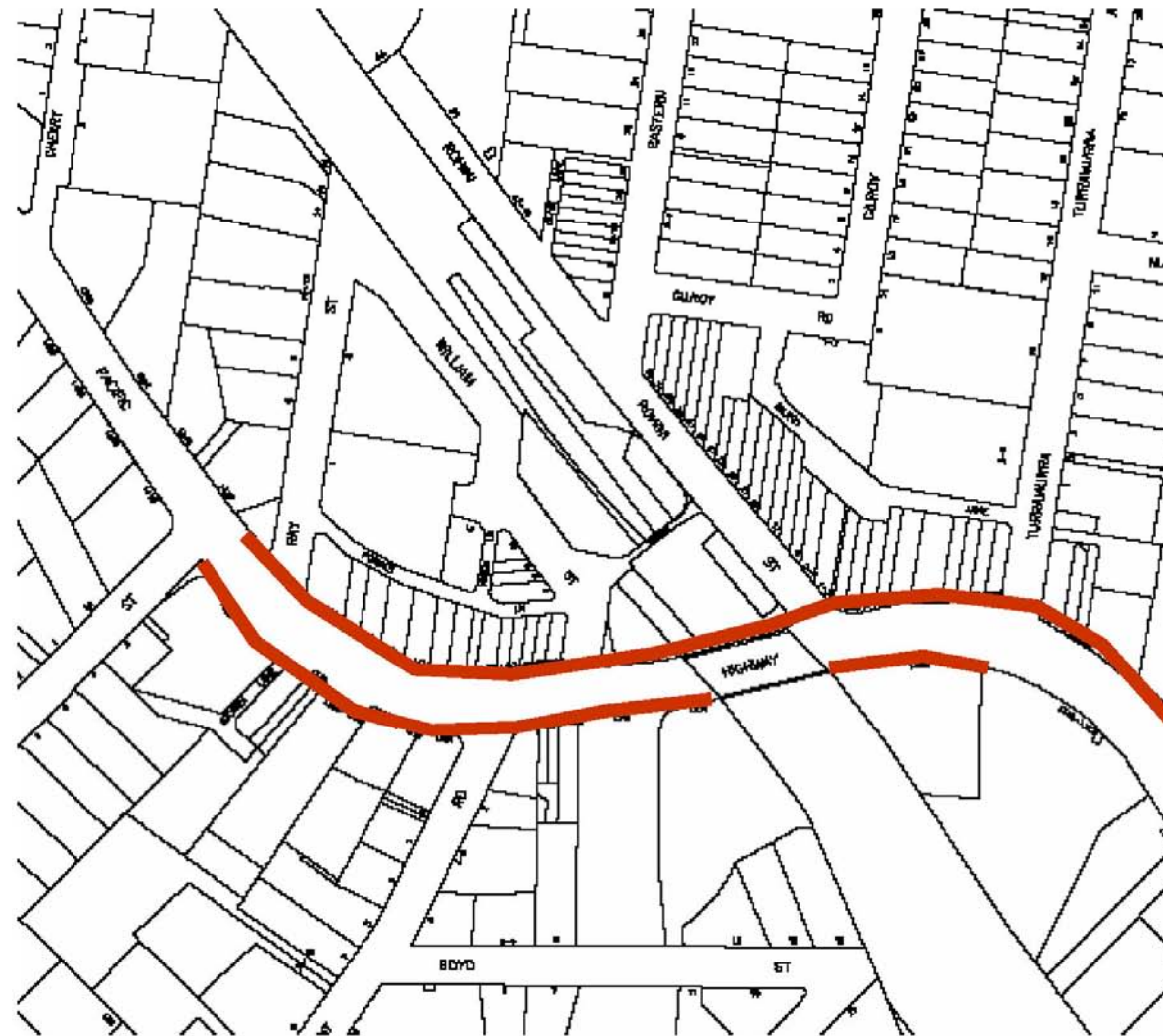
NO TURN FROM SOUTH HWY
INTO ROHINI - INCREASE
TIME FOR EXIT OUT OF ROHINI

19

TRAFFIC

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005



habitation

No. 2
ROAD WIDENING TO HIGHWAY
TO REDUCE NEED FOR TIDAL
FLOW AND INCREASE
FOOTPATH WIDTH

20

TRAFFIC

OPPORTUNITIES

TURRAMURRA TOWN CENTRE 21062005

PART 2

7.0 PLANNING OPTIONS

7.1 INTRODUCTION

This chapter presents a variety of planning and traffic options for Turrumurra Centre. The options have been developed in response to a range of parameters that have arisen from:

- Resident survey
- community visioning workshop;
- stakeholder consultation;
- consultants issues papers; and
- site analysis and review of opportunities; and
- The Ku-ring-gai Retail Strategy

Community comments and options selection

Community consultation to date has included a Householder Survey to 8000 homes, a vision workshop, and consultation sessions with Turrumurra Chamber of Commerce, North Turrumurra Action Group, Kissing Point Action Group, Kissing Point Sports Club, Northaven Village and Rohini Village.

3 broad mixed use land use options have been identified to address the community's comments and concerns identified in the above surveys and Question 16 of the Turrumurra Household Survey, Planning for the Future: "What can be done to improve Turrumurra town centre?"

Consolidated retail (option 1)

This option responds to the community's comments that suggested consolidating the main retail into one location. The Coles side would be the preferred location for a larger shopping complex. The Gilroy Street side of the centre could then be the quieter side of town with a focus on boutique speciality stores and as a community hub where existing and new community facilities would be consolidated in one location. The southern side of the highway would retain a non-retail ground floor to accommodate the need for professional office space.

Relevant community comments:

- Consolidate shopping centre.
- Centralised retail complex – preferred site in the Coles precinct.
- Provide a centralised complex in the Coles precinct.
- Mall and town centre across railway
- Consolidate shops
- Make the shopping centre into 3 precincts – commercial / supermarkets / strip and other shops
- Larger shopping centre / mall needed
- Demolish existing and build new centre
- Shops need to be in one large complex with parking
- Build a large shopping complex
- Amalgamate the three centres

Option 2 - two centres

This option responds to the community concern about the disjointed nature of Turrumurra centre by establishing two main retail areas on the northern side of the highway. A new supermarket would be located around Gilroy Lane on the eastern side of the railway to balance the Coles on the western side of the railway. This option would encourage the other side of the highway to redevelop with residential which provides an opportunity to improve public access to the Turrumurra Forest Reserve. Also a supermarket near Turrumurra Avenue would be more accessible to a number of retirement villages on the eastern side of the centre.

Relevant community comments:

- Move Franklins to the other side of the Highway
- Change Franklins side to car-parking
- Parking on one side of Highway and shops on the other.
- Coles is on the other side of the railway (to Rohini Village)
- Difficulty of access between 3 different retail areas.
- Uncoordinated / disjointed / unfocussed.
- Highway divides the centre of Turrumurra
- Disjointed – virtually 3 shopping areas in central Turrumurra
- Redevelop Turrumurra Plaza.
- Three shopping precincts in central Turrumurra is a problem.

- Turrumurra central is fragmented into 3 parts.
- Geographically dispersed
- huge distance between Franklins and video store in Rohini Street
- Town centre fragmentation needs fixing
- Concentrate the shops one side of the Highway
- One side of highway should be developed for shopping
- All shops on one side

Option 3 - Three centres

This option recognises that a proportion of residents do not want to see major changes to Turrumurra centre - retaining the existing shopping centres on the southern and northern sides of the highway. Residents noted the southern shopping area as a convenient place to shop for residents, particularly those from south Turrumurra. This option frees up space on the northern side for larger community facilities such as a leisure centre.

Relevant community comments:

- Group the community services
- Need sports centre and youth centre and locate them near Coles.
- Going to Franklins is easy (KPPA)
- Driving to Coles from Kissing Point Road is a problem
- William Street side is dead
- Swimming pool and gym would be great
- Overpass to connect shops
- Franklins centre looks old and run-down – start again

Additional options

Councillors raised a number of points for consideration in the development of the planning options. The main points are:

- Retain HACC facility in current location with same use
- 2 storey library on the highway in existing park
- Leisure centre elsewhere shown with an arrow
- Enlarged green space on Coles side
- Closing Rohini Street to cars at the pedestrian crossing with kiss and ride for station

- Turrumurra Avenue one way through traffic
- Wonga Wonga Street extension as road or walkway
- Cantilevered pedestrian crossings on highway bridge
- Aligning Duff and Ray Street

OPTION 1- MIXED USE AND RETAIL

The first question put to residents was: **Where is mixed use and retail to be located?**

There are currently three retail centres within Turrumurra town centre the south (Kissing Point Road area), the west (William Street area), and the east (Gilroy Lane area). Residents raised concerns about the problem created by the busy highway and railway trisecting the centre and the access problems thus created.

There is currently 15,800sqm of retail and commercial shop front space within Turrumurra. The Ku-ring-gai Council Retail Strategy has identified that there is a current unmet demand for an additional 4000sqm of retail and commercial shopfront space based on the existing population and LEP 194 projections. Further, the strategy identified the need to provide up to 6sqm of additional retail for every resident resulting from mixed use development in the centre.

The options presented below investigate three different ways in which the additional retail space could be accommodated within the centre.

All options show mixed use development which includes residential apartments on the upper storeys as required by the Minister's Direction.

OPTION 1A - TWO MIXED USE CENTRES WITH RETAIL CENTRALISED AT RAY STREET

Ray and William Streets

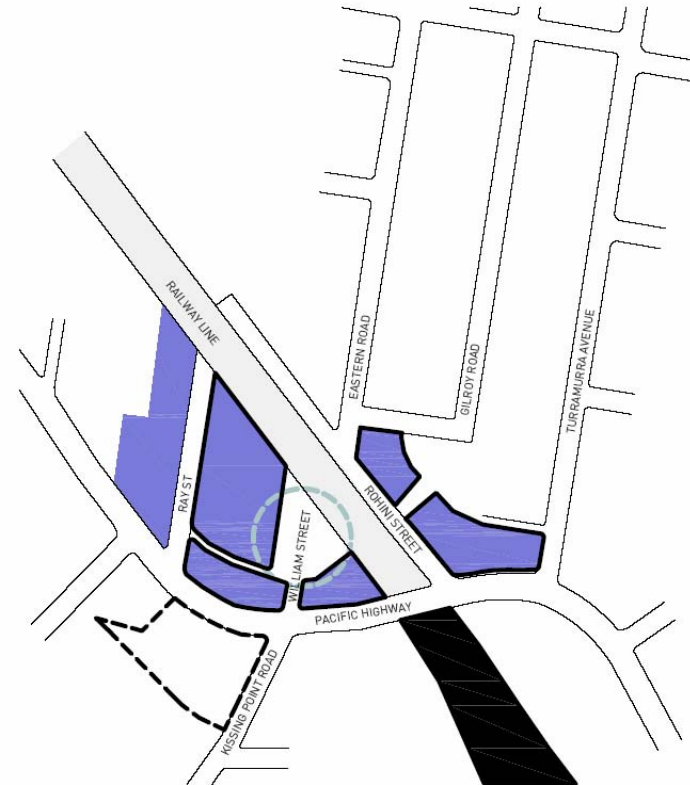
- Main retail focus around new square at William Street (William Square)
- Major supermarket (4000sqm) plus secondary supermarket (1500sqm) together in one location in area bounded by Ray Street, Pacific Highway and the railway.
- Specialty retail is located on ground floor on Ray Street, Forbes Lane and around new square. Commercial suites located at first / second floors
- Ground level commercial/retail fronting highway.
- Residential apartments located above all retail and commercial development
- New square at entry to station.
- Access to the William Street area from Kissing Point Road is improved through the realignment of William Street with Kissing Point Road

Rohini Street

- Specialty retail, cafe and restaurants on Rohini Street and facing north onto a new park behind Rohini Street

Kissing Point Road

- South of highway retail function removed
- Area dedicated for other uses (professional suites or home office at ground level) with residential on upper storeys



OPTION 1B - TWO MIXED USE CENTRES WITH RETAIL DISTRIBUTED

General

- Retail focus distributed between two linked centres on eastern and western side of the railway.
- Retail centres linked by 'green' urban open space that terminates in two major open spaces - William Square (William Street) and Turrumurra Village Green (at the end of Gilroy Road)
- Residential apartments located above retail and commercial throughout the centre
- Commercial located on second floor in development fronting the railway and the highway

William Street

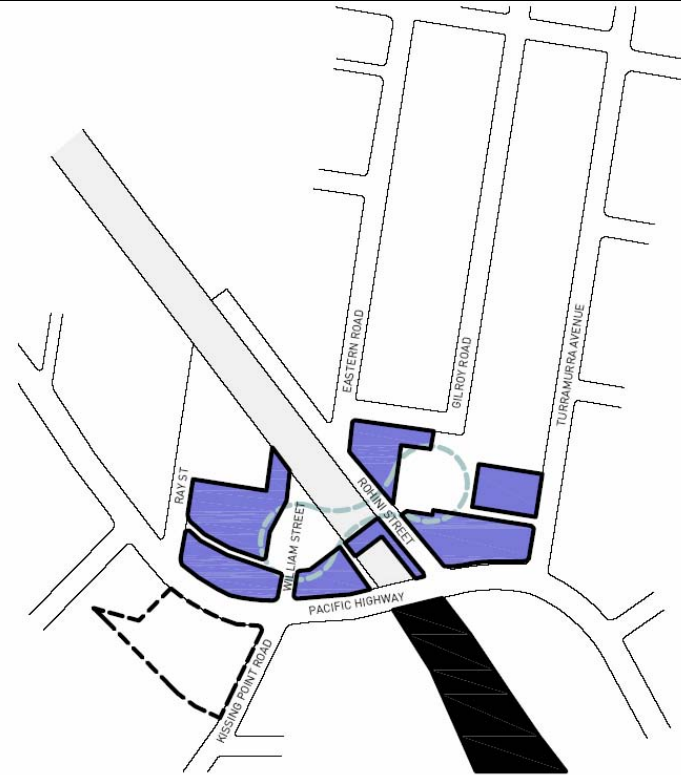
- Major supermarket (4000sqm) with specialty retail fronting proposed William Square at station entry.
- Access to the west side from the south side is improved through the realignment of William Street with Kissing Point Road

Gilroy Road

- Secondary supermarket (1500sqm) located at corner of Rohini Street and Gilroy Road
- Specialty retail, restaurants and cafes on Rohini Street and at rear of Rohini Street facing new park.

Kissing Point Road

- South of highway retail function removed
- Area dedicated for other uses (professional suites or home office at ground level) with residential on upper storeys



OPTION C - THREE MIXED USE CENTRES

General

- Retail distributed across three sites similar to the existing situation.
- New squares located around William Street, and at the southern end of Gilroy Road.
- Residential apartments located above retail and commercial in all commercial areas

William Street

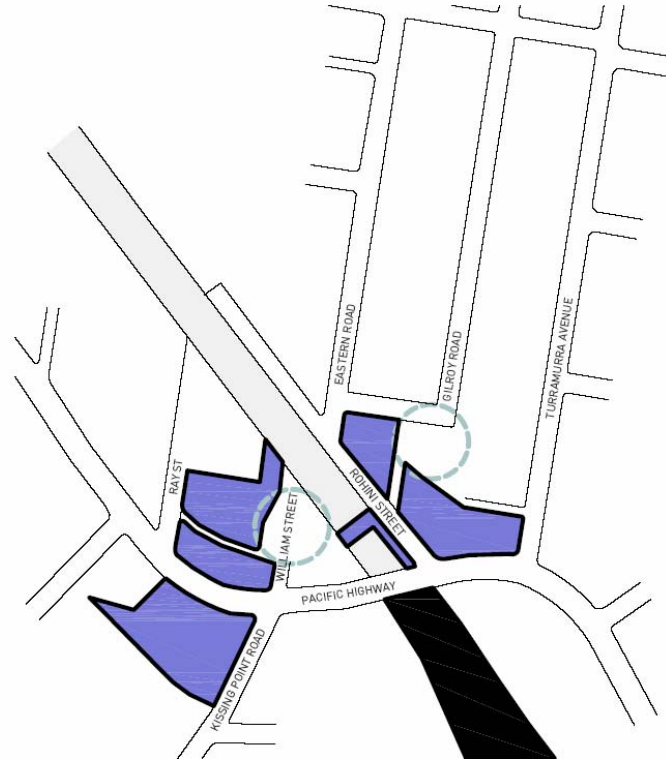
- Large supermarket (4000sqm) with specialty retail fronting new square at William Street.
- Commercial and retail uses fronting highway on ground and first floor.
- New development setback to create wider footpaths

Rohini Street

- Specialty retail, restaurants and cafes located on Rohini Street.
- Proposed shops behind Rohini Street with retail and cafe addressing new park
- Commercial uses fronting highway on two levels with residential above.

Kissing Point Road

- Secondary supermarket (1500sqm) located on Franklins site with additional specialty retail and commercial.
- Residential on upper storeys



OPTION 2 - COMMUNITY FACILITIES AND OPEN SPACE

The second question that was put to residents was: **Where are community facilities and open space to be located?**

Should community facilities be, combined retained in their current location or distributed throughout the centre?

The provision of new and improved community facilities and parks are the focus of the new planning for Turrumurra centre.

The expansion of Council's library facilities, upgrade of community facilities and a possible new leisure centre (including gym, pool, indoor pool, health and fitness activities, cafe) and

Significant improvements to public spaces and squares are also proposed. Turrumurra currently has no centrally located town square or Village Green that provides a heart for the centre. Two new parks are proposed for the eastern and western sides of the centre. The leisure centre and library will be used to anchor the new square and greens.

Public open space in the form of squares, village greens increased footpath widths and bio-links increase the public space from existing 19,000sqm to up to 33,000sqm.

Other community facilities, including those offered by NSW Health at Hillview, have been considered given the opportunity for consolidation within centre and better access for the community.

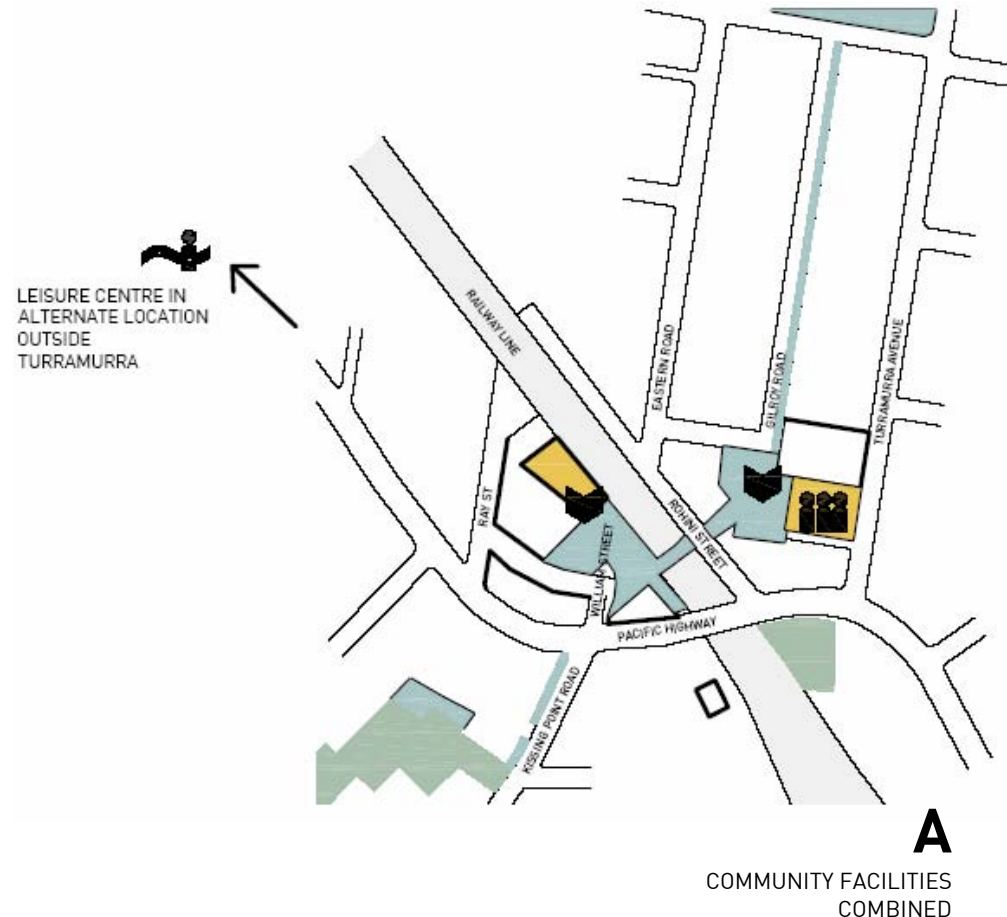
OPTION 2A COMMUNITY FACILITIES COMBINED (WITH TWO SUB-OPTIONS FOR LOCATION OF LIBRARY)

Community facilities

- This option seeks to consolidate the community facilities by co-locating the community services
- NSW Health and Council within the one new building
- The new building would be located in the Gilroy Road and Rohini Street area with a frontage to a new square.
- Residential uses to be located on upper floors above community uses.
- library can either be located adjacent to this facility or on the eastern side with a frontage to the proposed William Square.
- 'Hillview' could be utilised for another use, for example a function centre.

Open space

- New square located at end of Gilroy Road on existing HACC site.
- retail / cafe / community activities provide an active edge
- new public square located in William Street bounded by retail, supermarket and possible community services
- provide street frontage to bushland reserve between Kissing Point Road and Duff Street.
- widen pedestrian footbridge over rail line linking William Square and new square at Gilroy Road
- footpath widening to Gilroy Road to link with Karuah Park
- expand Karuah Park to Brentwood Street

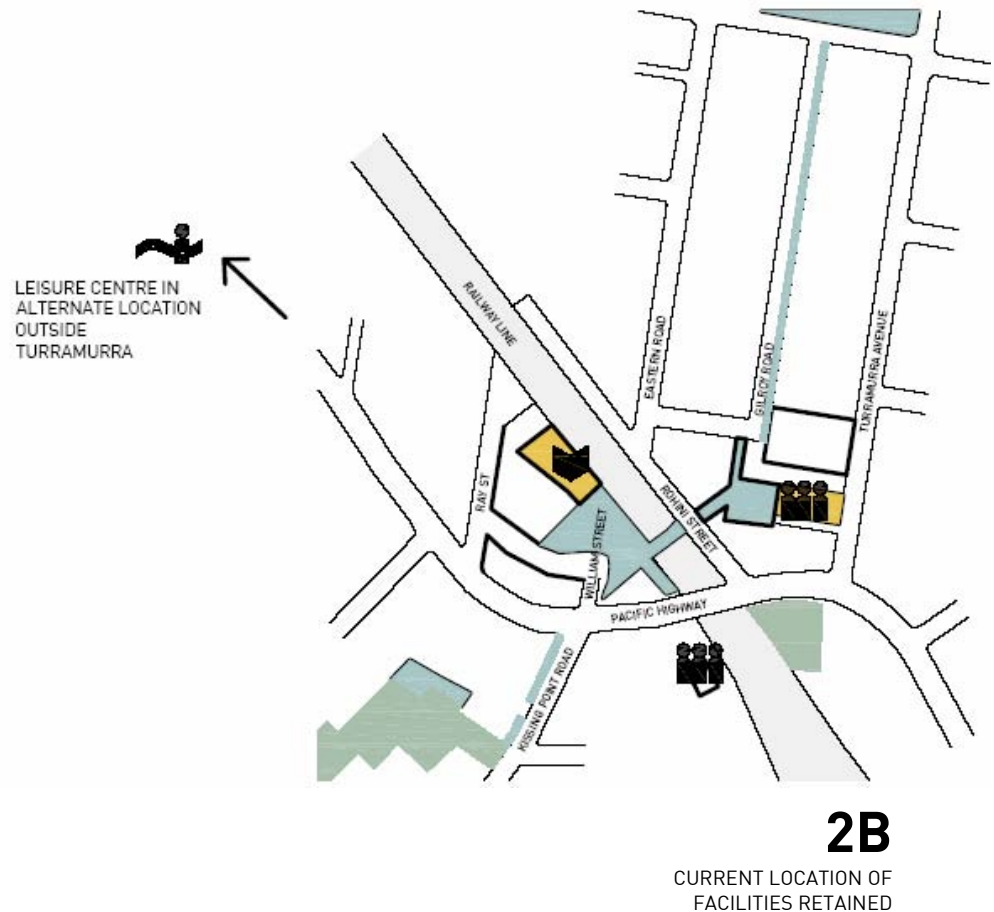


OPTION 2B - CURRENT LOCATIONS RETAINED BUT FACILITIES EXPANDED AND UPGRADED

- Library remains within Ray / William Street precinct with frontage to new square (William Square)
- community facilities are located in new buildings at the end of Gilroy Road with a frontage to new square
- linkage between centres improved through widening the pedestrian railway bridge
- NSW Health facilities remain at 'Hillview'
- Alternative community facilities remain in existing HACC centre. Open space does not have connection to Gilroy Road

Open space

- new square located behind Rohini Street shops “Turramurra Village Green”
- new retail / cafe / community fronting Gilroy Lane provides an active edge
- new square located in William Street “William Square” bounded by retail, supermarket and possible community spaces that provides a forecourt to the railway station
- provide street frontage to bushland reserve between Kissing Point Road and Duff Street
- new widened pedestrian footbridge over rail line linking William Square and Turramurra Village Green
- footpath widening to Gilroy Road to link Karuah Park with the centre
- Expand Karuah Park to Brentwood Street



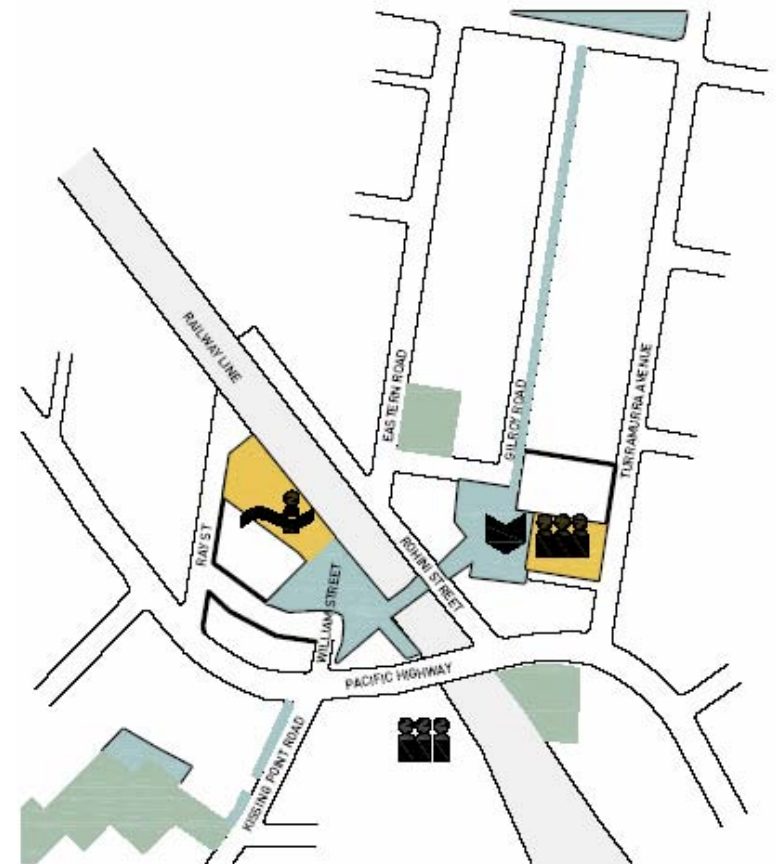
OPTION 2C - NEW LEISURE CENTRE AND COMMUNITY FACILITIES

Community facilities

- leisure centre at end of William Street with frontage to new square (William square)
- library and community facilities on Rohini Street side with frontage to new square - Turramurra Village Green
- linkage between centres improved through widening the pedestrian bridge over the railway
- NSW Health community facilities remain at 'Hillview'
- existing 'HACC' centre relocated to provide space for Turramurra Village Green

Open space

- new square located at end of Gilroy Road
- retail / cafe / community provides an active edge
- new square located in William Street bounded by retail, supermarket that also provides a forecourt to the railway station
- provide new street frontage to bushland reserve between Kissing Point Road and Duff Street.
- widen pedestrian footbridge over railway linking William Square and Turramurra Village Green at Gilroy Road
- footpath widening to Gilroy Road to link Karuah Park with centre
- expand Karuah Oval to Brentwood Street



2C

NEW LEISURE CENTRE AND
COMMUNITY FACILITIES

OPTION 3 - TRAFFIC IN THE RAY STREET AREA

The third question that was put to residents was: **How can we improve access to the rail station and the William and Ray Street area?**

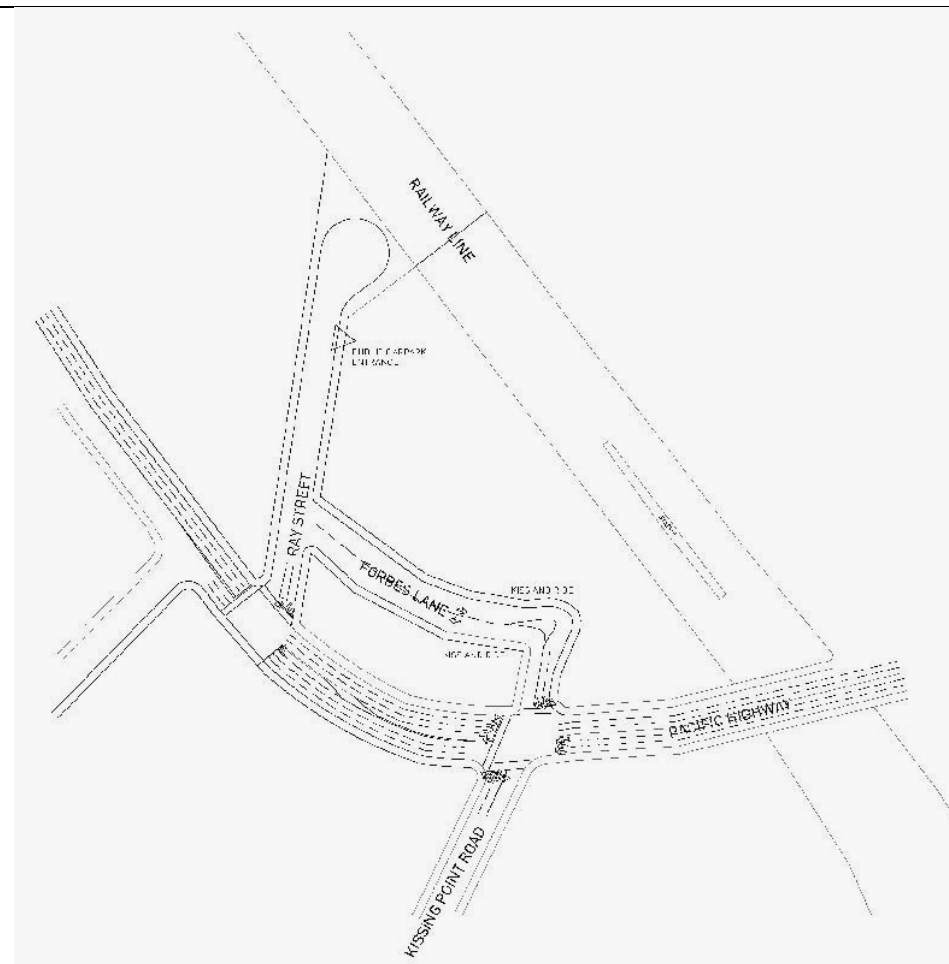
Currently this area is accessed only from the Pacific Highway via Ray Street and William Street. The rail line blocks access to the east and north creates a barrier and there is also no access to the area from the west.

The Ray Street intersection is one of the most congested intersections in Turramurra centre with very limited green time at the traffic lights. People traveling to the station via Kissing Point Road are required to negotiate the highway via a right and left turn.

Given the difficulty of access to this area a number of traffic options were identified to try and improve access by car and pedestrian to this area from Kissing Point Road and Ray Street.

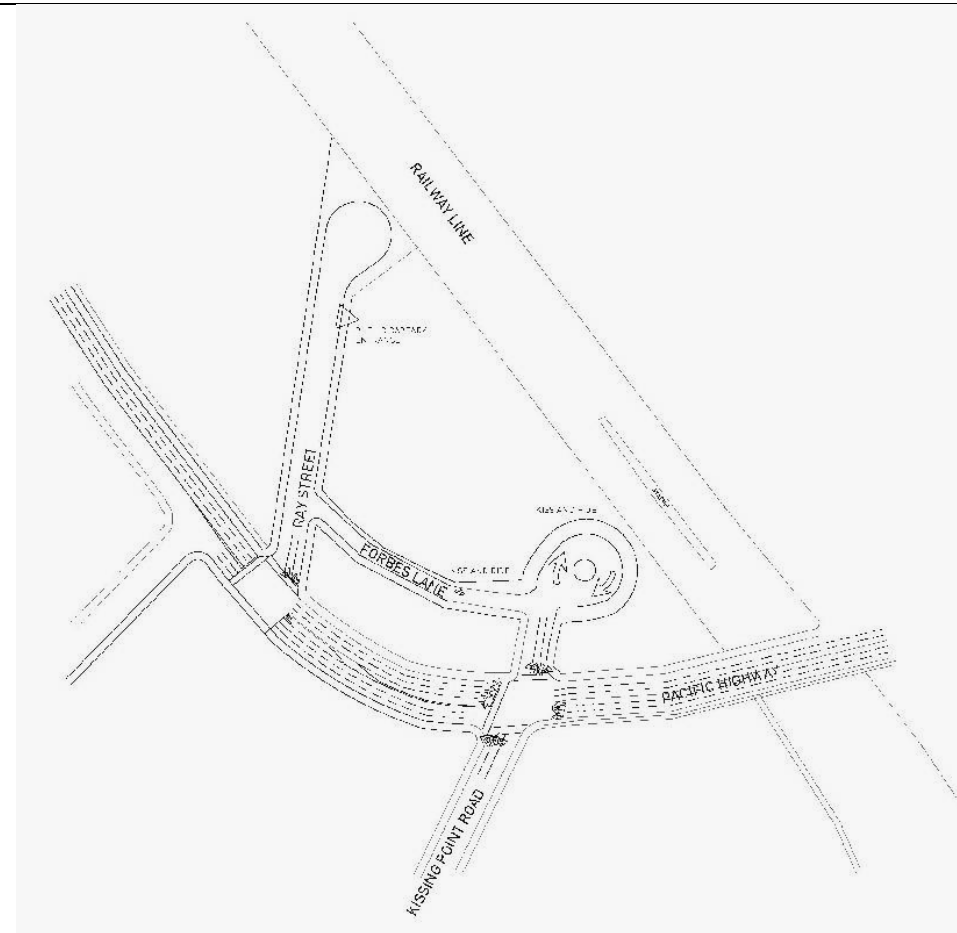
OPTION 3A - ALIGN WILLIAM AND KISSING POINT ROAD AND PROVIDE A LOOP ROAD VIA RAY STREET, FORBES LANE AND WILLIAM STREET

- Align William Street with Kissing Point Road to improve access to the rail station
- Widen Forbes Lane to allow two way traffic and parking bays
- Kiss and ride short term parking at entrance to railway station on both sides of Forbes Street
- Right turn into Ray Street from highway travelling north.
- Right turn into Kissing Point Road from highway travelling south
- Right turn into highway from Ray Street
- Highway widened to allow for removal of tidal flow
- Wider footpaths along highway to allow for tree planting



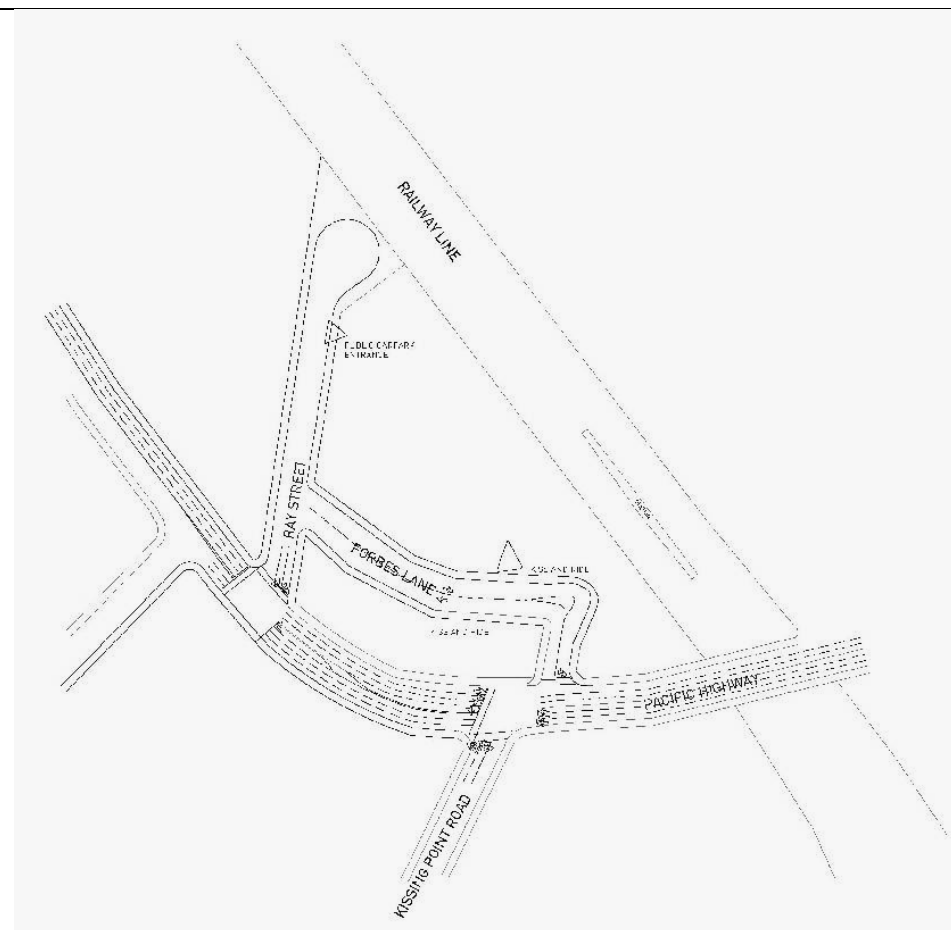
OPTION 3B - ALIGN WILLIAM AND KISSING POINT ROAD WITH A ROUNDABOUT AT THE END OF WILLIAM ST

- Align William Street with Kissing Point Road to improve access to station.
- Forbes Lane remain same width and used for one way traffic only for access to Ray Street
- William Street roundabout located at entrance to railway station.
- Kiss and ride and short term parking at entrance to railway station.
- Right turn into Ray Street from highway travelling north.
- Right turn into Kissing Point Road from highway travelling south
- Right turn into highway from Ray Street.
- Highway widened to allow for removal of tidal flow
- Wider footpaths along highway to allow for tree planting



**OPTION 3C - WILLIAM STREET AND KISSING POINT ROAD
REMAIN UNALIGNED AND FORBES LANE WIDENED**

- Retain current position of William Street.
- Widen Forbes Lane to allow for two way traffic and parking
- Kiss and ride on Forbes Lane
- Right turn into Ray Street from highway travelling north.
- Right turn into Kissing Point Road from highway travelling south
- Right turn into highway from Ray Street.
- Highway widened to allow for removal of tidal flow
- Wider footpaths along highway to allow for tree planting



OPTION 4 – TRAFFIC ON THE SOUTH SIDE OF THE HIGHWAY

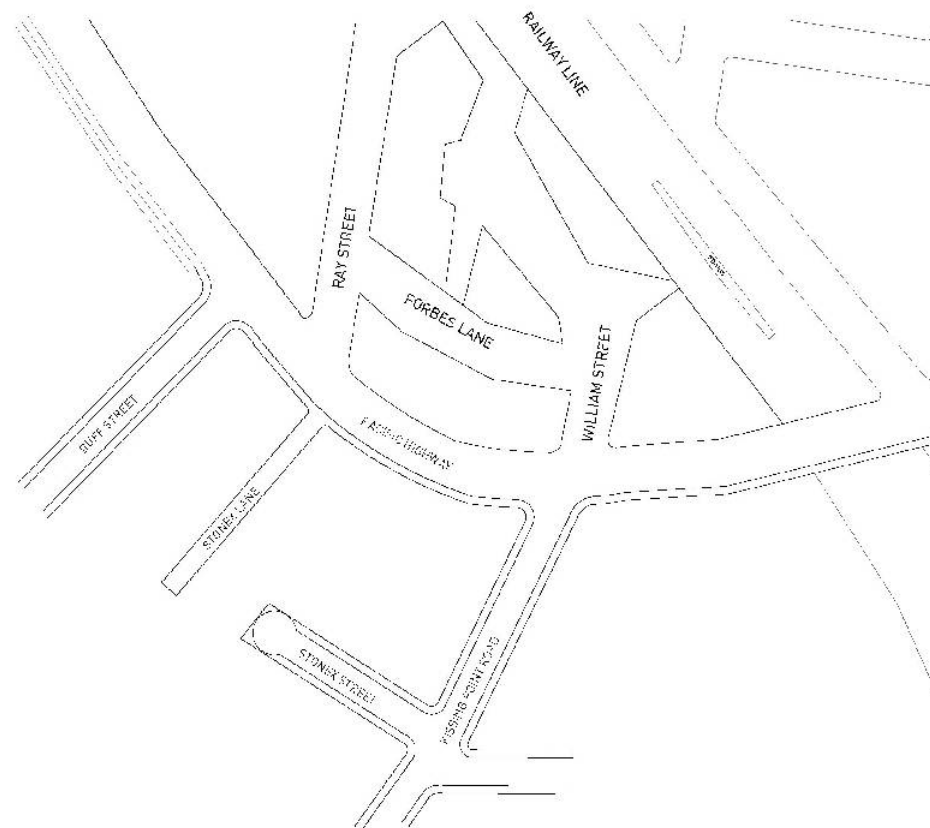
The fourth question that was put to residents was: **How can we improve access between Duff Street and Kissing Point Road?**

The Kissing Point Road intersection with the highway has the greatest degree of flexibility of all the intersections in the centre. Currently traffic in the area operates to an acceptable level. The main problems arise with access to and from the car parking for the shopping centre onto Kissing Point Road. In addition the informal laneway behind Franklins linking with Duff Street is used as a “rat run”. The lane is narrow and dangerous.

Three options were developed to show how this situation could be improved.

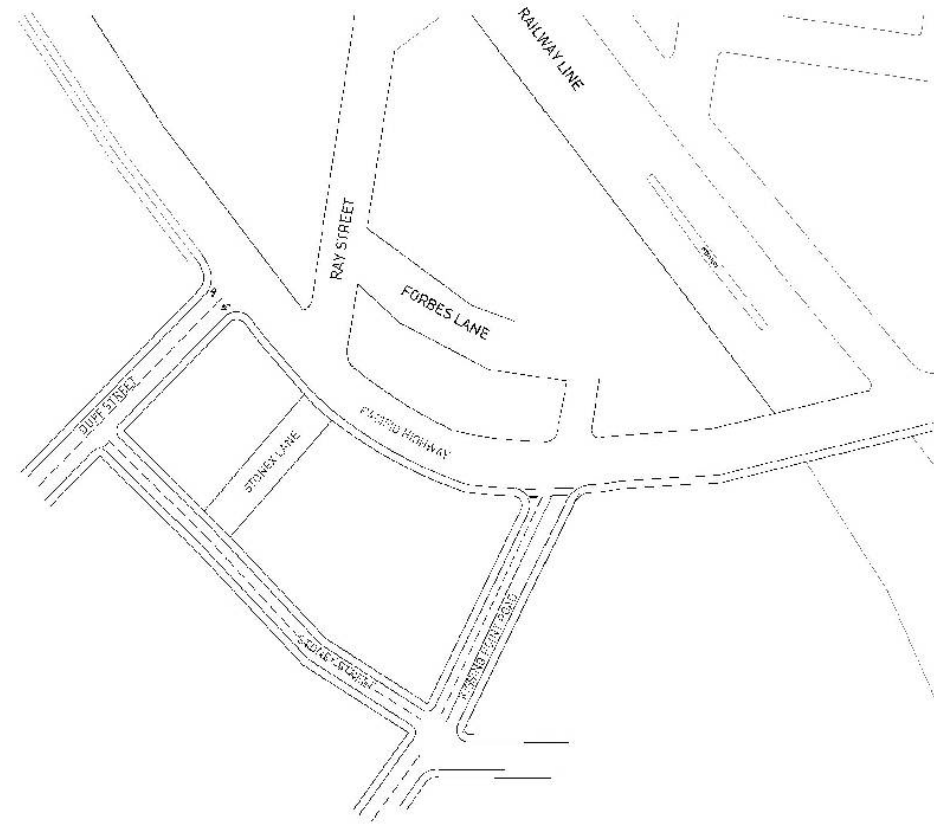
**OPTION 4A - NO LINK BETWEEN KISSING POINT ROAD
AND DUFF STREET**

- Extend Stonex Lane to provide access to bushland reserve between Duff Street and Kissing Point Road
- Create new street “Stonex Street” for access to rear of development fronting highway
- No access from Duff Street to Kissing Point Road



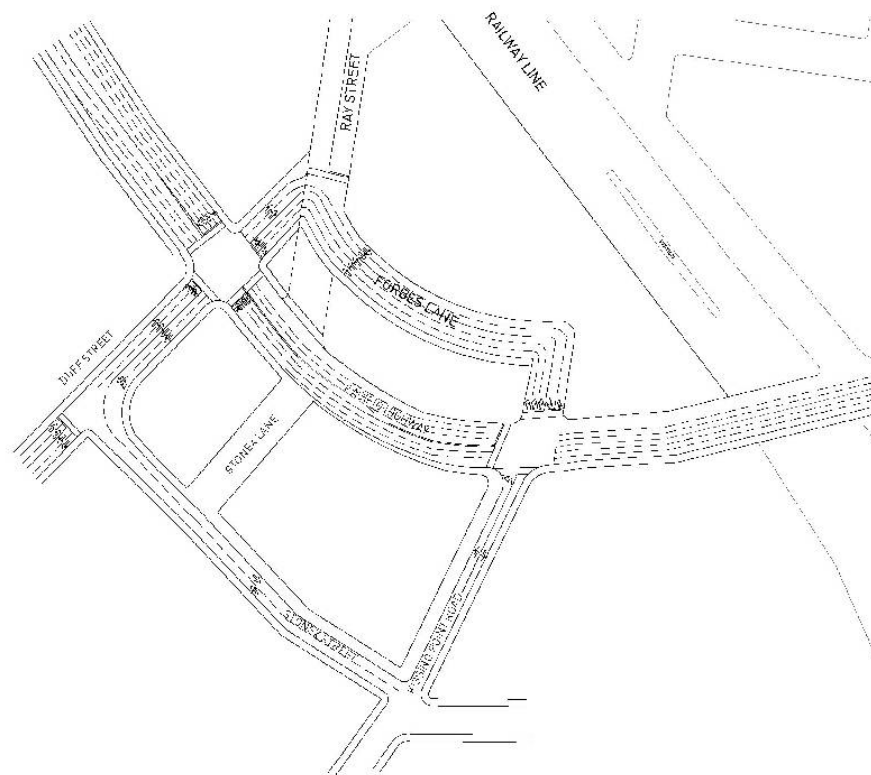
**OPTION 4B - NEW STREET LINKING KISSING POINT ROAD
AND DUFF STREET**

- Formalise existing link between Kissing Point Road and Duff Street by the creation of a new street “Stonex Street”
- “Stonex Street” provides a frontage to the bushland reserve between Duff Street and Kissing Point Road.



OPTION 4C - NEW STREET LINKING KISSING POINT ROAD AND PACIFIC HIGHWAY

- Formalise existing link between Kissing Point Road and Duff Street by the creation of “Stonex Street”
- Stonex Street provides a frontage to the bushland reserve between Duff Street and Kissing Point Road
- Realign Ray Street with Duff Street
- Principal new intersection at Duff Street with left in, left out only at Kissing Point Road



OPTION 5 – TRAFFIC IN THE ROHINI STREET AREA

The fifth question that was put to residents was: **How can we improve traffic circulation around Rohini Street?**

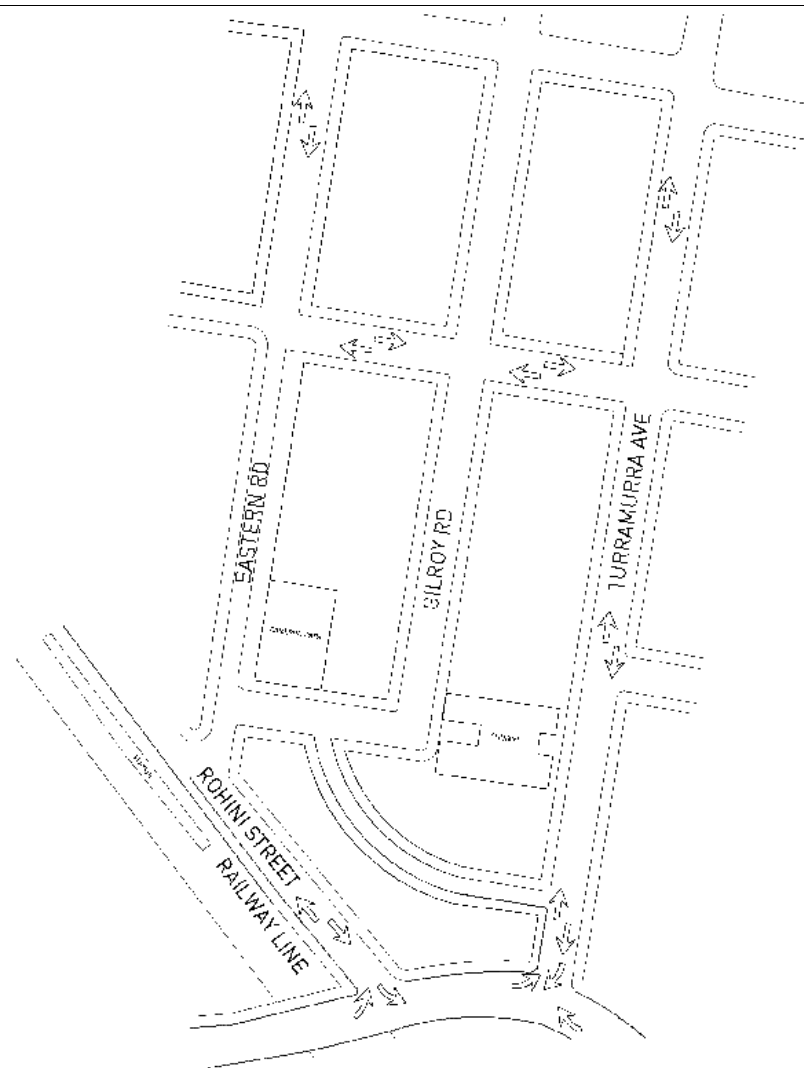
One of the key issues in this area is through traffic often regional through traffic using Turramurra Avenue and Rohini Street.

Traffic southbound on Eastern Road has only limited options to access the highway. The most direct route is via Rohini Street. Unfortunately, the through traffic conflicts with local traffic accessing the centre, pedestrians accessing the station and shops and buses accessing the centre. An alternative is Turramurra Avenue which is used by both through traffic north and south bound. In traffic planning terms this situation is unacceptable as through traffic must be kept of local streets.

Four traffic options were developed to address this issue. A number of options focused on providing a new road, at various locations, as a new through road link between Eastern Road and Turramurra Avenue.

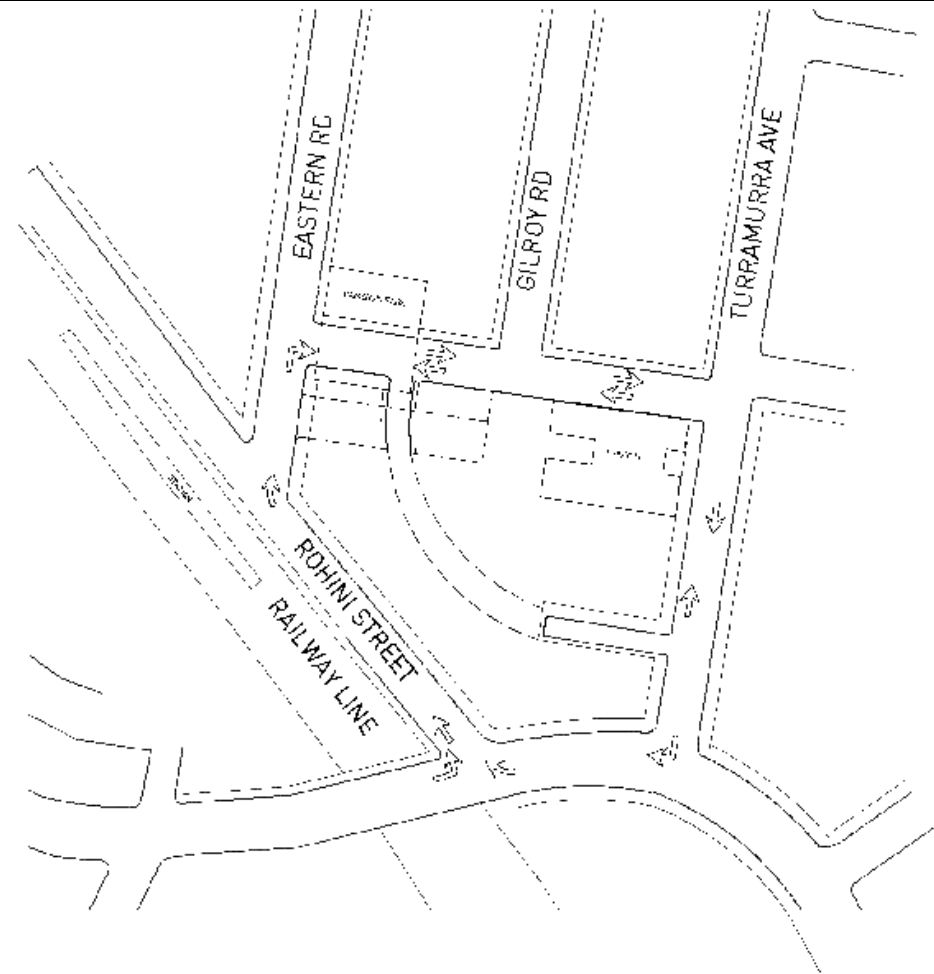
**OPTION 5A - TWO WAY TRAFFIC ON ROHINI STREET
WITH A NEW ROAD AT WONGA WONGA STREET**

- Extend Wonga Wonga Street through to Eastern Road
- Two way traffic on Rohini Street
- Left in and left out only at Rohini Street onto the highway
- Right turn into Turrumurra Avenue from the highway
- Left and right turn out of Turrumurra Avenue from highway
- Through traffic encouraged into Turrumurra Ave from Eastern via new road (Wonga Wonga Street extension) or from Brentwood



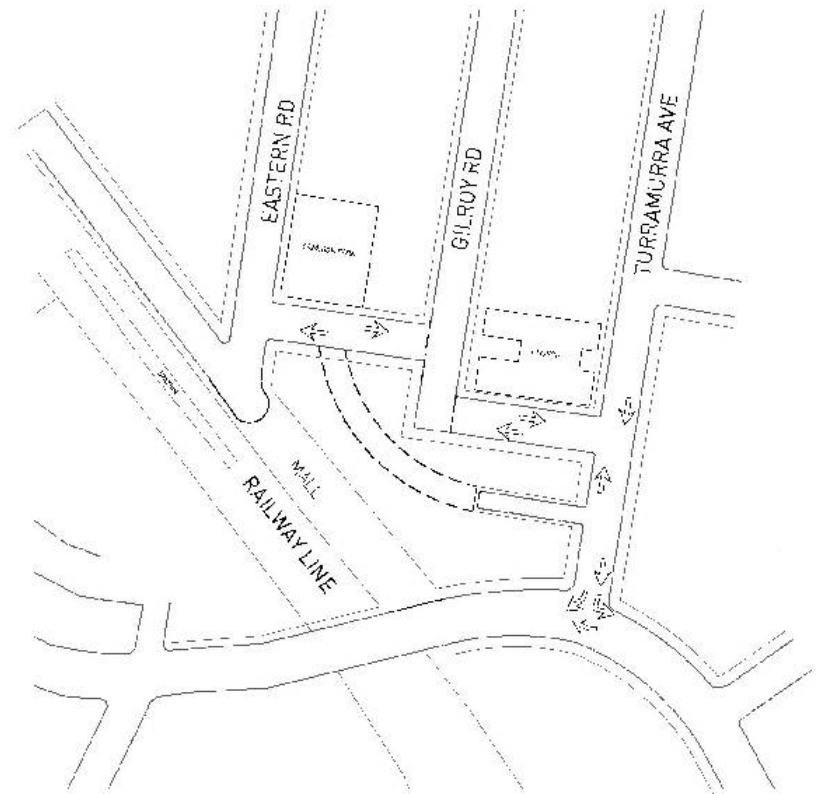
**OPTION 5B - ONE WAY TRAFFIC ON ROHINI STREET
WITH NEW ROAD LINK AT GILROY ROAD**

- One way traffic in Rohini Street northbound to Eastern Road
- Left and right turn from highway into Rohini Street
- Left and right turn out of Turrumurra Ave onto highway
- Left into Turrumurra Ave from highway
- New street between Eastern Road and Turrumurra Avenue along the northern boundary of the Uniting Church
- Street cuts through existing park however provides opportunities for larger open space at southern end of Gilroy Road
- Through traffic encouraged via Brentwood Avenue and Turrumurra Avenue in lieu of Eastern Road



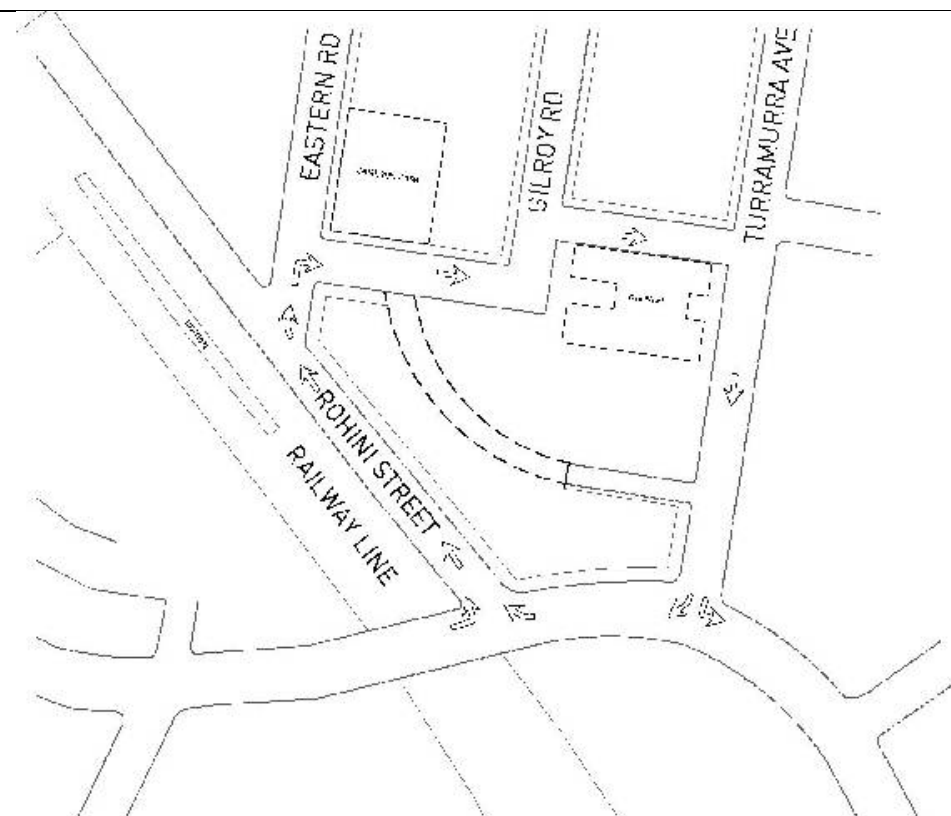
**OPTION 5C - ROHINI STREET CLOSED FOR PEDESTRIAN MALL
WITH NEW ROAD LINK AT GILROY ROAD (USING PART
EXISTING ROAD ALIGNMENT)**

- Remove traffic from Rohini Street
- Create new street between Gilroy and Turrumurra Avenue on southern side of the Uniting Church
- All through traffic to use Turrumurra Avenue
- Traffic lights at Turrumurra Avenue allows right turn into Turrumurra Avenue from the highway and right out of Turrumurra Avenue onto the highway
- Turrumurra Avenue remains two way



OPTION 5D - COMPLETE ONE WAY SYSTEM

- One way loop via Turramurra Avenue, Rohini Street and Gilroy Road
- New road along the northern boundary of the Uniting Church
- Reduces congestion in Rohini Street, and provides opportunity to widen footpaths for pedestrian activity



8.0 ASSESSMENT OF OPTIONS – COMMUNITY WORKSHOPS AND SURVEY

Planning and traffic options survey analysis

As part of the consultative process of developing an appropriate mix of planning options for the Turrumurra town centre, a range of displays, presentations and feedback opportunities were delivered to residents and other interested persons in Turrumurra during August and September 2005. These comprised:

- Options Workshop & Survey
 - *Masonic Centre (6.30pm, 10 August)*
 - 50 invited Turrumurra / Warrawee residents & 20 self-selected persons
 - Responses = 43
- Options Workshop & Survey
 - *Meals on Wheels centre (7pm, 15 September)*
 - 50 invited/ self-selected Turrumurra / Warrawee residents
 - Responses = 40
- Options Displays & Survey
 - *Outside Coles Supermarket (10am, 20 August)*
 - *Outside Franklins Supermarket (1pm, 20 August)*
 - *Cameron Park (12 noon, 24 August)*
 - *Meals on Wheels centre (12 noon, 28 August)*
 - *Turrumurra Library (August and September)*
 - Interested persons
 - Responses = 80
- Options Workshop & Survey
 - *Masonic Centre (3pm, 10 August)*
 - Invited Turrumurra owners of town centre lands
 - Responses = 22

- Options Display & Survey
 - *Council Web-site (August/September)*
 - Interested persons
 - Responses = 39

A mailout of Turrumurra News to some 8000 Turrumurra & Warrawee households led this process in early August. Options were displayed and described to allow interested survey respondents to apply their experience of Turrumurra town centre, during this formative step in its planning. The 224 above responses expressed choices and comments for 5 survey questions on town centre planning options:

- Town centre land-use – mixed-use and retail location options
- Community facility & open space – health, library and leisure centre options
- Traffic flow options –
 - William & Ray Streets area,
 - Duff Street & Kissing Point Road area &
 - Rohini Street area.

Q.1 – Where is mixed use & retail to be located?

Options centres		Coles /	Coles /	3 Retail
		Rohini	Rohini Supermarkets	
Preference	1 blue	69	66	94
	2 red	67	87	23
	3 yellow	58	32	87

Preference 1

3 Retail Centres – option C – proposed that retail capacity be retained in all 3 parts of the town centre, including Franklins' area, south of the Highway, being retained as retail. Of 224 responses received, the largest group of some 42% gave first preference to this option. Notably some 39% gave their third preference to this option as well. This may well reflect concerns expressed in additional comments received about these options, that the Highway restricts access from the south side to retailers on the north side, and that Franklins and its adjacent shops are more accessible from the south.

Preference 2

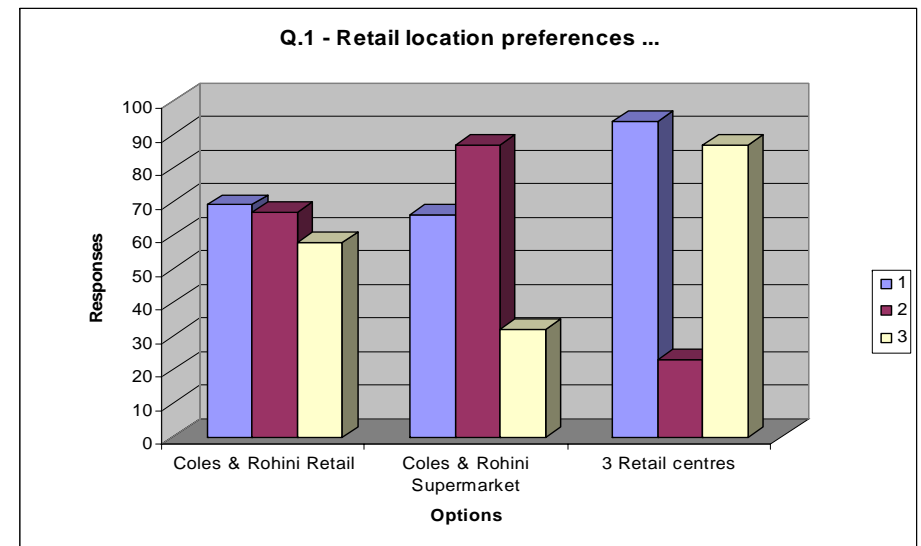
Coles /Rohini Supermarkets – option B – proposed two mixed use centres with supermarkets on both northern sides of the rail line, including a new one around Gilroy Lane, while Franklins' side south of the highway would be mainly for medium density residential. This option received the highest level of second preferences, 87%, with the lowest level of first (30%) and third (14%) preferences of the three options. This option was mentioned as making supermarket facilities much more accessible to households on the northern side of the rail line, along the Eastern Road spine.

Preference 3

Coles /Rohini - option A - proposed two mixed use centres, centralising retail on the northern Coles and Rohini Street sides of the rail line. The option proposed a larger shopping complex on the Coles side, specialty retail and community facility hub on the Rohini Street side, with Franklins' side south of the highway, being mainly for medium density residential. This received the a moderate/low level of the options with 31%, first preference, 30% second preference and 26% third preference of the 224 responses received. Based on the reasoning indicated for the above preferences by responses, a larger Coles-precinct complex would be less accessible for supermarket shopping for many residents both north and south of the Highway, and together with specialty retail/community hub in the Gilroy Lane / Rohini Street areas, is indicated as least favoured.

Retail Option Comment

Given the scope of the 3 retail options offered, it may not be surprising that survey respondents indicated preferences for supermarkets in the Franklins area and Rohini/Gilroy area, given that these would provide easier access to most Turrumurra/Warrawee households to the south and north respectively, unrestricted by crossing the railway or Highway. As reported in the 2005 Residents' survey, these two transport lines effectively divide the town centre into three.



Q.2 – Where are community facilities and open space to be located?

Options	A. Community Fac Combined	B. Current Locations of Fac Retained	C. New leisure centre & distributed Comm Fac
Preference 1	1	57	95
2	62	50	66
3	68	51	59

Preference 1

Current locations of facilities retained – option B – proposed enlarged library in Ray Street / Coles precinct fronting William Square & rail station forecourt, with other community facilities located at the end of Gilroy Lane, fronting a new Gilroy Green. NSW Health facilities to remain at *Hillview*.

Of 224 responses received, the largest group comprising some 43%, gave a decisive first preference to this option (the next nearest first preference was option C at 28%, discussed below). This high level support for the most conservative option B may well reflect concerns about the need for larger/more community facilities at Turrumurra town centre.

Preference 2

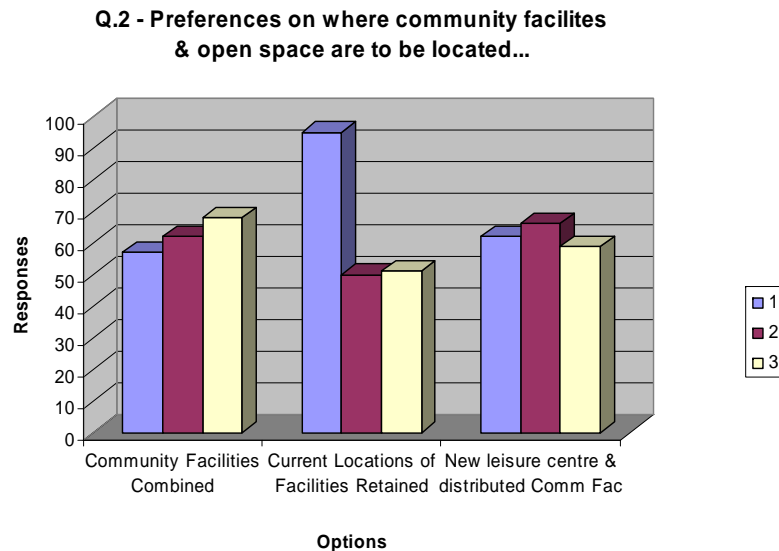
New leisure centre & distributed community facilities – option C – proposed a new leisure centre in the Coles precinct fronting the new William Square & rail station forecourt. Library and community facilities would be adjacent to a new Gilroy Square, with parking below. NSW Health facilities would remain at *Hillview*.

This option received the highest level, some 30%, of second preferences marginally ahead of Option A (28% - discussed below) and Option B (23% - discussed above). Support is notably less than for option B, with comments reflecting concern about too many community facilities located within this retail area. In survey response comments, some reservations were expressed about a leisure centre at Turrumurra.

Preference 3

Community facilities combined – option A – proposed that NSW Health & Council library & community facilities be located in one new building fronting a new Gilroy Green (adjacent to Gilroy Lane). This received the highest third preference vote of 31%, slightly ahead of option A (27%) then option B (23%)

This may indicate a consistency with the earlier preferences, where increased community facilities that competed with shopping and parking were not attractive to survey respondents.



Community facility Option Comment

It may not be surprising that survey respondents indicated preferences for retaining the current locations of community and NSW Health facilities and Council library, given their preferences for supermarkets in the Gilroy/Rohini and Franklins' precincts. Access, parking and shopping would seem to be respondents' priorities. A community /health/library hub in the Coles' precinct may be a more acceptable alternative, to obviate conflict with these priorities.

For questions 3 to 5, the survey asked respondents to express a level of support or other, as Agree / Neither / Disagree, for traffic options dealing with the key traffic areas feeding into and through the Turrumurra town centre. The options and respective responses analyses are set out below:

Q.3 - How to improve access to William & Ray Street area?

Options:	A. Align William St & KP Rd – Ray St / Forbes Lane Loop		B. Align William St & KP Rd - in/out William St	C. Do not align William St & KP Rd - Widen Forbes Lane
	Agree	105	89	30
	Neither	17	25	15
	Disagree	28	33	49

Most Agree

Align William Street & Kissing Point Road & Ray Street/Forbes Lane Loop -option A – proposed the above alignment, plus widening Forbes Lane to 2-way traffic, and including *kiss-and-ride* short term parking at rail station entrance.

Of 224 responses received, the largest group comprising some 47% gave a notable level of agreement this option (the next highest level of agreement option B at 40%, discussed below). This high level of agreement for option A, (reflected to an extent in option B that had some similar attributes) may indicate a much-stated need for better road access from areas south across the Highway to the rail station and town centre. (Option C received the lowest level of agreement at 13%.)

Most Neither

Align William Street & Kissing Point Road – in and out only at William Street – option B indicated Forbes Lane to remain one-way and included new roundabouts at the rail station entrance for *kiss and ride*. This option attracted the highest levels of Neither votes compared to options A (8%) and C (7%). Its lack of attractiveness was indicated by comments that Forbes Lane needed to be two-way, and in out only at William Street was again not as good as Option A.

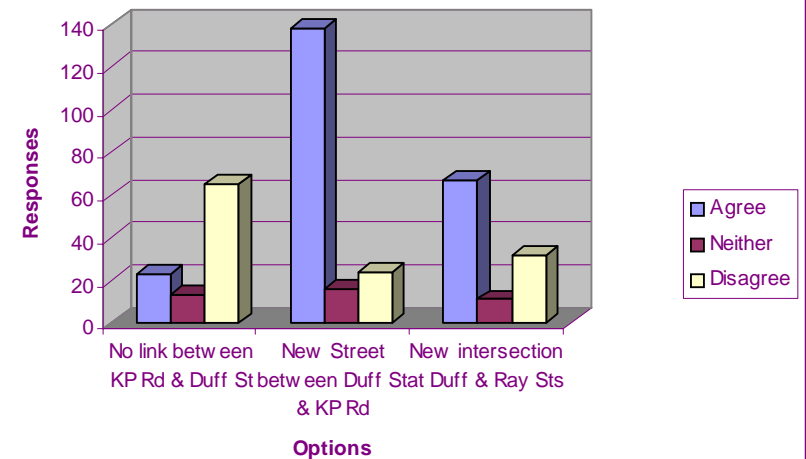
Most Disagree

Do not align William Street & Kissing Point Road – widen Forbes Lane - option C – included retaining the existing road alignments, widening Forbes Lane to two-way, with left-in and left-out from the Highway only at Forbes Lane. This option attracted the highest level of Disagree votes, at 22% of those responding to the survey. This is a minimalist option and, given the comments expressing concern with traffic flow in the town centre, attracted little agreement.

William & Ray Street area access – Options Comment

The high level of agreement to Option A and notably lesser attractiveness of options B & C reflects a clear message from those surveyed that there needs to be more direct road access from Kissing Point Road across the Highway to the rail station entrance, and Coles supermarket / Council Library precinct.

Q. 4 - How to improve access between Duff St & Kissing Point Road ...



Q.4 – How to improve access between Duff Street & Kissing Point Road?

	A. No link between KP Rd & Duff St	B. New Street between Duff St & KP Rd	C. New intersection at Duff & Ray Sts
Agree	23	134	63
Neither	13	16	11
Disagree	65	24	32

Most Agree

New Street between Duff Street & Kissing Point Road - option B – proposed the creation of a new Stonex Street, parallel to the Highway, between Duff Street and Kissing Point Road.

Of 224 responses received, the largest group comprising a notable 60% indicated agreement to this option B (the next highest level of agreement was option C at 28%, barely half the support of option B above). The high level of agreement for option A may bear out survey comments that the new street could formalise current use of the Franklins' car park access link between the above streets.

Most Neither

New Street between Duff Street & Kissing Point Road – option B – as with Most Agreement above, this option also received the most Neither, indicating a very small level of uncertainty of some 7% about this option. Similar levels of uncertainty were expressed for options A (5%) and C (6%) This very low level of uncertainty over all options suggests strong support to take action on traffic in this precinct.

Most Disagree

No link between Kissing Point Road and Duff Street – option A – was a do nothing option and received a 29% level of disagreement from survey respondents. This is consistent with the levels of Neither and Agreement traversed above.

Access between Duff Street & Kissing Point Road – option comment:

The high level of agreement to Option B – creating Stonex Street parallel to the Highway, and markedly less agreement with options A and C, supports comments on the need to better cater for the run of vehicles between Kissing Point Road & Duff Street that currently pass through the Franklins car park. Stonex Street could also provide clear delineation between any redevelopment of the Franklins site and the adjoining area of remnant blue gum high forest to the south.

Q. 5 – How to improve circulation around Rohini Street?

	A. Two-way Rohini St extend Wonga Wonga St	B. One-way Rohini St cross street	C. Rohini Street new straight	D. Complete one-way system Mall
Agree	40	38	65	71
Neither	19	21	4	11
Disagree	54	37	47	53

Most Agree

Complete one-way system – option D – proposed making Rohini Street one-way north-bound, with a new one-way road link between Eastern Road and Turrumurra Ave, via Gilroy Road, with Turrumurra Ave to become one-way south of Nulla Nulla Street.

Of 224 responses received, the largest group comprising some 32%, indicated agreement to this option D (the next highest level of agreement was option C at 29%, indicating a near similar level of support for closure of Rohini Street.) Options A (18%) and B (17%) received notably lower levels of agreement.

Most Neither

One way Rohini Street – new straight cross street – option B – proposed making Rohini Street one-way north-bound, a new road link between Eastern Road & Turrumurra Avenue, via Gilroy Road, and through traffic going via Turrumurra Avenue. It received only 9% of Neither responses. Option A at 8% had a very similar level – the low levels of Neither could reflect the need for action on town centre traffic management.

Most Disagree

Two-way Rohini Street – extend Wonga Wonga Street – option A – proposed Rohini Street remaining two-way, with only left-in and left-out where it meets the Highway; through traffic would then use an extended Wonga Wonga Street between Eastern Road & Turramurra Avenue. While option A received the highest level of disagreement (24%), notably option D had a similar level of disagreement.

Survey comments

Selected comments from the survey responses are indicative of Rohini traffic issues:

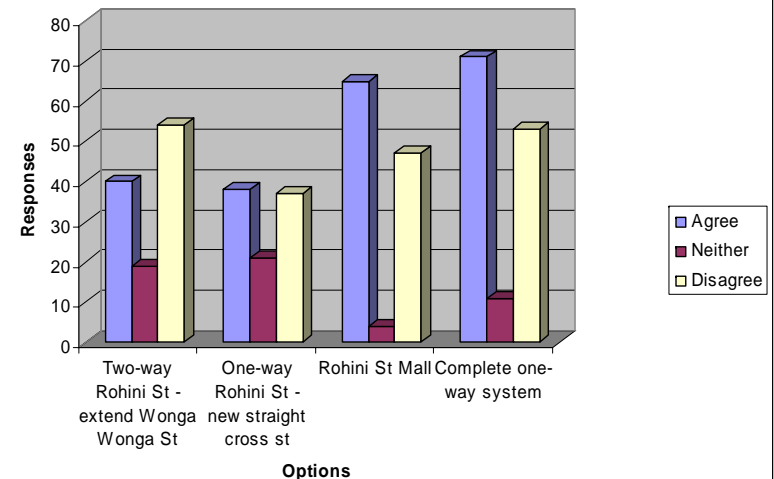
1. Closure of Rohini not considered practical
2. Eastern Road should be main transit spine
3. Put bus interchange under Coles; build bridge as per Mainstreet recommendations 15 years ago
4. Need for Ray & Rohini overbridge
5. Don't like any of these.

How to improve circulation around Rohini Street – option comment:

Option D, a complete one-way system was the most agreed option, with creation of a Rohini Street mall a close second preference (option C). These reflect support for better pedestrian access in and across Rohini Street. The low levels of Neither to all options indicate that traffic in this precinct needs attention. The relative levels of disagreement to the most agreed options, D and C, recognise the difficulty of dealing with traffic circulation in this precinct.

Taking these conjointly, the complete one-way system could provide an initial pedestrian/traffic planning option (D). Given Eastern Road is a main traffic link to the north of the town centre, a mall in Rohini Street may not be practical until a better link from Eastern Road to the Highway is established. A supermarket in this precinct (Question 1, above), could also provide other improvement opportunities.

Q. 5 - How to improve circulation around Rohini Street ...



Summary and Conclusions

Five questions were asked of interested residents and others about key aspects of the Turramurra town centre. Analysis and interpretation of 224 survey responses for 5 questions indicate, in outline:

1. Supermarket facilities would be good in the Franklins' and Rohini/Gilroy precincts
2. A community /health/enlarged library hub in the Library/Coles' precinct
3. Aligning William Street & Kissing Point Road and widen Forbes Lane
4. Creating a new 'Stonex Street' between Duff Street & Kissing Point Road
5. Making Rohini St one-way north-bound (creation of a Rohini Street mall was a close second preference).

9.0 ASSESSMENT OF OPTIONS – Staff and consultants

9.1 INTRODUCTION

The 5 options and the sub-options were assessed by Council planning staff taking into account specialist advice from:

- Traffic consultant
- Retail consultant
- Urban design consultant
- Other staff

The assessment also took into account the results of the community survey and the options most favoured by residents.

This section documents the assessment by staff and consultants. The comments relate to draft land use options, community facilities and open space options, and traffic options. The notes are made in terms of the advantages and disadvantages of each option.

9.2 ASSESSED OPTIONS

The following options were assessed

1. Mixed use and retail

- A. Two mixed use centres - retail centralised
- B. Two mixed use centres – retail distributed
- C. Three mixed use centres

2. Community Facilities and Open Space

- A. Community facilities combined
- B. Current locations of facilities retained
- C. Distributed community facilities including new leisure centre

3. Traffic Options:

William St & Kissing Point Road

- A Align William Street and Kissing Point road – Ray Street/Forbes Lane loop
- B Align William and Kissing Point Road – in/out from William Street
- C Do not align William Street and Kissing Point Road, widen Forbes Lane

4. Duff Street & Kissing Point Road

- A No access between Duff Street and Kissing Point Road
- B Access between Duff Street and Kissing Point Road via new street

5. Access around Rohini Street

- A Two way Rohini Street and extension of Wonga Wonga Street
- B One way Rohini Street, new straight cross street
- C Rohini Street mall
- D Complete one way system

9.3 OPTIONS ASSESSMENT

Retail Assessment		
	Advantages	Disadvantages
Option A Two mixed use centres - retail centralised	<ul style="list-style-type: none"> Highway borders retail centre rather than severs it. 	<ul style="list-style-type: none"> Worst location for supermarkets having least convenience since bulk of trade area is south of Highway and north and east of railway. Loss of convenience for shoppers south of the Highway. Will involve crossing the highway to undertake shopping. Rohini Street shops lack anchor tenant on their side of railway Feasibility/implementation issues
Option B Two mixed use centres – retail distributed	<ul style="list-style-type: none"> Highway borders retail centre rather than severs it. Provides Rohini Street shops with an “anchor” tenant on their side of railway Supermarket services northern residents who currently travel to St Ives or Hornsby to shop 	<ul style="list-style-type: none"> Loss of convenience for shoppers south of the Highway. Will involve crossing the highway to undertake shopping. Proposed location of supermarket requires multiple amalgamations Feasibility/implementation issues
Option C Three mixed use centres	<ul style="list-style-type: none"> Retains supermarket based centre on the south side to serve that side of the highway, which is currently undersupplied with such retail space. 	<ul style="list-style-type: none"> Highway severs shopping centre Rohini Street shops lack anchor tenant on their side of railway

Open Space and Recreation Assessment		
	Advantages	Disadvantages
Option A Community facilities combined	<ul style="list-style-type: none"> new town square/village green on both sides of town centre All options show the relocation of Turrumurra Village Park away from the highway to form part of a new town square or village green. From an open space point of view this can be justified as the park in its current location has poor amenity and value. The outcome will be a new larger park with good aspect and protection. Expansion of district park (Karuah Park) with improved pedestrian links to the town centre to cater for growing population 	<ul style="list-style-type: none"> Loss of green space on highway Cost of land acquisition for Karuah Park extension to Brentwood Avenue
Option B Current locations of facilities retained	<ul style="list-style-type: none"> new town square/village green on both sides of town centre relocation of Turrumurra Village Park Expansion of district park with improved pedestrian links to the town centre to cater for growing population 	<ul style="list-style-type: none"> Cost of land acquisition for Karuah Park extension to Brentwood Avenue
Option C Distributed community facilities including new leisure centre	<ul style="list-style-type: none"> new town square/village green on both sides of town centre relocation of Turrumurra Village Park Provides an aquatic leisure centre option offering public facilities currently not available in Ku-ring-gai This location is one of a number of preferred locations for the leisure centre. The Ray Street area is suitable because it is in the northern area of LGA; adjacent to railway and the Pacific Highway; the site is big enough for the centre; there are collocation opportunities with Library, commercial, residential retail; and there are opportunities for integration with mixed use development incorporating commercial, residential or other community facilities.. 	<ul style="list-style-type: none"> Cost of land acquisition for Karuah Park extension to Brentwood Avenue Funding for Leisure centre and traffic issues

Community facilities assessment		
	Advantages	Disadvantages
Option A Community facilities combined	<ul style="list-style-type: none"> Supported by Ku-ring-gai/Hornsby Volunteer Recruitment, Referral and Training Service NSW Health keen to move out of Hillview as the building does not suit their needs and is expensive to maintain Strong synergies between uses Use of shared facilities Concentration of activity will attract new services Synergies between State health services and local services Library addressing main town square reinforcing civic function HACC and library in existing location is preferred by community services Consolidates all community facilities into one location adjoining the existing Uniting Church to create hub Releases Hill View for appropriate commercial use eg function centre to fund maintenance and restoration Library located next to Coles 	<ul style="list-style-type: none"> Community do not support bringing regional health facility into the town centre
Option B Current locations of facilities retained	<ul style="list-style-type: none"> Library addressing main town square reinforcing civic function 	<ul style="list-style-type: none"> Dispersed small scale community facilities Uses remain in existing locations spread out across the centre and divided by roads No opportunities gained from collocation Retaining HACC facilities in existing location negates opportunity to create new centrally located village green HACC will need to be on the second floor over the new supermarket. Meals on Wheels requires unloading and loading facilities. Best location is at ground level with direct access

Option C Distributed community facilities including new leisure centre	<ul style="list-style-type: none"> • Balance of community uses consolidated into larger groupings. • Leisure centre and Council facilities provide magnets on either side of rail line • Library located next to leisure centre 	<ul style="list-style-type: none"> • Library relocated no longer associated with main shopping centre. • Library best separated from HACC facility • Excludes option 1A (two supermarkets in this area will not fit alongside the leisure centre) • Funding for leisure centre requires further research
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Traffic and Transport Assessment		
	Advantages	Disadvantages
Option A Community facilities combined		<ul style="list-style-type: none"> • The main disadvantage of this option, in traffic terms, is that the two main trip generators (supermarkets) are confined to the Ray Street precinct which impacts directly onto Ray Street. • The combination of a constrained road network in Ray Street (Barriers of the Railway Line & Pacific Highway), the high level of traffic generated from these two land uses and the limited amount of green time available to the local road results in unacceptable conditions at the Ray Street/Pacific Highway intersection. • The community facilities at Gilroy Lane impact to a lesser extent although problems are exacerbated on the Rohini Street approach in both the morning and evening peak period.
Option B Current locations of facilities retained	<ul style="list-style-type: none"> • Library addressing main town square reinforcing civic function 	<ul style="list-style-type: none"> • Option provides limited assistance due to the existing traffic issues at both the Rohini Street and Ray Street approaches. • The traffic generated from the supermarket in Gilroy Lane impacts directly onto Rohini Street which already experiences difficult traffic conditions. • The impact on the Ray Street/Pacific Highway intersection, although creates problems to a lesser degree than option A, still results in the intersection of Ray Street/Pacific Highway operating at unacceptable levels. •

Option C Distributed community facilities including new leisure centre		<ul style="list-style-type: none"> • The disadvantage of this option is that it locates two main trip generators (Leisure Centre & Supermarket) in the Ray Street Precinct impacting directly onto Ray Street as in Option A. • Results in unacceptable conditions at the Ray Street/Pacific Highway intersection.
3 Traffic – Ray & William Street Alignment	<ul style="list-style-type: none"> • The realigning of William Street in traffic operational terms offers limited advantages. 	<ul style="list-style-type: none"> • The issue which may arise from this arrangement apart from capacity issues with the introduction of an additional phase at this intersection is that the limited queuing space on the William Street approach combined with the limited green time allocated to the side roads may result in congestion issues in the vicinity of the drop off/pick up zone and possibly at Ray Street where William Street ends.
4 Traffic – Ray & William Street Alignment	<ul style="list-style-type: none"> • Option B, a new Stonex Street – parallel to the highway between Duff St & Kissing Point Rd is preferable in traffic terms, as it would effectively remove some traffic from the Kissing Point Road/Pacific Highway intersection. (i.e. Left turning traffic from Kissing Point Road may choose to use Stonex Street/Duff Street) 	<ul style="list-style-type: none"> • Option 4C – a new intersection at Duff & Ray Street - is least preferred as it introduces signals at Duff Street & creates additional capacity pressures.
5 Traffic – Rohini St circulation	<ul style="list-style-type: none"> • Removes turning movements from the Pacific Highway providing an opportunity for additional capacity elsewhere within the overall system. • With Gilroy Lane set back, as shown, this will allow sufficient queuing space on the Turramurra Avenue approach to the Pacific Highway. • Another advantage to the one way system in Rohini Street is that it allows the opportunity for reallocation of road space towards pedestrians. (i.e. boulevard- footpaths etc.) 	
Ray/Rohini Street bridge	<ul style="list-style-type: none"> • Allows for distribution of Eastern Road traffic more evenly between Rohini Street/Ray Street and Turramurra Avenue relieving pressure particularly on the Rohini Street approach. • Provides improved accessibility and operation of public transport buses to and from both sides of the rail station. 	<ul style="list-style-type: none"> • Attracts more traffic through an existing quiet dead end street.

	<p>(This, in turn, would result in journey time and operational cost savings.)</p> <ul style="list-style-type: none">• Provides improved accessibility for residents to access either the existing supermarket or proposed leisure centre/library in Ray Street either by car or on foot by avoiding the congested Pacific Highway.• Supported in principle by Rail Corp.• The existing deep cutting lends itself easier to construction.	
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Planning and Urban Design		
	Advantages	Disadvantages
Option 1A Two mixed use centres - retail centralised	<ul style="list-style-type: none"> Consolidates all major shopping into on the north side minimising Division of the centre Reduces need for pedestrians to cross the highway 	<ul style="list-style-type: none"> Requires a strong focus on eastern side to ensure area retains vitality and not “lost” Reclassification and sale of council land Road closures and reclassification
Option 1B Two mixed use centres – retail distributed	<ul style="list-style-type: none"> Consolidates shopping centre into two primary areas either side of the railway which is a less problematic separation - achieves the consolidation goal Allows expansion of existing Coles supermarket Provides balanced outcome with magnets on either side of highway The removal of retail from the Franklins site opens this site to residential uses (with perhaps some commercial on ground floor of KPR intersection), and provides for better access to the bushland behind. Pedestrian access to the Turrumurra Town Centre is improved by the alignment of KPR and William St 	<ul style="list-style-type: none"> Limits the potential for community uses such as a library or leisure centre at this location. Speciality retail would also be limited at this site - being spread to the Rohini Street side. Activation of the Rohini St area relies on a 'community use' anchor. Requires establishment of small supermarket to the northern side and closure of Franklin Franklins currently have an 8-9 year lease so unlikely to change in medium term Site on the corner of Gilroy and Rohini has multiple ownerships and requires considerable amalgamations Requires improved pedestrian link over rail line to be successful
Option 1C Three mixed use centres	<ul style="list-style-type: none"> This option retains the status quo - supermarkets remain their existing locations It is the option that is most likely to happen in the short to medium term Redevelopment will improve the appearance and functionality of the area The removal of retail from the Franklins site opens this site to residential uses (with perhaps some commercial on ground floor of KP Rd intersection), and provides for better access to the bushland behind. Pedestrian access to the Turrumurra Town Centre is improved by the alignment of KPR and William Street 	<ul style="list-style-type: none"> This option does not really go towards solving any of the issues - it just increases the floor space in each area. Retail on the Rohini Street side may be weakened, and a square behind the Rohini St shops anchored by the HACC centre would be underutilised. The shopping centre remains separated and divided by the highway Access to Coles from northern side of town centre remains difficult

Environment		
	Advantages	Disadvantages
Option 2	<ul style="list-style-type: none"> • Opportunities for establishment of new trees 	<ul style="list-style-type: none"> • Relocation of parks will affect existing mature trees. Some of these trees may be transplantable
Option 4A		<ul style="list-style-type: none"> • Disconnected roads will leave unresolved edge conditions to reserve with development backing onto the bushland • Drainage down lane will be high velocity
Option 4B	<ul style="list-style-type: none"> • Formalises the informal lane behind Franklins into a two way street • Follows current road alignment does not impinge on bushland reserve • Provides improved interface to bushland for management and public access. Housing will front onto and address bushland • New development will have high levels of stormwater and environmental controls than existing • additional reserve area • possible funding 	
Option 4C	<ul style="list-style-type: none"> • As per 4B 	

10. THE RECOMMENDED OPTION

It is clear from the preceding discussions that there is no clear preference for one option over another rather there is a preference for elements from each option. The following is a summary of preferences.

Preferred option - economic and retail

None of the options presented are ideal in retail terms. The bulk of trade area is south of Highway and east of the railway.

To provide maximum convenience to residents, the best location for the supermarkets are on the southern side of the highway in the present location of Franklins and in the Turrumurra Avenue/ Rohini Street area on the eastern side of the centre. This provides the ideal retail model with the two supermarkets (anchors) at either end of the centre and strip retail in between. It also creates space in the Ray & William Street area for civic and community uses, including a larger public library and possible leisure centre.

The main disadvantage of this option is that the highway still severs the shopping centre. Highway traffic will continue to divide Turrumurra. There are also some implementation issues relating to the relocation of Coles that need to be overcome.

Preferred option – open space

The preferred option from an open space point of view is:

- Long term expansion of Karuah Park district facility and linking to town centre
- Relocation of Turrumurra Village Park
- The leisure centre's scale means that it can only be located in the Ray & William Street area. The decision about whether it is located in Turrumurra, or elsewhere, should be made in the wider context of an optimum location for Ku-ring-gai.

- Expansion of open space within the Turrumurra area. Specifically the creation of new squares around the new retail centres, and linkages between these new squares.
- The key to a successful public space is to provide an anchor that activates the edge. In consideration of the retail and community options this must be taken into account.
- The realignment of Gilroy Street to the northern side of the Uniting Church allows for the consolidation of Cameron Park with the new square at the head of Gilroy Street. This would allow for the creation of a large north facing open 'green space' with good access to the activities that take place within the Town Centre.

Preferred option – community facilities

The preferred option from a community services point of view is to co-locate facilities. While the library and the HACC facilities do not need to be close by there are benefits to creating a “community hub”. This option was previously identified in option A, however given that the resident-survey preferred location for a supermarket is now in the Gilroy Lane area, this creates the opportunity to establish a community hub on the Ray Street/William St area set around a new town square.

Council's library will continue to be located in the Ray Street precinct to front the new town square. The preferred location is near the highway on the site of the existing Turrumurra Village Park. An alternative location is on the northern edge of the square adjoining a leisure centre.

As a sub-option, the HACC / Meals on Wheels facility could either be located on the second floor of the Library building, with basement loading dock. Or it might front Ray Street directly, but would be a lesser option for the reasons outlined.

The options provided for the co-location of the community facilities and / or relocation at the Ray St site or at the end of Gilroy Street. Co-location from an economic perspective seems to make sense as parts of the facility can be shared (toilets / amenities etc) and construction costs can be reduced as one facility is being built and designed.

The community facilities will provide an anchor to a public space, complementing speciality retail uses, cafes, service retail and the railway station. Without such synergy, they are unlikely provide enough of an anchor to make the town square successful. With them, the William/Ray Street area should become an energetic, dynamic space between the Franklins and Rohini Street supermarkets proposed.

Preferred option - traffic

- The preferred approach in traffic terms is to locate the main traffic generators in precincts that disperse rather than concentrate problems:
- The supermarkets are then best located in Turrumurra Ave/Gilroy lane precinct north of the highway, and the Franklins area to the south of the highway between Kissing Point Road and Duff Street.
- The size of the supermarket and retail development should be restricted to an ideal maximum rather than an optimum maximum.
- Locating the library and leisure centre in the Ray & William Street precinct (area D) which generates less traffic than that of a supermarket, and considering the constraints on the road network, assists to some degree.

The location of the supermarket on the eastern side near Turrumurra Avenue also has the advantage that it does not impact substantially on Rohini Street but may necessitate the need for traffic signals at the Turrumurra Avenue/Pacific Highway intersection. (Still to be investigated)

Preferred option - urban design

The opportunity to swap Council Turrumurra Ave car park land for Coles' supermarket land should be investigated. A new supermarket off Turrumurra Avenue would provide good access for resident shoppers from the north of the rail line. Franklins would continue to provide good supermarket access for households south of the highway.

Linking the two supermarket precincts would then be a network of enhanced public spaces and a civic hub/ town square in the Ray & William St area, bounded by speciality retail. At the hub are the station and community facilities. Drawing the key elements from the above and from Option C creates a sound urban design model of two anchors with speciality retail and civic uses in between. This option also relieves some of the traffic pressures at Ray Street

Assessment of alternatives and options raised by residents

Other options raised during consultation for consideration are identified below.

Commuter parking

Many people asked what are we doing about commuter parking? Why haven't we addressed this issue?

Response:

- Commuters largely from out of the area either the central coast or the Warringah northern beaches area. Therefore not a local issue
- Unlikely to be any funding from Ministry of Transport for a centre the size of Turrumurra
- One option is privately operated car parks that charge a fee for parking more than 2-4 hours

- Another option is time limited parking on local streets close to the station

Bus stop on Rohini Street

It was noted that the access via the footpath to the station from the bus stop is not suitable for disabled as it does not conform to Australian Standards.

Response:

- One possibility is to put the bus stop on other side where rail buses currently operate from as this provides level access
- In this arrangement, the Rohini Street bus stop becomes drop off and pick-up for commuter parking
- This option will be modelled, tested and further considered.

Additional community facilities

Response:

- Youth This is being considered in association with library and/or the leisure centre
- Arts and cultural centre. Is Council undertaking a study?

Access over the highway

- *What about pedestrian access under the highway?*
- *What about a pedestrian bridge over the highway?*
- *Road bridges over or tunnels under the highway from Eastern Road or Gilroy Road to KPR*

Response:

- Generally this type of work is considered unsuitable for a centre the size of Turrumurra
- The cost of road works such as a tunnel or bridge over the highway is beyond the economics of this study

- Pedestrian underpasses are unsafe unless highly active with shops for surveillance. This would not be economically viable in Turrumurra
- Pedestrian bridges do not provide an alternative given grade/lift access costs. They cater for people moving from one shopping complex to another. Successful in the CBD. Gordon is not heavily used

New pedestrian walkway

Running from Cherry Street to the end of Rohini Street

Response

- This option will be investigated further

Vehicle bridge over the rail line at Ray Street

- *Majority demand consideration of the 'Ray Street bridge'.*
- *There is a long history and old plans that one an award. Option A could include the bridge*
- *Options needed for bridge connecting Ray Street to Rohini Street - investigate feasibility*
- *Need to consider linkages- look at both sides of Ray Street traffic flows to Eastern Avenue*
- *It would be great to have a linkage between Ray Street and Rohini Street.*

Response:

- Preparing a cost estimate for a new bridge
- Traffic consultant will provide advice on advantages and disadvantages

“Option 1D”

Retain Franklins on south side and locate new supermarket on eastern side of rail line

Response:

- This option has become the preferred option

Hillview

New community use option locates all community uses to the Hill View site

Response:

- This option has been considered however the disadvantages include notable difficulties of access to the site

Hillview Road corridor land

Could be used for public parking and open space?

Response

- Developing a proposal to put to RTA that provides a balance of uses including open space, housing and public parking and access

Development over the rail line

- *Possible air right development over the railway to provide required retail/commercial spaces without the redevelopment of existing town centre.*
- *Should use the existing railway reserve as open space to span across the railway line- this is a waste of an open space opportunity.*

Response:

- This type of development will require buildings of between 10-12 storeys to make the development economically viable
- This type of development is more typical of Chatswood and St Leonards and is not considered appropriate for a centre the scale of Turrumurra
- Discussions with indicated that Rail Corp policy does not encourage air rights development. Only transferable development rights will be given

DESCRIPTION OF THE RECOMMENDED OPTION

The recommended option is a combination of option 1C and 1B in that it creates a sound town centre model of two major attractors at either end. Linking between the two is a network of enhanced public spaces that is bounded by speciality retail. At the centre are the rail station and a community facilities “hub”.

The rationale is to put the supermarkets where the majority of people can access them easily and where they cause the least traffic impact. Residents noted that the Ray Street area is difficult to access particularly from the north and the south. The Coles supermarket also has significant traffic impacts in its existing location.

The preferred configuration of supermarkets is one on the southern side of the highway serving south Turrumurra residents and one on the northern side of the railway near Turrumurra Avenue serving residents to the north and east of the centre. Significantly this option was raised by a number of people during the consultation phase.

The preferred location for community facilities on balance is consolidated within the Ray Street precinct to create a community hub in the centre of the commercial area.

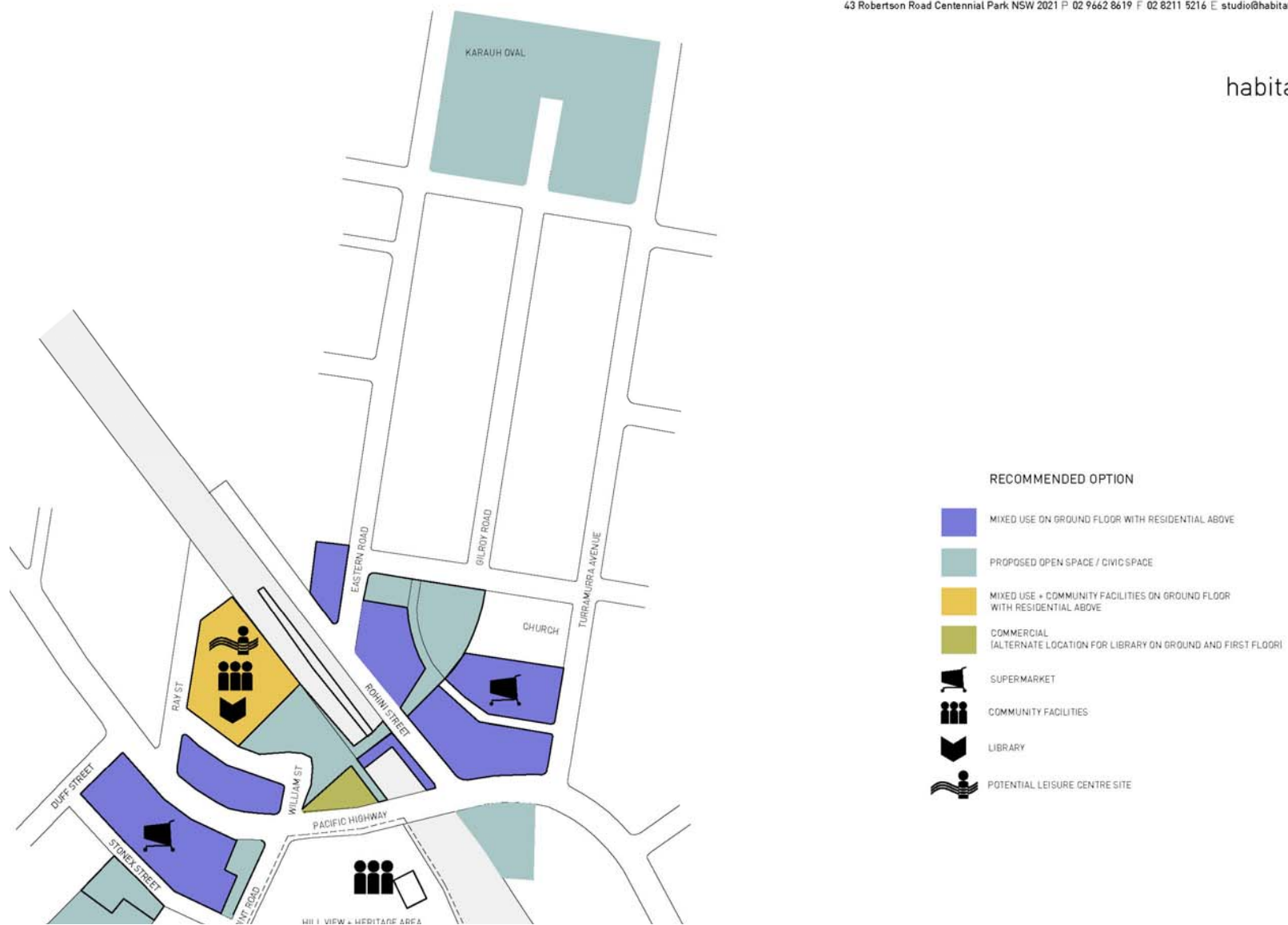
Recommended Traffic Option (D3SV)

The recommended traffic option has been developed by comparison with a series of detail traffic models (refer appendix A and B):

- New Stonex Street (Two Way)
- Realigned Forbes Lane (One Way) with new connection at Kissing Point Road.
- No right turn permitted from Forbes Lane into Pacific Highway. (This movement is catered for via Kissing Point Road, Stonex Street and Duff Street.)
- No left turn from Ray Street into Pacific Highway

- No left turn from Pacific Highway into Forbes Lane.
- Rohini Street (Signals removed, left in left out only)
- New Gilroy Lane (Two Way)
- Turrumurra Avenue (Two Way)
- New Signals at Turrumurra Avenue/Pacific Highway
- Left Turn Bays on Pacific Highway at Turrumurra Avenue and Kissing Point Road.

habitation



COMPONENTS OF RECOMMENDED OPTION (OPTION D)

The Recommended Option has a number of key components which are described below:

New pedestrian bridge over rail line at train station

- Rail Corp is proposing to construct a 3.5m wide pedestrian bridge over the rail line linking William Street and Rohini Street as part of Easy Access Upgrade
- Rail Corp has agreed to provide in-kind assistance to Council for the delivery of a wider bridge including project management
- Opportunity for Council to partner project and fund only the increased width of the bridge
- 7.5m wide bridge highly desirable
- 1-2 shops required to provide passive surveillance
- Funding mechanism needs to be determined

Improved pedestrian access along the Pacific Highway

- Pedestrian access along the Pacific Highway traveling east to west or vice versa has poor amenity and in some locations, such as the road bridge over the railway, pedestrian conditions are dangerous
- Footpaths are very narrow and there is no protection for pedestrians from vehicles
- Investigate the potential for new pedestrian access bridge cantilevered off existing road bridge (Costs and funding sources need to be determined)
- Require building setbacks to allow for widening of footpaths and street tree planting

New road bridge over railway at Ray Street

- Option identified by community during options exhibition period
- Provides additional pedestrian and cycle link over railway
- Consultant currently preparing cost estimate
- Funding mechanism to be determined
- Cost benefit analysis required
- Likely implications for other traffic network and road hierarchy will need to be considered
- Undertake further feasibility assessment and traffic modeling as required

New pedestrian link between Rohini Street and Gilroy Lane

- Provides direct visual link between the eastern and western sides of the centre
- provides linkage between new village greens and station
- Complex implementation involves multiple amalgamations, negotiations with landowners
- Timing, may take many years to implement
- further investigation as part of built form controls as to most appropriate means to achieve

New village green (eastern side of the centre on Gilroy Lane)

- Possible relocation of Cameron Park to a more central location
- Possible relocation of existing community facilities (HACC) creates opportunity for new park in the town centre
- Existing croquet lawn could be retained as part of new park
- Existing building(s) could be retained/modified as part of park setting for commercial use such as restaurant or café however this would compromise amount of useable open space available

New Turramurra Village Park (western side of centre on Ray/William Streets)

- Possible relocation of Turramurra Village Park from highway to William street car park area.
- The new location will provide new park in quiet protected location centrally located and useable
- Potential to incorporate “railway gardens”
- Turramurra village park has lost its function and amenity due to traffic on highway
- Park not heavily used and has poor amenity
- Undertake further investigation. Relocation partly relates to decision to realign William Street and reclassify land

New Turramurra Library

- existing facility requires expansion to meet future needs
- Existing location supported by community
- Requires retail and community infrastructure to support the function
- Preferred location in Ray/William Street precinct

New community facilities buildings

- existing facilities (HACC, Life Start, Meals on Wheels, Senior Citizens) require expansion to meet future needs
- Consolidation supported by existing service providers
- Community support for current location on east side
- However should supermarket relocate to eastern side inadequate space will be an issue
- Opportunity arises to create “community hub” around town square on west side in Ray Street precinct
- Opportunity for shared use of facilities

New leisure centre

- Consultant identified a strong community need for such a facility
- consultant identified the ray street precinct as one of three preferred sites in the lga
- the site is close to public transport and can accommodate the building footprint
- traffic impacts require detailed assessment
- possible relocation of existing supermarket creates opportunity
- Leisure centre could potentially support the community facilities by acting as an “anchor”
- Subject to traffic modelling and further assessment by leisure centre consultant, community survey and Council endorsement

Mixed Use retail precinct on southern side of highway

- existing Franklins supermarket requires expansion to meet demand and compete with new Thornleigh Markets
- strong community support for current location of supermarket
- serves residents to south of highway
- adjoining retail requires redevelopment - currently run down
- new street to south strongly supported by community
- retain and expand existing retail precinct south of highway consistent with retail strategy

New mixed use precinct with retail and residential on Turramurra Avenue car park

- Preliminary advice from traffic and retail consultants support this location
- The site provides direct access to Pacific Highway
- Will require new traffic signals at intersection of Turramurra Ave with highway

- Serves residents to north and east reducing need to travel to St Ives or Hornsby
- Could accommodate medium size supermarket approximately 2500-3000sqm in size
- Impacts on church need to be taken into account
- Requires reclassification of council land, rezoning and underground public car park
- Potential for new retail fronting Gilroy Lane to support supermarket
- Requires further investigations to determine feasibility of new supermarket

New shop top housing (mixed use residential) areas

- Most new housing will be within mixed use zones located on land currently zoned for commercial within the centre
- Other areas for investigation are the interface sites and existing medium density zones (2e, 2f, 2g and 2h)
- Few sites outside the commercial areas likely to be rezoned due to range of constraints and recent rezoning.

Realignment of William Street with Kissing Point Road

- Traffic assessment indicates some advantages in traffic terms
- Would provide improved pedestrian connection across the highway
- Difficulty of implementation – land ownership etc.
- Economic impacts on existing landowners to be considered
- Timing, may not be achievable in short to medium term
- Supported by the community
- Requires further assessment including traffic modelling and cost benefit analysis

New street between Eastern Road and Turramurra Avenue

- New link road required between Eastern Road and Turramurra Avenue required to reduce through traffic on Rohini Street and Gilroy Lane
- New link road strongly supported by traffic consultant
- Preferred location is close to the centre to reduce impacts on Turramurra Avenue
- Preferred location for a new street is along the northern edge of the Uniting Church
- Further traffic modelling and assessment and consultation with landowners required to determine final alignment

11. NEXT STEPS

This report has described the process of the development of a preferred option for the Turrumurra commercial centre. The recommended option will be put to Council for formal resolution.

The council resolution will then form the basis for the preparation of a draft Turrumurra Centre Development Control Plan and draft Turrumurra Centre Local Environment Plan which will include the preparation of detailed plans documenting building envelopes, zoning, site coverage, Floor Space Ratio and building height and a public domain concept plan.

The next stage will involve further resident consultation and discussion with landowners and other stakeholders including Government departments.

The next stage will also require financial assessment for the key elements of the preferred option and an economic impact assessment and additional traffic and parking assessment.

Formal exhibition of the draft documents is anticipated to take place in mid 2006.

APPENDIX A

DRAFT Traffic Impacts Note:- (10/10/05)

(This note has been prepared to indicate the level of traffic impact that each of the scenarios below will have on the existing road network.)

1. Existing Situation:-

- Difficulties on the Rohini Street approach in the morning and evening peak periods and on the Ray Street approach in the evening peak period.
- The Rohini Street issues result from the shear volume of traffic using Eastern Road (Regional Road) and the minimal green time allowed for Rohini Street at the Pacific Highway intersection.
- The Ray Street issues appear to be as a result of rail commuters and business employees exiting the car park during the evening peak period, .
- The Pacific Highway operates well.

(It should be noted that the results below have been based on modeling which does not take into account the removal of the Tidal Flow arrangement on Pacific Highway which would give more favorable results.)

2. LEP 194:-

- Difficulties increased on the Rohini Street approach in the morning and evening peak periods.
- Difficulties increased on the Ray Street approach in the morning and evening peak periods. The evening peak period reaching unacceptable limits.

- Difficulties starting to occur on the Kissing Point Road approach particularly in the evening peak period.
- The Pacific Highway operates satisfactorily.

3. Urban Design Options

The impacts of the four urban design options (A-D) in traffic terms are influenced by how the main trip generators are located within the seven zones (A-G) and how these relate to the main and local road network.

A:- (Supermarkets at Ray Street/Community Facilities at Gilroy Lane)

Net Traffic Generation:- 1106 trips

- The main disadvantage of this option, in traffic terms, is that the two main trip generators (supermarkets) are confined to Area D which impacts directly onto Ray Street.
- The combination of a constrained road network in Ray Street (Barriers of the Railway Line & Pacific Highway), the high level of traffic generated from these two land uses and the limited amount of green time available to the local road results in unacceptable conditions at the Ray Street/Pacific Highway intersection.
- The community facilities at Gilroy Lane impact to a lesser extent although problems are exacerbated on the Rohini Street approach in both the morning and evening peak period.

B:- (Supermarkets at Ray Street & Gilroy Lane/Community Facilities at Gilroy Lane & Ray Street)

Net Traffic Generation:- 1280 trips

- The advantage of this option is that it attempts to separate the two main trip generators (supermarkets) between Area D (Ray Street) and the western side of Area E (Gilroy Lane/Rohini Street).
- However this does not provide much assistance due to the existing traffic issues at both the Rohini Street and Ray Street approaches.
- The traffic generated from the supermarket in Gilroy Lane impacts directly onto Rohini Street which already experiences difficult traffic conditions.
- The impact on the Ray Street/Pacific Highway intersection, although creates problems to a lesser degree than option A, still results in the intersection of Ray Street/Pacific Highway operating at unacceptable levels.

C:- (Supermarkets at Ray Street & Stonex Street/Community Facilities at Gilroy Lane/ Leisure Centre at Ray Street) Net Traffic Generation:- 1144 trips

- The disadvantage of this option is that it locates two main trip generators (Leisure Centre & Supermarket) in Area D again impacting directly onto Ray Street similarly as in Option A.
- Again the combination of a constrained road network in Ray Street (Barriers of the railway line & Pacific Highway), the high level of traffic generated from these two land uses and the limited amount of green time available to the local road results in unacceptable conditions at the Ray Street/Pacific Highway intersection.

(Preferred Option)

D:- (Supermarkets at Gilroy Lane/Community Facilities at Gilroy Lane/Leisure Centre at Ray Street) Net Traffic Generation:- 1075 trips

- The main advantage of this option is that it locates the main traffic generators most appropriately within the seven zones. The main traffic generated occurs in Area A, (Supermarket) and Area E (Supermarket) and to a lesser degree in Area D.
- In addition to this the size of the development in this option has been restricted to an ideal maximum rather than an optimum maximum.
- Another advantage of this option is in relation to the location of the library and leisure centre in Area D which generates less traffic than that of a supermarket and considering the constraints on the road network assists to some degree.
- The traffic impact however at the Ray Street/Pacific Highway intersection results in unacceptable traffic conditions in the PM peak period only.
- The location of the supermarket on the Eastern side of Area E also has the advantage that it does not impact substantially on Rohini Street but however may necessitate the need for traffic signals at the Turrumurra Avenue/Pacific Highway intersection. (Still to be investigated)

Economic indicators from the Scates modeling indicate that in terms of economic benefit the options would be ranked as follows:- (From best to worst)

1. Existing
2. LEP194
3. Option D
4. Option B
5. Option A
6. Option C

4. Traffic Options

It should be noted that the traffic options developed should take account of the limitations of the Pacific Highway and where possible remove some turning movements from the three major signalized intersections.

4.1 Improved station access & William Street/Ray Street Area

In terms of realigning William Street unless there are additional traffic capacity benefits (i.e. Results in G-turn arrangement which removes the right turn from Pacific Highway into Kissing Point Road i.e. +-180 vehicles/hour) in traffic operational terms there appears to be limited advantage with this option. (However it is noted that there are other advantages associated with this arrangement)

The issue which may arise from this arrangement apart from the obvious capacity issues with the introduction of an additional phase at this intersection is that the limited queuing space on the William Street approach combined with the limited green time allocated to the side roads may result in congestion issues in the vicinity of the drop off/pick up zone and possibly at Ray Street where William Street ends.

4.2 Access between Duff Street & Kissing Point Road

Option B preferable in traffic terms as it would effectively remove some traffic from the Kissing Point Road/Pacific Highway intersection. (i.e. Left turning traffic from Kissing Point Road may choose to use Stonex Street/Duff Street)

Option C is least preferred as it introduces signals at Duff Street and creates additional capacity pressures.

4.3 Rohini Street Circulation Improvements

In traffic terms Option B is preferred as it:-

- Removes turning movements from the Pacific Highway providing an opportunity for additional capacity elsewhere within the overall system.
- With Gilroy Lane set back, as shown, this will allow sufficient queuing space on the Turrumurra Avenue approach to the Pacific Highway.
- Another advantage to the one way system in Rohini Street is that it allows the opportunity for reallocation of roadspace towards pedestrians. (i.e. Widened footpaths etc.)

5. Ray Street/Rohini Street Rail Bridge

Advantages:-

- Allows for distribution of Eastern Road traffic more evenly between Rohini Street/Ray Street and Turrumurra Avenue relieving pressure particularly on the Rohini Street approach.
- Provides improved accessibility and operation of public transport buses to and from both sides of the rail station. (This, in turn, would result in journey time and operational cost savings.)
- Provides improved accessibility for residents to access either the existing supermarket or proposed leisure centre/library in Ray Street either by car or on foot by avoiding the congested Pacific Highway.
- Supported in principle by Railcorp.
- The existing deep cutting lends itself easier to construction.

Disadvantages:-

- Attracts more traffic through an existing quiet dead end street

APPENDIX B – URBAN DESIGN OPTION TRAFFIC GENERATION TABLES

Turrumurra Town Centre Traffic Study

Ku-ring-gai Council Planning Committee Summary Note (Revised 30 November 2005)

1. Introduction:-

The purpose of this summary note is to provide a basis on which to present the Traffic Modelling findings from the Turrumurra Town Centre Traffic and Parking Study. It is important to note that this note will be followed by a Final Traffic Report which is the document which should be referenced in future in relation traffic issues for the Turrumurra Town Centre.

It should be noted that Traffic modelling does not provide definitive answers but is an effective tool in providing valuable guidance upon which decisions can be made regarding future land use options.

2. Traffic Modelling & Key Definitions:-

The traffic modelling software predominantly used by Traffic Consultants and the RTA for road network modelling is SCATES which can be used to assess the operation and performance (existing and future) of signalled intersections which are linked under the Urban Traffic Control system SCATS.

It uses Level of Service (LOS) A to F as a way of defining the operational performance of various signal intersections where level of service A indicates the most favourable and level of service F the least favourable. (It should be noted that the overall level of service of an intersection is determined by the Average Vehicle Delay (AVD) for all traffic movement and therefore it should not be taken as given that a signal intersection operating at LOS A is operating satisfactorily on all approaches.)

The LOS at signal intersections is determined on the basis of Average Vehicle Delay (AVD) and the Degree of Saturation (DS) and is best explained by way of a basic example:-

- Local Road Approach - Green Time Available = 10 seconds
- Rate of flow across the stop line = 1 vehicle every 2 seconds
- Number of Vehicles on approach at each cycle = 4

In the example above it is obvious that in 10 seconds all 4 vehicles will clear the intersection with some 2 spare seconds available. i.e. 4 vehicles clear the intersection in 8 seconds. This relationship between traffic volume and available green time is known as **Degree of Saturation**.

Now consider there were 10 vehicles on this same approach. During the 10 second green time only 5 vehicles clear with the remaining 5 vehicles left to wait until the same corresponding green time comes around again. This waiting period is known as the **Vehicle Delay**.

3. Turramurra Existing Situation:-

GTA Consultants undertook existing traffic counts at various locations throughout the study area. These were undertaken during the AM and PM peak periods and form the base data used in the traffic modelling. The results of the existing SCATES traffic modelling indicates that there are delays and queues at the Ray Street approach during the PM peak period and at the Rohini Street approach during both the AM and PM peak period.

This information was used as the basis for testing future land use options and traffic improvement options for the Turramurra Town Centre.

4. LEP 194 (Traffic Impacts):-

GTA Consultants were given the location and yields for the approved Local Environment Plan 194 development sites for Turramurra. A three step process was undertaken for assessing the impact of the new development as follows:-

4.1 Traffic Generation (RTA Rates applied for medium density development on the basis of a recommended percentage split of 2 and 3 bedroom units by location)

4.2 Traffic Assignment (On the basis of the generation above the additional trips were assigned to the existing road network with a 80/20 outbound/inbound split applied to the AM peak with this reciprocated in the PM Peak. It was also assumed that 50% of the outbound traffic in the AM peak would go via Brentwood Avenue to avoid the delays at the Pacific Highway and the reverse would apply in the PM peak)

4.3 Scates/aaSidra Modelling (SCATES Traffic Model used to assess the impact on the existing road network of Pacific Highway and associated local side roads. aaSidra Traffic Modelling undertaken of local intersections along Brentwood Avenue.)

Although detailed outputs (including DS, AVD's & LOS for each approach) have been produced for the LEP 194 and future land use scenarios it is felt best for the purpose of presenting the outcomes in a more broad and holistic way that economic performance indicators be used as opposed to the individual criteria for each intersection. (Details of the economic outputs for the LEP 194 assessment are included in Appendix A)

Economic performance indicators provide an overall cost of the traffic system under the various traffic conditions and are useful in giving an indication of the overall impacts when compared against the existing base case situation. They are calculated based on vehicle operating and time costs as defined in the RTA's Economic Evaluation Manual.

5. Urban Design (Traffic Impacts):-

5.1 Options:-

In consultation with the Ku-ring-gai community and Councils Urban Design Consultant five Urban Design Options were developed for the Retail/Commercial/Residential centre of Turramurra as follows:-

Option A

Retail/Commercial:- (2 x Supermarkets at Ray Street)

Community Facility at Gilroy Street

Library at Gilroy Street

Medium Density Development

Option B

Supermarket at Ray Street and Gilroy Street

Community Facility at Gilroy Street

Library at Ray Street
Medium Density Development
Option C
Supermarkets at Ray Street and Stonex Street
Community Facility at Gilroy Street
Leisure Centre at Ray Street
Medium Density Development
Option D (Option DA – Leisure Centre Removed)
Supermarkets at Turramurra Avenue and Stonex Street
Community Facility at Gilroy Street
Leisure Centre at Ray Street
Library at Ray Street
Medium Density Development
Option E
Supermarkets at Ray Street and Stonex Street – As existing but expanded
Community Facility at Gilroy Street
Library at Ray Street
Medium Density Development

The development of a preferred land use option in traffic terms is best determined on the basis of a combination of the level of likely traffic generation and how this is distributed onto the road network. In the case of Turramurra with its restricted road network (Bounded by the Pacific Highway and Railway Line) it was important that the highest trip generators (i.e. Supermarkets) not be concentrated in the same location but rather that consideration be given to these being evenly distributed throughout the Turramurra Town Centre.

In terms of the above philosophy Option D appeared to fit best as it minimized the amount of traffic generated onto Ray Street by the provision of a Leisure Centre and Library including some specialty retail and relocated the existing supermarket to Turramurra Avenue. This option achieved the best level and distribution of traffic generation across all areas within the Town Centre as indicated in the Traffic Generation Tables in Appendix B.

It was also considered necessary to include one additional land use option which was based on Land Use Option D but removed the Leisure Centre and this was included as Option DA.

5.2 Traffic Generation:-

Traffic Generation rates for each option were determined primarily from the RTA's Guide to Traffic Generating Developments. For the Leisure Centre more accurate generation rates were obtained from similar type developments and the rates for the library were determined from existing peak usage figures obtained from Turramurra Library itself.

Table 5 overleaf indicates traffic generation rates used for the assessment:-

Table 5 – Traffic Generation Table

Land Use	Rate	Reference
Medium Density Residential	0.55trips per dwelling	RTA 3.3.2
Retail:-		
Supermarkets	155A (SM) 155trips/1000m2 GLFA	RTA 3.6.1
Library/Community Centre		Figures obtained from Turrumurra Library (Calculated)
Leisure Centre*	Gym - 9trips/100m2 GFA Aquatic Centre - 90trips/hr weekday	RTA 3.8.2
Speciality Retail Shops	46A (SS) 46trips/1000m2GLFA	RTA 3.6.1
Commercial	2trips/100m2 GFA 22A(OM) 22trips/1000m2GLFA	RTA 3.5

Note:- * Traffic Generation Rates for the leisure centre are based on rates for a gym (% of GFA) and on rates obtained from the Aquatic Centre in Ryde

In order to determine the net traffic generation to be assigned to the road network the existing traffic generated from the existing land uses were subtracted from the traffic generated from the new urban design options above.

5.3 Traffic Assignment & Economic Impacts:-

The Traffic Generated from the above Urban Design Options was then assigned to the existing road network and the traffic impacts assessed using SCATES. The economic performance indicators (Annual Route Costs and Average Vehicle Delays for the main and side roads) for each Urban Design Option are included in Appendix A.

The economic indicators for each Urban Design Option indicated that Option D performed best followed by Option E.

6. Traffic Options:-

6.1 Methodology

The methodology adopted for the development of the Traffic Options to accommodate the impacts of the various urban design options was as follows:-

Using:-

- Urban Design Option D as the starting point (best option from an economic perspective) and identifying that the traffic issues for this option are located at Ray Street and Rohini Street with Kissing Point Road having some flexibility and;
- Having regard to Councils Exhibited Traffic Options;

The following thinking was adopted:-

In order to improve the situation in Traffic Terms would require some if not all of the following:-

1. Remove Tidal Flow from Pacific Highway (RTA amenable to this.)
2. Remove some of the turning movements from the three signal intersections. (i.e. Remove Signals, Ban Turns etc.)
3. Concentrate efforts on improving capacity at the Ray Street and Rohini Street intersections by not adopting any traffic options which adversely impact on these two intersections.
4. Implement traffic management measures in locations surrounding the Town Centre to redistribute traffic away from the town centre. (i.e. Change priority at the Brentwood/Turrumurra Avenue Intersection to direct traffic along the collector road of Brentwood Avenue.)
5. Reduce the Scale of the Development proposed.

On the basis of the above the following Traffic Options were developed and assessed taking account primarily of points 1,2 & 3 above:-

6.2 Option D1

New Stonex Street (Two Way)

Realigned Forbes Lane (**One Way**) Set back sufficiently to allow queuing space.

No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.

Rohini Street (One Way In)

New Gilroy Lane (Two Way) Set back behind Church to allow queuing space

New Signals at Turrumurra Avenue

6.3 Option D1A

New Stonex Street (Two Way)

Realigned Forbes Lane (**Two Way**) Set back sufficiently to allow queuing space.

No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.

Rohini Street (One Way In)

New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.

New Signals at Turrumurra Avenue

6.4 Option D2

New Stonex Street (Two Way)

Realigned Forbes Lane (Two Way) Set back sufficiently to allow queuing space.

No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.

Rohini Street (One Way Out)

New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.

Turrumurra Avenue (One Way in between Pacific Highway & Gilroy Lane)

New Signals at Turrumurra Avenue

6.5 Option D3

New Stonex Street (Two Way)

Realigned Forbes Lane (Two Way) Set back sufficiently to allow queuing space.

No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.

Rohini Street (Signals removed, left in left out)

New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.

Turrumurra Avenue (Two Way)

New Signals at Turrumurra Avenue

The outcome of the assessment of the above options indicated that another option based primarily on Option D3 but with the inclusion of a one way operation of Forbes Lane and some additional banned turns would provide most favourable results and would be most appropriate at this stage for Land Use D for the Turrumurra Town Centre. This option is presented below as Option D3SV.

6.6 Option D3SV

New Stonex Street (Two Way)

Realigned Forbes Lane (One Way) with new connection at Kissing Point Road.

No right turn permitted from Forbes Lane into Pacific Highway. (This movement is catered for via Kissing Point Road, Stonex Street and Duff Street.)

No left turn from Ray Street into Pacific Highway

No left turn from Pacific Highway into Forbes Lane.

Rohini Street (Signals removed, left in left out)

New Gilroy Lane (Two Way)

Turrumurra Avenue (Two Way)
New Signals at Turrumurra Avenue
Left Turn Bays on Pacific Highway at Turrumurra Avenue and Kissing Point Road.

Following this assessment it was considered necessary to superimpose the traffic options of D3SV onto the land use option E in order to give a direct comparison between these two different land uses with the same traffic management measures. This resulted in a further traffic option E3SV. The results from the comparison between Option D3SV and E3SV are as follows:-

Option D3SV would be more acceptable in Traffic terms requiring infrastructure changes of a relatively manageable/feasible size. There is also a good balance between the main road and side road delays in this option. In addition, the traffic changes proposed (D3SV) will not require a large amount of refinement in order to be generally accepted by the RTA.

Although Option E3SV could be made to work, as it stands, it is less acceptable in traffic terms with main road delays of nearly double that of Option D3SV and would require substantially more infrastructure changes i.e. Possibly more banned turns, more right turn lanes from Ray Street and possibly a new rail link connecting Rohini Street and Ray Street for it to reach levels which would be generally acceptable to the RTA.

7. Conclusions

7.1 Existing Traffic Situation:-

- The Pacific Highway operates well with delays and queues on the side streets at the Ray Street intersection in the PM peak (LOS F) and at the Rohini Street intersection in both the AM and PM peak periods. (LOS F)

7.2 LEP 194:-

- The introduction of the total LEP 194 development will not have a significant effect on the Pacific Highway (LOS B&C) traffic but will have a further detrimental affect on the local roads of Ray Street and Rohini Street.
- The introduction of some minor Traffic Management Measures on the south-eastern end of Rohini Street (i.e. Enforce and Extend the Peak Parking Restrictions) will improve the situation at Rohini Street.
- The introduction of two right turn lanes from Ray Street will improve the situation at Ray Street. This could be achieved by either widening of the southern side of Ray Street, providing an additional lane, or banning the left turn at Pacific Highway altogether and allowing the left turn to take place from William Street via Forbes Lane. It should be noted that the latter has implications for access into Kissing Point Road.

7.3 Urban Design Land Uses:-

- Any future land use options for Turramurra Town Centre should focus on an even distribution of trip generators and not concentrate these in one location due to the existing constrained road network and current traffic sensitivity of the Pacific Highway.
- The major trip generators for the Turramurra Town Centre are by far the supermarkets.
- Land Use Option D provides the best fit in terms of land use distribution with the inclusion of a Leisure Centre and Library at Ray Street and the supermarket relocated to Turramurra Avenue.

It should be noted that this assessment in traffic terms provides a good basis on which to progress the changes proposed for the Turramurra Town Centre further and whichever option is selected by Council will require further work at a more detailed level.

7.4 Traffic Options:-

- Option D3SV is the preferred traffic option which accommodates Urban Design Option D and provides a balance of average vehicle delay both on the main road of Pacific Highway and on the local side roads and overall provides the least economic impact.
- Option D3SV would only require a low level of refinement in order for it to be generally acceptable to the RTA.
- Option E3SV is less acceptable in traffic terms with main road delays of nearly double that of Option D3SV and would require more infrastructure changes i.e. Possibly more banned turns, more right turn lanes from Ray Street and possibly a new rail link connecting Rohini Street and Ray Street for it to reach levels which would be generally acceptable to the RTA.

APPENDIX B1 – SCATES TRAFFIC MODELLING (ECONOMIC ANALYSIS OUTPUTS)

URBAN DESIGN OPTION TRAFFIC GENERATION TABLES

TRAFFIC OPTIONS:- TURRAMURRA (TO DATE)

D1.

- New Stonex Street (Two Way)
- Realigned Forbes Lane (**One Way**) Set back sufficiently to allow queuing space.
- No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.
- Rohini Street (One Way In)
- New Gilroy Lane (Two Way) Set back behind Church to allow queuing space
- New Signals at Turrumurra Avenue

D1A.

- New Stonex Street (Two Way)
- Realigned Forbes Lane (**Two Way**) Set back sufficiently to allow queuing space.
- No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.
- Rohini Street (One Way In)
- New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.
- New Signals at Turrumurra Avenue

D2.

- New Stonex Street (Two Way)
- Realigned Forbes Lane (Two Way) Set back sufficiently to allow queuing space.

- No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.
- Rohini Street (One Way Out)
- New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.
- Turrumurra Avenue (One Way in between Pacific Highway & Gilroy Lane)
- New Signals at Turrumurra Avenue

D3.

- New Stonex Street (Two Way)
- Realigned Forbes Lane (Two Way) Set back sufficiently to allow queuing space.
- No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.
- Rohini Street (Signals removed, left in left out)
- New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.
- Turrumurra Avenue (Two Way)
- New Signals at Turrumurra Avenue

D3SV.

- New Stonex Street (Two Way)
- Realigned Forbes Lane (One Way & Banned Right Turn out).
- No left turn from Ray Street into Pacific Highway.
- Rohini Street (Signals & pedestrian crossings removed, left in left out)
- New Gilroy Lane (Two Way).

APPENDIX C

TURRAMURRA TOWN CENTRE

Kissing Point Progress Association

Uniting Church hall, Vernon & Chisholm Sts Sth Turrumurra
8.00pm Tuesday, 31 May 2005

- Thanks to KPPA Chris Woolley, for organising attendance/ coffee
- Apologies tendered by Cr Malicki & Cr Andrew
- Opportunity for forming change for Turra TC
- NSW Govt direction on MD in town centre area
- Need to consult with locals to get good ideas for the future TC
- Broad outreach to community – Youth / Retirees/Shoppers/ Business/ResGps
- Further steps incl Vision and Options workshops and small email surveys

1. How long have you lived in or near Turrumurra?

9, 20+, 38, 38, 44, 35, 38, 44, 46 38, 40, 5, 9, 9.

2. What is one good point about shopping at Turrumurra?

- Going to Franklins is easy
- Coffee shop – Pierre's
- Friendly, easy to get to, diverse shopping
- Can get most things you want – without a car
- Well-known and friendly location
- Close and handy
- Better variety than previously for low-gluten foods
- Personal and friendly
- Close and handy – except Pierre's
- Close – saves time, known by shopkeepers

- 2 supermarkets and parking near both, friendliness
- Easy access and parking at supermarkets
- Convenient and close

3. Name one bad point about shopping at Turrumurra?

- Geographically dispersed – Franklins to Video in Rohini – spread out !
- Noisy, dirty smelly highway, in the middle of town centre
- (85 year old friend) no quiet place to have lunch cheaply
- Saturday main access along KP road is difficult due to netball
- Highway and railway split the town centre into 3
- 2 sloping car parks – dangerous for older people with trolleys
- Need for highway underpass for pedestrians
- Need tunnel off Terrigal road to railway for pedestrians
- Turrumurra is no good for shopping in the rain
- Fragmentation of centre by highway and railway
- Driving to Coles from KP road is a problem
- Make accessway under highway – using rail embankment areas
- Highway divides the shops into 2 areas
- Awful in the rain – MainStreet plans show rail bridge underpass options
- Socialise the location – outdoor eateries needed
- Need for infrastructure to match new MD needs
- Real shopping is at Chatswood and St Ives – Turrumurra is too difficult
- Tunnel under highway may attract undesirables
- Perhaps a bridge/overpass like at Gordon
- Pollution from the Highway is a problem

4. What one project or issue needs to be done to improve Turrumurra?

- Access across the highway needs to be a priority
- Keep the charm – plants, trees and stone flagging
- Highway access is the main project needed
- Canoon Road Sth Turra – traffic mgmt is needed on Saturdays on KP road
- Town centre fragmentation needs fixing
- Car parking – commuters are often from Central Coast
- Chamber of commerce – banks and PO need to be open on Saturdays
- Lift needed at station
- KP road to highway then left to station is a problem.
- Need a left turn lane at KP road to highway
- KP road left turn lane to Comenarra needed
- Crossing - above or below - needed at highway
- Need for multi-storey car park at rail station
- More diversity in shops needed (eg clothing, bookshop)
- Need more trains from Gosford to City = fewer cars in car park
- Put Eastern road over highway
- Divert the highway and realign the roads
- Turrumurra is dissected - problem parking – HWY road tunnel needed
- Don't forget the Ecological Sensitive area behind Franklins
- Restaurants are good and getting better – but Take-away is poor.

5. What thoughts do you have about the role of roadside or strip shops?

- Strip shops provide character to the village
- New one is quite attractive
- Only as good as their pedestrian access

- Landscaping could help break up – access is imperative
- Turn them around away from the highway
- Join them up by a new retail arcade beneath the highway
- Rohini street is good
- Highway strip shops should be turned around or put in arcades
- Some arcades don't work- eg Indian Restaurant arcade
- Strip shops opposite KP road are a mish-mash Tiles/Carpets
- Drapery shop access is always difficult
- Sheila's boutique did not last it was too vulnerable a location
- Turning strip shops around makes access difficult without a lift
- Highway is a bottleneck with tidal flows
- Strip shops are obsolete
- Put the highway in a tunnel under the centre or Pedestrian arcade under the highway
- Make the shopping centre into 3 precincts – commercial / supermarkets / strip and other shops
- Develop an Andronicus veranda along the back of the strip shops – a sun-friendly / positive aspect location – with lift to ground
- Strip shops were for quieter times – not now with Hy traffic
- Supply and demand will dictate what is needed at Turrumurra
- Loss of good retailers, eg Banks – shows a suburb in decline
- Diversity is going from retailing here
- Outside Franklins, Plaza Arcade fruit shop has seen five different operators trying to trade well from that location
- Old fruit shop at Turrumurra – poor entrance – yet it seems to do well

- Use connecting bridges and lifts like Bondi Junction to link all shops
- Turrumurra would not support a Westfield – some heritage shops – preserve their character
- Personal treatment at Turrumurra make it precious for shopping
- Main Street plans have turned the strip around
- Strip shops are good – open till 6pm for commuters – eg Chemist
- Strip shop windows are good
- Strip shops were from another era when car access was from highway
- Turrumurra is fragmented – newer young people with children and older people too find it difficult
- Try to merge the old heritage character with tasteful new MDensity
- Could use highway shops if they had good access from back lane
- Strip shops suit Turrumurra, but may not mix with MD too well
- Link shops at rear - attract shopping diversity
- Poor parking – better at rear.
- Needs a pedestrian crossing at William St
- Open Library on Thursday to match Pension day
- Library is most important as a centre
- *Pothole in Rohini St outside Taylors Chemist – a permanent problem!*
- More lighting in Laneways at night off Rohini Street
- *Repaint Ped X at Eastern & Gilroy – not clear*
- Poor footpaths between rail and bus shelter at Eastern road/Rohini
- Armco railing needed both sides of highway rail bridge to protect pedestrians
- Put a Post Box on the William st side of the Highway
- *Plaques – note William Street tree*
- Construction of lift at Gordon – need one at Turrumurra
- Crepe Myrtles – see Main Street colour scheme plans
- Highway ped crossing from Station to school - Boronia Street bus stop takes about 5 minutes
- Safety island needed at bus stop at Boronia (not Monteith).

6. Final Comments/issues - open discussion

Rohini Street – Pedestrian Crossing – too much greenery – limited visibility – lower the stone wall a little

- Roof needed over rail overbridge
- Rohini Street – would 5 storeys cast a shadow over the mall area?
- Add colour to Rohini Street – with street banners
- Needs a civic focus to explain Turrumurra history
- William St side is dead – needs a roundabout fountain

APPENDIX D

TURRAMURRA TOWN CENTRE

Kissing Point Sports Club

Clubhouse, Auluba Rd, Turramurra

7.30pm (till around 8.30pm), Wednesday, 27 April 2005 94871315

- Thanks to Julie Commins for organising attendance/ coffee
- Acknowledge Cr Malicki & later Cr Andrew
- Opportunity for forming change for Turra TC
- NSW Govt direction on MD in town centre area
- Need to consult with locals to get good ideas for the future TC
- Broad outreach to community – Youth retirees/Shoppers/business/ResGps
- Further steps incl Vision and Options workshops and small email surveys

1. How long have you lived in or near Turramurra?

6 4 6 8 10 20 22 17 15 23 12 21 19 12 25 19 13 15 14 20 33 25
11 33

2. What is one good point about shopping at Turramurra?

- Friendly
- Convenient – not a major centre
- Village style
- Coles and library nearby
- Easy parking near station
- Choice of food and groceries – most needed things locally
- Village style
- Convenient
- Diversity of shops
- Parking

- Proximity to home
- Diversity
- diversity
- Convenience
- Convenience
- Convenience
- Vegie shop
- Friendly
- Convenience
- Friendly
- Parking – better than big centres
- Selection of shops
- Dentist and doctors
- Quality and variety
- Community eel
- Variety
- Community
- Atmosphere

3. Name one bad point about shopping at Turramurra?

- No undercover parking
- Unattractive
- Divided by Pacific Highway & Railway
- Rohini St is a nightmare for cars
- Too spread out
- Traffic – avoid Rohini street
- ditto
- Too spread out
- Ditto
- Traffic – esp. Kissing Point Rd intersection
- Fragmented

- Getting out of KP road morning and evening
- No public areas and no focus for people#
- Highway is a real problem to cross
- The park next to the station is a waste
- Park is ugly and hidden
- Not an elderly-friendly centre – lots of retirees in villages nearby

4. What one project or issue needs to be done to improve Turrumurra?

- Need an outdoor community area – incl. coffee, away from noise
- More commuter parking – like Gordon
- Ditto
- Slow down highway trucks as they come down into Turrumurra – the ped crossing at the Carwash dangerous – trucks don't see the lights
- Public space
- Redesign K/Point Rd to work with Ray & Williams St etc
- Parking and need for a town centre focus – best spot is the Coles car park
- Put an open community & garden area as a roof for that car park
- Change LH turn at KPoint Road – pedestrians slow this a lot
- Put a red light camera at KP road
- More commuter parking – less traffic congestion
- Improve highway traffic flow through town centre
- Turn highway into a tunnel and make the space a pedestrian mall
- Commuter parking
- Franklins centre looks old and run-down – start again
- Commuter parking
- Traffic on highway
- Commuter parking
- Ditto – Rohini Street is a problem
- Need an outdoor focus for town centre
- Move Franklins to the other side of Highway
- Change Franklins side to car-parking
- Make KP road a ring road
- Make a new shopping complex - inside with no traffic
- Ped Crossing in Rohini Street – cut down bushes – they block vision
- Franklins Car park access to KP road is a problem – make entrance there and exit to Pacific highway
- Close Rohini street as a pedestrian mall – traffic is bad there
- Use car-park as town centre
- Turn the highway shops around
- Supermarket car parks are sloping and unfriendly for people with children
- Red lights at KP road
- Walkway above Highway to get rid of LH turn from KP road
- Commuter Parking
- Walkways over highway and Rohini Street
- LH lane from KP road should be left turn only
- LH lane needs to turn right as well so as to turn left at Rohini St
- Concentrate the shops one side of the Highway
- Take KP road intersection straight across to Ray & Williams Sts
- Parking on one side of Highway and shops on the other.

5. What thoughts do you have about the role of roadside or strip shops?

- Less attractive, noise, shopping style different products (tiles) to a mall, convenience/access from highway
- A place for specific businesses that need traffic visibility
- Needs upgrading – look a bit dowdy
- A place for a quick shop – offers different services
- Must match current needs, people choose to park behind, and should have entry from behind
- Variety and convenience, access to strip is good- eg ballet school
- Good shopping mix
- Strip shops are good for some services – parking is a hassle for just shopping at one place – if too hard, we go elsewhere
- Parking is still the problem – strip shops have no street appeal
- Window advertising for street traffic is good for strip shops - but people often arrive via a backdoor from the car park
- Better colour coordination between shops
- Overpass won't work look at Gordon
- Needs updating
- Don't use strip shops
- We don't want a Hornsby-type mall – congestion and traffic is already bad
- Strip shops are a waste of space
- Macquarie centre seems to be catering more for under 30's people
- Village atmosphere is reinforced by strip shops
- Gives an old town feel having strip shops
- Strip is changing to meet needs – clothing out tiling in
- Strip shops should stay – Woolies at Greenway Plaza will have an impact – lets keep diversity in shopping
- More strip shopping, more pedestrians, less cars
- Eliminate highway strip shops – move them to South Turramurra
- Strip shops need good parking nearby
- Strip shops make a streetscape – Chemist area is dangerous
- Strip shops along and near Rohini are accessible – others on highway will evolve for highway visibility and rear access
- Assist shops to grow – change their face to open onto car park
- Strip shops create atmosphere with access from Highway
- The mix of strip and other makes the village
- Turn strip shops around; expand Coles area on a theme of civic focus
- Put parking underground and increase it
- Delivery truck access must be included in new design
- One stop shopping is what is needed today – allow for population age change
- More medium density housing means some shops may go to light industrial areas
- Access to rail means an increase in need for convenience shopping
- Highway shops should be demolished
- Car park alternatives are necessary to meet town centre needs

6. Final Comments/issues - open discussion

- Do something quickly – some shops are dying others changing to bread shops and RE agencies
- Look at copying St Leonards – at a smaller scale
- Decentralisation of more businesses into Turramurra town centre
- Strip shops are a dying heart here
- Keep an open feel with nice areas for people
- Keep it open and keep the atmosphere
- Shops in Turramurra should keep to visual scale form KP road
- Town centre should be attractive with greenery and trees at Railway
- Use rail access and space above it better
- Need to link or concentrate shops in the town centre
- Widen form Ray to Rohini Street – look at this area for MD residential
- Move Franklins to the other side – widen the highway there
- Commuter parking needed – or better local buses (53 spaces is not enough)
- Don't build over railway – we are not a St Leonards
- Rents are killing the smaller shops – older people don't buy as much as younger ones
- Create enjoyable outdoor spaces – use South Turramurra as an alternative to Town Centre
- Strip shops have low-cost offices above, this is good for small business
- Develop south and north Turramurra as alternatives to town centre
- Keep Village atmosphere – cater for older people
- Pedestrians above ground; cars underground
- Care for greenery and keep it clean.

APPENDIX E

Turramurra Town Centre

Consultation with Residents – Northaven/ St Margarets Village Representatives (2+2)

3pm, 18 February 2005 (Fraser & Janice / Gordon & Joyce)

Introduction

Thanks to Village for interest and assistance.

Looking to the future of Turramurra town centre ...10- to 20 year horizon

Six outreaches by Council – Household Survey 8000 homes; resident groups consultations, business consultations, young person's consultations, retirement village consultation, shopper survey.

Today's session – Retiree reps will be asked a series of questions. We will seek perspectives and experiences.

Feedback session by winter – survey results on kmc website.

How long have you lived in or near Turramurra?

Years = 9, 42, 41, 41.

Name a good thing about shopping at Turramurra?

- Good to have a village near former home
- Hillview do good work – eg exercise and weights
- Community centre is good for exercise training – arthritis
- Supermarket access is OK but we go to St Ives
- Computer pals at Gilroy – 6 new PCs are good
- Crossing the highway is a problem – 15 people at Northaven are over 90
- Senior Citizens centre – esp Meals on Wheels

- Good parking at Coles- but expensive prices compared to Hornsby
- No car needed from Northaven – walk to shops
- Library is good even though highway a problem; 6 of 28 here are over 90
- Bendigo bank hours are good
- Tree planting on roadside should be encouraged
- Coles, library, travel shop, 2 supermarkets are competitive

Name a bad thing about shopping at Turramurra?

- Crossing at Rohini Street to Highway is dangerous for older people
- Steps at Turramurra Station are a problem
- We have 3 bakeries - yet no Medicare or MBF
- Banks have reduced from 5 to 3 now
- Roads & footpaths are poor in William street, affected by tree roots and dangerous
- Two potholes near Kissing Pt Rd & Highway (RTA?)
- Turramurra Park last many eucalypts in storms and winds – need for lower height (6m) canopy trees instead?
- Let (Turramurra) people know about local retirement so they can plan
- Hillview Health don't do enough publicity to village residents.

What could be done to improve Turramurra?

- Need to advise older people on services available
- Improve Turramurra Park – eg toilets and change rooms (for an example see Mosman cricket grounds and oval facilities)
- Too many spray-can people – graffiti needs policing, a role for the neighbourhood watch
- Smarten up Turramurra Park – eg a Kiosk for coffee etc would be good

- Park needs good facilities to match local uses – eg Rotary Wine & food Society stalls
- Ku-ring-gai art society – look at something like Mosman Gallery
- Older Ku-ring-gai people are a bit complacent – they should visit other areas to see good facilities
- Ku-ring-gai residents don't realize what they *could* have
- We need a walk-accessible gallery/facility
- Art appreciation is growing at Turramurra – a gallery is needed
- Railway station lifts are needed
- Men's Shed is needed in Ku-ring-gai
- Senior Citizens Centre should include mens shed – like Lane Cove
- Highway truck slipstream is almost dangerous for aged and frail people – windrush and vacuum is a problem, as is rain/wash from roadway
- Make the highway a mall
- Ban 4WD from local parking areas
- Kissing Point road pathways are a challenge near Franklins
- A Post Box is needed nearer to Northaven to save crossing Highway
- Rohini St Pedestrian Crossing is becoming dangerous as vegetation blocks visibility – *not all present agreed*.

Please give your thoughts about strip shopping along the Highway?

- Turn the shops around – form little arcades
- 2 restaurants (Indian & Thai) have absorbed shops and passageway
- Good hairdressing
- A problem location – getting worse for access
- But good visibility from passing traffic for strip retailers
- Arcades at night become a security hazard
- Security a problem for shops with both a front and rear access
- This dual access means security/expense / less profitable.

APPENDIX F
TURRAMURRA TOWN CENTRE
PLANNING Consultation NTAG
11.30am – 13 March 2005

Introduction

Thanks to Brian Cannon – *North Turramurra Action Group*.
Looking to the future of Turramurra town centre ...10- to 20 year horizon

Six outreaches by Council – Household Survey 8000 homes; resident groups consultations, business consultations, young persons consultations, retirement village consultation, shopper survey.

Today NTAG Members will be asked a series of questions.
The replies look to glean experiences and perspectives on each question.

[Cr Ian Cross present]

Feedback session by winter – survey results on kmc website.

How long have you resided in Turramurra?

50 years, 40, 45,45,44,30, 1.2, 47,30,40, 18, 18, 18 13 18, 2 13.

Name a good thing about shopping at Turramurra?

- Parking and transport
- Video shop
- Dear bottle shop
- Convenience
- Video shop
- Nothing
- Theos liquor
- Nothing
- Library

- Railway station
- Nothing
- Pool shop
- Bottle shop
- Convenience
- Video
- Supermarket
- Car parking
- Library
- Chemist
- Station parking
- Diversity
- Parking
- Library
- Parking
- Access
- Nursery
- Doctors
- Quiche in plaza.

Name a bad thing about shopping at Turramurra?

- High prices
- Limited variety
- Divided by highway
- Unremitting congestion
- Traffic
- Commuter parking
- Poor shop access
- Kissing point road access
- Congestion
- Crossing the highway for shopping
- Fragmented shopping – suggest Rohini St Mall
- Rail station parking
- Expensive

- Highway pedestrian crossings
- Rohini St pedestrian crossing – delays cars
- No undercover parking – like Gordon
- Divided by highway
- Does not fill a niche – not big or small.

What could be done to improve Turrumurra?

- All shops on one side
- Undercover parking,
- Pass
- Better access to shops
- One side of highway should be developed for shopping
- Close Rohini St rail bridge – traffic to Ray Street
- Change bus parking for better access to Coles
- Eastern Road access esp in mornings
- Need for overpass / underpass across Highway
- Consolidate shopping into one accessible area
- Easier access to shops
- Walkway like Gordon across Highway
- Better bus terminal
- More upmarket shops
- Feeder road to shopper car-parking
- Over/underpass across highway
- Commuter parking
- Better supermarket access
- More upmarket shops
- Underground the highway or build shops over it
- Controlled pedestrian crossing in Rohini St
- Rohini St Crossing over vegetated – hinders drivers seeing pedestrians
- Trucks on highway in peak hours
- Commuter parking.

Please give your thoughts about strip shopping along the Highway?

- Reversing the shops doesn't work in Pymble
- Strip shopping is outdated
- Parking and access needed behind
- Poor variety
- Eradicate
- No place for strip shopping
- Ditto
- North Turrumurra is parked often parked on both sides
- Unappealing, difficult and dangerous
- Polluted and child-unfriendly
- Strip shopping does not work on the Highway
- Highway too busy for shopping
- Outdated shopping – footpath is a potential danger zone
- An accident waiting to happen, given trucks and traffic
- Shops are old and grotty – reverse shops to face inwards
- Pass
- Dangerous and noisy
- No strip shop parking is a problem on the highway
- Congestion; lane markers make the highway confusing
- Pass.

Special qualities of shopping at North Turrumurra?

- Sub post office is great
- Don't use
- Convenience at north turra and friendly
- Convenience, but difficult access sometime
- Fruit shop needs to be open on Sunday afternoon
- Friendly location
- No supermarket and bank
- Dentists, chemist and convenience

- Atmosphere and environment
- Friendly village, keep developers out
- Village atmosphere and convenience
- Access and friendly village style
- No need for Woolies, very accessible friendly
- Small and friendly
- Upmarket atmosphere
- Services are good, doctors dentists hairdressers restaurant and take way are all good
- Intimate, convenient and friendly
- Village atmosphere is good – often dying elsewhere
- Variety, animal hospital, newsagent PO good – but lost hardware
- Drapery no longer here – don't want to go to Turrumurra
- Rubbish and some overhanging bushes across footpaths are a problem for access
- Good doctor and dentist
- Convenience – but move pedestrian crossing.

Improvements for North Turrumurra:

- Consider moving pedestrian crossing near Normurra Ave 1 or 2 metres towards Turrumurra
- Police the too-close parking to pedestrian crossing near shops
- Parking outside the real estate agency makes the pedestrian crossing dangerous
- Keep developers including new hospitals out of here
- Council must use competent legal counsel in Court proceedings
- Need for car park feeder road to ease congestion on Normurra
- Pedestrian crossing is hard to see as a driver – move a bit towards Turrumurra
- Put in rumble strips approaching pedestrian crossing

- Keep it simple – especially parking
- Change pedestrian crossing
- Limit inappropriate development
- Shopping in North Turrumurra is dangerous
- Council is impotent against NSW government on development
- Too much shopper parking makes the pedestrian crossing dangerous
- Limit shopper parking to 2 hours
- Put 40kmh limit along shopping strip all the time
- Police double parking by deliveries etc on Bobbin Head road at shops
- Pedestrian crossing is not obvious – especially to drivers from elsewhere

Final Point

- Sports traffic is often a problem
- Police u-turns on Bobbin Head road near shops
- Better signage for available parking areas
- Don't expand shopping area
- Kiss and drop times are dangerous near Normurra Ave
- Consider road link from F3 dip to Mona Vale road – along gully to Wildflower Park
- North Turrumurra shopping is good because of access
- Bobbin Head and Burns roads need lights to turn Right off Burns Road
- Filter needed on Eastern Road turning right into Burns Road
- *New NTAG Secretary is Steve Slater*
- *Email St Ives shopper Survey to Brian*
- *GHD did resident surveys – follow up.*

APPENDIX G

Turramurra Town Centre Consultation with Residents – Rohini Village 10am, 18 February 2005

Introduction

Thanks to Village for interest and assistance.
Looking to the future of Turramurra town centre ...10- to 20 year horizon

Six outreaches by Council – Household Survey 8000 homes; resident groups consultations, business consultations, young person's consultations, retirement village consultation, shopper survey.

Today's session – Retiree reps will be asked a series of questions.
We will seek perspectives and experiences.
Feedback session by winter – survey results on kmc website.

How long have you lived in or near Turramurra?

Years= 37, 10, 4, 80 (1926!), 50, 10, 2

Name a good thing about shopping at Turramurra?

- Roger's food shop is excellent
- Good chicken shop – quality
- Love being here
- Convenient esp to newsagent
- OK for me (101yrs) Each time I contacted Council they did something – there was a dirt road outside our place in 1926 when we came here; I contacted Council about ponding, they fixed the ponding and put in a culvert
- No Dept Store – but Hornsby is OK for me

- Quite happy
- Supermarket competition is good – eg Coles & Franklins
- We need a good restaurant here for retirees

Name a bad thing about shopping at Turramurra?

- No bookshop
- No mens underwear shop
- Paving on railway side of Rohini street is very broken near trees and around Cherry Street
- Need F3 to F2 extension to reduce highway traffic
- Hairdressers from Turramurra should come to village
- Coles is on the other side of the railway
- No fruit shop delivers to us
- Council needs to look at footpaths that need repairs
- Need a seat or two outside the Thai restaurant and near ped crossing to the railway
- Ditto – look a repairs to footpaths and a new seat near Thai restaurant.

What could be done to improve Turramurra?

- Fruit and vegetable truck to sell at the Village here towards the end of each week
- Bus needed to come to Rohini Village weekly, say Thursday or Friday
- Weeding and path maintenance by Council is needed
- Clean up rubbish around railway entrance from Rohini Street
- Shopping area flower tubs – colour and maintenance needed
- The Crepe myrtles in Rohini St are looking sad – attention needed
- We need a post box outside our Village.

Please give your thoughts about strip shopping along the Highway?

- More of a mall is needed
- Could we close off the Highway?
- We need to put lights in for railway exit pedestrian crossing in Rohini St AND synchronise with Highway/Eastern Road traffic lights
- People dribble across that rail exit pedestrian crossing – needs better
- Rear arcades should provide a solution for Highway shops
- Need a seat between Cherry St and shelter shed
- Double Bay solution – turn the Highway shops around
- Need for wider footpaths in future – outdoors /café society.

Final Point

- Garage on cnr of Rohini St has closed – we need a restaurant there
- Near that garage – gutter needs repair – it gets flooded, blocked drain on a bad corner
- Toilets are not very good – we need automatic new ones like Wollongong !
- Taxis don't like our short trips
- Taxis are not very reliable – even for longer trips
- Taxi phone at Coles needed
- Coles entrance is not too good, doubtful emergency exits, poor seating for elderly
- For people living by themselves, it is difficult to buy smaller packets – eg muesli, soups.

Points from Residents Preparatory Meeting:

Coles

- More seating needed for older shoppers
- Taxi phone
- Narrow congested exits – fire exits?

Rohini Street

- Make it into mall
- Extra crossing lights coordinated with highway traffic lights
- Another seat near chicken shop or lower down
- Rohini & Eastern – water builds up in gutter
- Put posts either side of above pedestrian crossing – although lights would correct this

William Street

- Safer crossing needed to National Bank or up to Highway
- Needs a taxi rank closer to station entrance - would save carrying heavy luggage some distance

Shops

- Should have hours of business on them – many do.

Railway Bridge

- Should have notice and arrows pointing to taxi rank and Shorelink bus terminal, and list of which hospitals bus routes go to.

APPENDIX H
TURRAMURRA TOWN CENTRE
PLANNING Consultations
7.30am – 7 & 14 March 2005

Introduction

Thanks to Chamber of Commerce for interest and assistance.
Looking to the future of Turramurra town centre ...10- to 20 year horizon

Six outreaches by Council – Household Survey 8000 homes; resident groups consultations, business consultations, young person's consultations, retirement village consultation, shopper survey.

Today's session - Businesses will be asked a series of questions.
We will seek perspectives and experiences.
Feedback session by winter – survey results on kmc website.

How long have you operated your business in Turramurra?
10, 1 or 2 // 2, 2, 2, 11, 13, 16, 5, 9, 10, 1, 3, 43/15, 2, 5, 1.

Name a good thing about shopping at Turramurra?

- parking
- garbage removal and cleanliness
- parking for shoppers
- most shops are here in Turramurra
- two good supermarkets – Franklins is hidden Coles is obvious
- shop-top housing is good for business
- atmosphere / station location/ cosy village set-up
- friendly shoppers and customers
- older population are loyal shoppers and forthright people
- no special attraction – need for a focus

- diversity of shops
- affluent people
- local support
- ditto
- good community
- close to buses
- local community
- good demography
- one-stop location
- diversity of business
- no competition in hardware
- like-mindedness
- good shopping
- community-minded people
- high net worth people
- nice place & nice people
- traffic/bus/rail hub
- good local services.

Name a bad thing about shopping at Turramurra?

- Extend parking to 4 hours
- Set parking up like Gordon – multistorey with worker parking
- North and south Turramurra
- Highway divides the centre of Turramurra
- Traffic flow on highway is major disadvantage
- Disjointed – virtually 3 shopping areas in central Turramurra
- Rail station could use a lift
- Biggest issue is parking
- Lots of people got to Hornsby, Macquarie or St Ives
- North Turramurra people shop at St Ives
- Central Turramurra people shop locally
- South Turramurra people shop at south Turramurra

- Pacific highway
- Highway makes shopping difficult
- Traffic flow and highway
- Three shopping precincts in central Turrumurra
- Divided by highway and railway
- Council lost local funds for Turrumurra town centre
- Council does not listen – higher rates less service
- Highway problems
- Parking – need for more all day parking
- Parking – suggest 4 hour limit eg for hairdressing and others
- Limited shopping range – Coles is a magnet
- Need for employee parking
- Turrumurra central is fragmented into 3
- Signage needed, plus advertising locally (*www?)
- Some retail gaps eg children's toys
- We are not an attractive village like Wahroonga for business
- Eastern Rd and Rohini St are congested after 2pm each day

What could be done to improve Turrumurra?

- Close Rohini Street
- Walkover across highway like Gordon
- New shops to take away old tatty-ness- preserve heritage too
- Mall and town centre across railway
- Open up wasted space ... like Norton St (Leichhardt)
- Eliminate parking levy for new business
- Small scale Interchange esp. for Nth & Sth Turra users of the railway
- Village style include a Town Square
- Use rail airspace as a town central point
- Medium density there needs to be tasteful

- Consider traffic mgmt by street closure
- Older people are intimidated by highway
- Consider closing Rohini st – *not all agreed*
- Lights needed at Turrumurra Ave and highway
- Don't close Rohini St – would be a disaster for eateries and PO
- Light traffic bridge needed – Rohini & Bray Streets
- Old Council raided \$500,000 from parking fund for general revenue
- Loss of parking to other uses near Uniting Church
- Need to link shops with retirement village opp on highway
- Better links Turrumurra disintegrated hub – lifts for access would help
- Access for older persons across highway and to rail platforms needed
- 600 new units along Highway from Warrawee will be a disaster here
- Turrumurra needs a strategy – not bandaid solutions
- Hub role is important Connection and office space over rail station
- Commuter parking.

Please give your thoughts about strip shopping along the Highway?

- None
- pass
- pass
- here to stay
- parking is needed off the Highway
- has a place and future if parking is provided behind
- exposure is critical for many businesses
- other centres like Wahroonga, Crow's nest
- Ditto

- North Turramurra is parked often parked on both sides
- Strip shops are the gateway to Turramurra
- Use highway and rail to benefit the town centre
- 72000 cars per day along highway
- Pennant Hills tunnel may open highway at Turra to parking
- Much potential after-hours uses along highway
- Visibility is important for our Drapery shop
- Look at Parramatta rd Annandale – new parking behind has revitalised
- Traffic is a problem.

Final Point

- Highway traffic is a problem
- M2 to F3 link is missing – bandaid traffic job is a criticism of Sydney
- Keep trucks out of Turramurra if possible – rail the freight
- Prostitution is not for Turramurra
- Don't ruin it with redevelopment – try to keep character
- Need for an active role for business
- Need for a revitalised Chamber of Commerce.

APPENDIX I

Residents' Vision Workshop 5th May 2005
Summary and Synthesis of Outcomes

1. What qualities does Turrumurra Town Centre need to keep?

The following is a summary of responses from all tables:

- Sense of community atmosphere
- Small scale
- Open space / green
- Small local shops
- Village atmosphere.
- Viable alternative shopping centre (ie. to Westfield).
- Quality of life / greenery / point of difference.
- Existing infrastructure to be enhanced.
- Diversity of retail outlets.
- Library.
- All existing open space – parks, car parks etc to be retained as open visual space.
- Local population.
- Seniors centre / child care centre / Turrumurra tots / Hill View.
- Lawn areas / parks.
- Medical services / dental / hairdresser.
- Hardware.
- Good public transport links trains / buses.

2. What are the issues or problems that need to be addressed in planning for the Turrumurra Town Centre?

The following is a summary of responses from all tables:

- Difficulty of access between 3 different retail areas.
- Poor traffic flow particularly Rohini Street.
- Lack of cycle ways

- Better access for retirees / elderly.
- Widening of arterial roads ie. Kissing Point Road
- Through traffic.
- More and better parking.
- Rail feed bus services run at a loss.
- Traffic / parking / access / traffic flow.
- Uncoordinated / disjointed / unfocussed.
- Lack of quality / choice of shopping / eateries.
- Lack of after hours activity.
- Inadequate pedestrian links through the centre.
- Division of shopping centre by road and rail.
- Lack of car parking.
- Excessive noise.
- Traffic congestion.
- Lack of open space.
- Lack of vitality at night.
- Local traffic circulation must be kept / separated from through traffic on highway.
- Improved bus / train / car interchange and pedestrian access.
- Safety at night.
- Traffic gridlock.
- Parking – shopping and commuter.
- Access to station for elderly / disabled.
- Difficult access to unattractive shopfronts on highway.

3. What characteristics and features would make a good town centre for Turrumurra?

The following is a summary of responses from all tables:

- Pedestrian mall.
- Outdoor dining.
- Transport hub – another exit from railway station to access this hub.

- Redevelopment of plaza with bridge or tunnel access across the highway.
- Multi-storey underground car park.
- Face shops away from Highway.
- Viable alternative shopping centre to St Ives.
- Proper use open spaces.
- Use space wisely.
- Cover up highway? Railway?
- Consolidated shopping centre.
- Face shops to car parks.
- Rooftops have beautiful views – use them.
- Nothing for children – pool close but not central.
- Waste of land bottom of Rohini Street where buses go.
- No overpass over highway – too many stairs.
- Community facilities on both sides.
- Several levels of shopping that can be linked over highway.
- Lifts – open space and community area over rail.
- Don't want another Hornsby – losing shops and banks.
- Re-do community areas – Meals on Wheels etc.
- Office space for rent.
- Accessibility over the highway possible if lifts into shopping spaces.
- Overpass.
- Rohini Street Mall.
- Focus on existing hub.
- Attract younger people to town centre.
- Village green / alfresco dining.
- Access improvement for station / bus interchange.
- Development height (of buildings) to be stages to limit mass.
- Open air dining.
- Inward focus to development (away from the highway)
- More open space for cafes – safe outdoor seating.
- More car parking (especially for station).
- Easy access / transit for pedestrians.

- Centralised retail complex – preferred site in the Coles precinct.
- Underground parking – multi-level.
- Alfresco dining.
- Shops facing inwards – incorporate highway grouping of services / retail / community shops.
- Linking 3 precincts – pedestrian overbridges over highway and over Rohini Street.
- Variety of retail and services.
- Incorporate library and community centre.
- Support development by adjacent high rise surrounding.
- Make station safe and increased activity

4. Describe your group's vision for Turrumurra Town Centre:

The vision statements from each group are set out below:

Group 1:

- Poor traffic flow around the centre.
- Require improvements to the rear of shops.
- Underground the existing car parks.
- Need to provide facilities for younger population.
- Total reconfiguration of existing roadways is required for the centre.

Group 2:

- Need to maintain small shop feel.
- Need diversity of shops.
- Keep the library and existing open space areas.
- Inadequate pedestrian access to the town centre.
- Lack of commuter car parks.
- Lack of night time activities.
- Provide one or more village green in the centre.
- Need safe place to sit.

- The centre should be dominated by small business.
- Retain health and other community services.

Group 3:

- Provide a centralised complex in the Coles precinct.
- Need a village green centrally located
- Need a variety of shops and alfresco dining areas.
- Need multi-level or underground car park.
- Require upgrade to the commercial frontage along Pacific Highway.
- Group the community services.
- Provide better location for existing community facilities.
- Provide new study room and internet services to the library.
Possible provision of coffee shops in the library.
- Allow medium density development around the town square/plaza to fund the public improvements.

Group 4:

- Retain the village atmosphere of the centre.
- Underground existing car parks.
- Need to cater for the children.
- Improve the accessibility to the station.
- Provide roof top gardens for views.

Group 5:

- Maintain small shops.
- Need to cater for elderly people.
- Provide more parking.
- Require improvements to the Kissing Point Road and Rohini Street.
- Need new cycleway.
- Redevelop Turramurra Plaza and provide tunnel to link to another side of shops.

- Provide more exit points to the station.
- Use air space over the railway for development.
- Need sports centre and youth centre and locate them near Coles.

5. Synthesis

All the words and statements from each group can be organised under the following headings:

Village atmosphere

- Improve village atmosphere / spaces.
- Identify meeting place.
- Lacks community atmosphere – develop.
- Lacks community atmosphere – develop.

Traffic and Parking

- Improve traffic movement and parking facilities.
- Close off town centre to traffic.
- Highway shops poor rear access turn around.
- Underground car parking
- Commuter parking.
- Multi-layered car park preferred underground.

Public space and parks

- Create mall / open air and closed dining (people access).
- Central village green surrounded by cafes and low rise shops
- Village Green
- Village green(s).
- Provide safe places to sit.
- Wisely used spaces – for people not cars.
- Inappropriate to have so much car parking in important places – make for people.

- More open space.

Reorientate shops

- Commercial spaces consolidated and face pedestrian spaces / car parks.
- Highway shops poor rear access turn around.
- Turn commercial inwards.
- Pacific Highway shopfronts should face the rear.

Create retail core

- Development confined to and focussed on existing hub.
- Limit development to hub to prevent impacts.
- Division between shops intolerable.
- Group retail in central area
- Group retail.

Mix of uses - viability and vitality

- Increase viability of shops / businesses.
- Centre to be dominated by small businesses to serve daily needs.
- Lack of vitality at night.
- Viable shopping centre – specialty and staples.
- Community, residential, commercial, open space.
- Retail
- Cafes

Children and youth

- Cater to children (eg. pools).
- More facilities for children – sports centre, youth centre.
- Facilities for young people.
- Cater for younger generation.

Pedestrian accessibility

- Accessibility – station, overpasses etc.

- Increase / enhance links between components.
- Interlinked pathways throughout the centre.
- Bridges / tunnels across railway and highway.
- Poor pedestrian links.

Rail air-space development

- Open space built over railway.
- Development using air space of railway line.

Views

- Use rooftops for views.

Green

- Roof gardens, as much green as possible.

Community services

- New library and community facilities (better facilities).
- Keep library.
- Comprehensive range of health and community services.
- Health and community services.

Public transport

- Improve access to public transport.
- Train station with bus interchange, car parking and a lift to the platform.

Pacific Highway

Widen Pacific Highway

5. Components of the Vision

By grouping the headings identified above we can identify common themes:

Paragraph 1:

Village atmosphere

Public space and parks

Paragraph 2:

Mix of uses - viability and vitality

Community services

Children and youth

Paragraph 3:

Reorientate shops

Create centralised retail core

Views

Greenness

Pacific Highway

Paragraph 4:

Pedestrian accessibility

Public transport

Paragraph 5:

Traffic and Parking

Notes:

- The idea of rail air-space development has been discounted as the scale of such development (eg St Leonards) is considered inappropriate for Turrumurra.
- The idea of a practical realistic plan will be included as a fundamental planning principle rather than in the vision ie development is required to fund public and community improvements.

APPENDIX J

TURRAMURRA TOWN CENTRE PLANNING Consultations

7.30am 7 April 2005

Introduction

Thanks to KNOX - SRC & John Starreveld for interest and assistance.
Looking to the future of Turrumurra town centre ...10- to 20 year horizon

Six outreaches by Council – Household Survey 8000 homes; resident groups consultations, business consultations, young person's consultations, retirement village consultation, shopper survey.

Acknowledge attendance of Cr Andrew.
Today's session – KNOX reps will be asked a series of questions.
We will seek perspectives and experiences – *survey results on kmc website*.

How long have you lived in or near your suburb in Ku-ring-gai?

1. Turra - 13
2. Turra - 2
3. Gordon -12
4. SI - 8
5. 3
6. 2 Py,
7. 14+ tu,
8. 3,
9. 3 Go

Name a good thing about shopping at your suburb in Ku-ring-gai?

1. Turra - Close
2. Easy access
3. Gordon - meets most needs
4. SI – good for elderly, skatebowl is good
5. Not as busy as Westfield
6. Turrumurra is a versatile area
7. Pymble is convenient
8. Turrumurra has good VCR and Pizza
9. Gordon is a good size with good variety

Name a bad thing about shopping at your suburb in Ku-ring-gai?

1. Turra – divided – needs to be on one side
2. Turra – not convenient, parking and access are poor
3. Gordon – bit tired and old, not like Chatswood
4. SI – Crowded at non-school times, space is limited
5. Gordon – convenience, duplication of some shops
6. SI – Crowded and busy
7. Gordon – mid range size makes it a bit of a problem as a centre

What could be done to improve your suburb in Ku-ring-gai?

1. Turra - Sport shop and Gym
2. Turra – no video store
3. Gordon – not very organised as a location – no link to rail station
4. Turra – roads are a problem for town centre
5. Turra – a surf shop and restaurants would be good
6. Turra – too many bread-shops, need some restaurants
7. SI – same kind of shops, lots of duplication of shops for older persons, add some sports shops

Please give your thoughts about strip shopping along main roads?

1. Turra – parking is mostly OK for these shops
2. Turra – not under one roof; strip shops have easy access
3. Gordon – kerb parking not on – car parks OK
4. Turra – video and newsagent and bakery need good quick access
5. SI – parking and access to/from Memorial Ave is dangerous
6. Gordon is efficient in many ways – but Lindfield has better strip access
7. Pymble – shops off the highway works well
8. Turra – good centre with close parking off highway for little strip shops

Final Point

1. Turra – need to focus on a fitness centre for area
2. Turra – Food and fast food would be good for young and ret village people
3. Pymble - good redevelopment is needed behind the railway station
4. Gordon – is tired people go to bigger places like Westfield
5. SI – need facilities on highway lie squash
6. Gordon – Pymble pool is OK - another in the north of Kgai would be good
7. Pymble – basketball hoops would be good in parks – social hub for youth
8. Turra – Fitness centre and gym would be good
9. SI – youth clothing outlets need to be available
10. Gordon – keep our town centres mid-size, with sports centres and meeting places for youth; few young persons shops eg fashion shops.

Vote of thanks

Expressed thanks on behalf of Council, Cr Andrews and myself for time and perspectives given this morning. Noted household survey results would be available on kmc website – weblink forwarded to Mr Starreveld later that morning with emailed note of thanks to Knox./cc Cr Andrew

ATTACHMENT B - Chronology of Surveys & Consultations

Turramurra Chamber of Commerce - Executive December 2004/ January 2005

Turramurra Household Survey 1 February 2005

Rohini Retirement Village 18 February 2005

Northhaven & St Margaret's Retirement Villages 18 February 2005

Turramurra Chamber of Commerce 7 & 14 March 2005

Pymble Ladies' College - survey 10 March 2005

North Turramurra Action Group 13 March 2005

Knox College Student Representative Council 7 April 2005

Kissing Point Sports Club 27 April 2005

Residents' Vision Workshop 5 May 2005

Kissing Point Progress Association 31 May 2005

Turramurra Business Consultation 6 June 2005

Turramurra Vision Survey 24 June 2005

Mail out of The Turramurra News 8000 - postcode 2074 August 2005

Turramurra Web-site Options Display and on-line Survey August/ September 2005

Turramurra Library Options Display and Survey August/ September 2005

Turramurra Commercial Owners' Options Workshop 10 August 2005

Turramurra Residents & Business Options Workshop 10 August 2005

Coles Turramurra - Options Display & Survey 20 August 2005

Franklins Turramurra - Options Display & Survey 20 August 2005

Cameron Pk Turramurra - Options Display & Survey 24 August 2005

Meal on Wheels Centre Turramurra - Options Display & Survey 28 August 2005

Turramurra Residents Options Workshop 15 September 2005

Turramurra Uniting Church Council consultation 17 November 2005

Turramurra Chamber of Commerce Options Presentation 21 November 2005

Turramurra Town Centre Traffic Study

Ku-ring-gai Council Planning Committee Summary Note

(Revised 30 November 2005)

1. Introduction:-

The purpose of this summary note is to provide a basis on which to present the Traffic Modeling findings from the Turramurra Town Centre Traffic and Parking Study. It is important to note that this note will be followed by a Final Traffic Report which is the document which should be referenced in future in relation traffic issues for the Turramurra Town Centre.

It should be noted that Traffic modeling does not provide definitive answers but is an effective tool in providing valuable guidance upon which decisions can be made regarding future land use options.

2. Traffic Modeling & Key Definitions:-

The traffic modeling software predominantly used by Traffic Consultants and the RTA for road network modeling is SCATES which can be used to assess the operation and performance (existing and future) of signaled intersections which are linked under the Urban Traffic Control system SCATS.

It uses Level of Service (LOS) A to F as a way of defining the operational performance of various signal intersections where level of service A indicates the most favourable and level of service F the least favourable. (It should be noted that the overall level of service of an intersection is determined by the Average Vehicle Delay (AVD) for all traffic movement and therefore it should not be taken as given that a signal intersection operating at LOS A is operating satisfactorily on all approaches.)

The LOS at signal intersections is determined on the basis of Average Vehicle Delay (AVD) and the Degree of Saturation (DS) and is best explained by way of a basic example:-

- Local Road Approach - Green Time Available = 10 seconds
- Rate of flow across the stop line = 1 vehicle every 2 seconds
- Number of Vehicles on approach at each cycle = 4

In the example above it is obvious that in 10 seconds all 4 vehicles will clear the intersection with some 2 spare seconds available. i.e. 4 vehicles clear the intersection in 8 seconds. This relationship between traffic volume and available green time is known as **Degree of Saturation**.

Now consider there were 10 vehicles on this same approach. During the 10 second green time only 5 vehicles clear with the remaining 5 vehicles left to wait until the same corresponding green time comes around again. This waiting period is known as the **Vehicle Delay**.

3. Turramurra Existing Situation:-

GTA Consultants undertook existing traffic counts at various locations throughout the study area. These were undertaken during the AM and PM peak periods and form the base data used in the traffic modeling. The results of the existing SCATES traffic modeling indicates that there are delays and queues at the Ray Street approach during the PM peak period and at the Rohini Street approach during both the AM and PM peak period.

This information was used as the basis for testing future land use options and traffic improvement options for the Turramurra Town Centre.

4. LEP 194 (Traffic Impacts):-

GTA Consultants were given the location and yields for the approved Local Environment Plan 194 development sites for Turramurra. A three step process was undertaken for assessing the impact of the new development as follows:-

- 4.1 Traffic Generation** (RTA Rates applied for medium density development on the basis of a recommended percentage split of 2 and 3 bedroom units by location)
- 4.2 Traffic Assignment** (On the basis of the generation above the additional trips were assigned to the existing road network with a 80/20 outbound/inbound split applied to the AM peak with this reciprocated in the PM Peak. It was also assumed that 50% of the outbound traffic in the AM peak would go via Brentwood Avenue to avoid the delays at the Pacific Highway and the reverse would apply in the PM peak)
- 4.3 Scates/aaSidra Modeling** (SCATES Traffic Model used to assess the impact on the existing road network of Pacific Highway and associated local side roads. aaSidra Traffic Modeling undertaken of local intersections along Brentwood Avenue.)

Although detailed outputs (including DS, AVD's & LOS for each approach) have been produced for the LEP 194 and future land use scenarios it is felt best for the purpose of presenting the outcomes in a more broad and holistic way that economic performance indicators be used as opposed to the individual criteria for each intersection. (Details of the economic outputs for the LEP 194 assessment are included in Appendix A)

Economic performance indicators provide an overall cost of the traffic system under the various traffic conditions and are useful in giving an indication of the overall impacts when compared against the existing base case situation. They are calculated based on vehicle operating and time costs as defined in the RTA's Economic Evaluation Manual.

5. Urban Design (Traffic Impacts):-

5.1 Options:-

In consultation with the Ku-ring-Gai community and Councils Urban Design Consultant five Urban Design Options were developed for the Retail/Commercial/Residential centre of Turramurra as follows:-

Option A

Retail/Commercial:- (2 x Supermarkets at Ray Street)
Community Facility at Gilroy Street
Library at Gilroy Street
Medium Density Development

Option B

Supermarket at Ray Street and Gilroy Street
Community Facility at Gilroy Street
Library at Ray Street
Medium Density Development

Option C

Supermarkets at Ray Street and Stonex Street
Community Facility at Gilroy Street
Leisure Centre at Ray Street
Medium Density Development

Option D (Option DA – Leisure Centre Removed)

Supermarkets at Turramurra Avenue and Stonex Street
Community Facility at Gilroy Street
Leisure Centre at Ray Street
Library at Ray Street
Medium Density Development

Option E

Supermarkets at Ray Street and Stonex Street – As existing but expanded
Community Facility at Gilroy Street
Library at Ray Street
Medium Density Development

The development of a preferred land use option in traffic terms is best determined on the basis of a combination of the level of likely traffic generation and how this is distributed onto the road network. In the case of Turramurra with its restricted road network (Bounded by the Pacific Highway and Railway Line) it was important that the highest trip generators (i.e. Supermarkets) not be concentrated in the same location but **rather that consideration be given to these being evenly distributed throughout the Turramurra Town Centre.**

In terms of the above philosophy Option D appeared to fit best as it minimized the amount of traffic generated onto Ray Street by the provision of a Leisure Centre and Library including some specialty retail and relocated the existing supermarket to Turramurra Avenue. This option achieved



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the best level and distribution of traffic generation across all areas within the Town Centre as indicated in the Traffic Generation Tables in Appendix B.

It was also considered necessary to include one additional land use option which was based on Land Use Option D but removed the Leisure Centre and this was included as Option DA.

5.2 Traffic Generation:-

Traffic Generation rates for each option were determined primarily from the RTA's Guide to Traffic Generating Developments.

For the Leisure Centre more accurate generation rates were obtained from similar type developments and the rates for the library were determined from existing peak usage figures obtained from Turramurra Library itself.

Table 5 overleaf indicates traffic generation rates used for the assessment:-

Table 5 – Traffic Generation Table

Land Use	Rate	Reference
Medium Density Residential	0.55trips per dwelling	RTA 3.3.2
Retail:-		
Supermarkets	155A (SM) 155trips/1000m2 GLFA	RTA 3.6.1
Library/Community Centre		Figures obtained from Turramurra Library (Calculated)
Leisure Centre*	Gym - 9trips/100m2 GFA Aquatic Centre - 90trips/hr weekday	RTA 3.8.2
Speciality Retail Shops	46A (SS) 46trips/1000m2GLFA	RTA 3.6.1
Commercial	2trips/100m2 GFA 22A(OM) 22trips/1000m2GLFA	RTA 3.5

Note:- * Traffic Generation Rates for the leisure centre are based on rates for a gym (% of GFA) and on rates obtained from the Aquatic Centre in Ryde

In order to determine the net traffic generation to be assigned to the road network the existing traffic generated from the existing land uses were subtracted from the traffic generated from the new urban design options above.

5.3 Traffic Assignment & Economic Impacts:-

The Traffic Generated from the above Urban Design Options was then assigned to the existing road network and the traffic impacts assessed using SCATES. The economic performance indicators (Annual Route Costs and Average Vehicle Delays for the main and side roads) for each Urban Design Option are included in Appendix A.

The economic indicators for each Urban Design Option indicated that Option D performed best followed by Option E.

6. Traffic Options:-

6.1 Methodology

The methodology adopted for the development of the Traffic Options to **accommodate** the impacts of the various urban design options was as follows:-

Using:-

- Urban Design Option D as the starting point (best option from an economic perspective) and identifying that the traffic issues for this option are located at Ray Street and Rohini Street with Kissing Point Road having some flexibility and;
- Having regard to Councils Exhibited Traffic Options;

The following thinking was adopted:-

In order to improve the situation in Traffic Terms would require some if not all of the following:-

1. Remove Tidal Flow from Pacific Highway (RTA amenable to this.)
2. Remove some of the turning movements from the three signal intersections. (i.e. Remove Signals, Ban Turns etc.)
3. Concentrate efforts on improving capacity at the Ray Street and Rohini Street intersections by not adopting any traffic options which adversely impact on these two intersections.
4. Implement traffic management measures in locations surrounding the Town Centre to redistribute traffic away from the town centre. (i.e. Change priority at the Brentwood/Turramurra Avenue Intersection to direct traffic along the collector road of Brentwood Avenue.)
5. Reduce the Scale of the Development proposed.

On the basis of the above the following Traffic Options were developed and assessed taking account primarily of points 1,2 & **3** above:-

6.2 Option D1

New Stonex Street (Two Way)

Realigned Forbes Lane (**One Way**) Set back sufficiently to allow queuing space.

No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.

Rohini Street (One Way In)

New Gilroy Lane (Two Way) Set back behind Church to allow queuing space

New Signals at Turramurra Avenue

6.3 Option D1A

New Stonex Street (Two Way)

Realigned Forbes Lane (**Two Way**) Set back sufficiently to allow queuing space.

No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.

Rohini Street (One Way In)

New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.

New Signals at Turramurra Avenue

6.4 Option D2

New Stonex Street (Two Way)

Realigned Forbes Lane (Two Way) Set back sufficiently to allow queuing space.

No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.
 Rohini Street (One Way Out)
 New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.
 Turramurra Avenue (One Way in between Pacific Highway & Gilroy Lane)
 New Signals at Turramurra Avenue

6.5 Option D3

New Stonex Street (Two Way)
 Realigned Forbes Lane (Two Way) Set back sufficiently to allow queuing space.
 No left turn from Ray Street into Pacific Highway & Pacific Highway into Forbes Lane.
 Rohini Street (Signals removed, left in left out)
 New Gilroy Lane (Two Way) Set back behind Church to allow queuing space.
 Turramurra Avenue (Two Way)
 New Signals at Turramurra Avenue

The outcome of the assessment of the above options indicated that another option based primarily on Option D3 but with the inclusion of a one way operation of Forbes Lane and some additional banned turns would provide most favourable results and would be most appropriate at this stage for Land Use D for the Turramurra Town Centre. This option is presented below as Option D3SV.

6.6 Option D3SV

New Stonex Street (Two Way)
 Realigned Forbes Lane (One Way) with new connection at Kissing Point Road.
 No right turn permitted from Forbes Lane into Pacific Highway. (This movement is catered for via Kissing Point Road, Stonex Street and Duff Street.)
 No left turn from Ray Street into Pacific Highway
 No left turn from Pacific Highway into Forbes Lane.
 Rohini Street (Signals removed, left in left out)
 New Gilroy Lane (Two Way)
 Turramurra Avenue (Two Way)
 New Signals at Turramurra Avenue
 Left Turn Bays on Pacific Highway at Turramurra Avenue and Kissing Point Road.

Following this assessment it was considered necessary to superimpose the traffic options of D3SV onto the land use option E in order to give a direct comparison between these two different land uses with the same traffic management measures. This resulted in a further traffic option E3SV. The results from the comparison between Option D3SV and E3SV are as follows:-

Option D3SV would be more acceptable in Traffic terms requiring infrastructure changes of a relatively manageable/feasible size. There is also a good balance between the main road and side road delays in this option. In addition, the traffic changes proposed (D3SV) will not require a large amount of refinement in order to be generally accepted by the RTA.

Although Option E3SV could be made to work, as it stands, it is less acceptable in traffic terms with main road delays of nearly double that of Option D3SV and would require substantially more infrastructure changes i.e. Possibly more banned turns, more right turn lanes from Ray Street and possibly a new rail link connecting Rohini Street and Ray Street for it to reach levels which would be generally acceptable to the RTA.

7. Conclusions

7.1 Existing Traffic Situation:-

- The Pacific Highway operates well with delays and queues on the side streets at the Ray Street intersection in the PM peak (LOS F) and at the Rohini Street intersection in both the AM and PM peak periods. (LOS F)

7.2 LEP 194:-

- The introduction of the total LEP 194 development will not have a significant effect on the Pacific Highway (LOS B&C) traffic but will have a further detrimental affect on the local roads of Ray Street and Rohini Street.
- The introduction of some minor Traffic Management Measures on the south-eastern end of Rohini Street (i.e. Enforce and Extend the Peak Parking Restrictions) will improve the situation at Rohini Street.
- The introduction of two right turn lanes from Ray Street will improve the situation at Ray Street. This could be achieved by either widening of the southern side of Ray Street, providing an additional lane, or banning the left turn at Pacific Highway altogether and allowing the left turn to take place from William Street via Forbes Lane. It should be noted that the latter has implications for access into Kissing Point Road.

7.3 Urban Design Land Uses:-

- Any future land use options for Turrumurra Town Centre should focus on an even distribution of trip generators and not concentrate these in one location due to the existing constrained road network and current traffic sensitivity of the Pacific Highway.
- The major trip generators for the Turrumurra Town Centre are by far the supermarkets.
- Land Use Option D provides the best fit in terms of land use distribution with the inclusion of a Leisure Centre and Library at Ray Street and the supermarket relocated to Turrumurra Avenue.

7.4 Traffic Options:-

- Option D3SV is the preferred traffic option which accommodates Urban Design Option D and provides a balance of average vehicle delay both on the main road of Pacific Highway and on the local side roads and overall provides the least economic impact.
- Option D3SV would only require a low level of refinement in order for it to be generally acceptable to the RTA.



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- Option E3SV is less acceptable in traffic terms with main road delays of nearly double that of Option D3SV and would require more infrastructure changes i.e. Possibly more banned turns, more right turn lanes from Ray Street and possibly a new rail link connecting Rohini Street and Ray Street for it to reach levels which would be generally acceptable to the RTA.

It should be noted that this assessment in traffic terms provides a good basis on which to progress the changes proposed for the Turrumurra Town Centre further and whichever option is selected by Council will require further work at a more detailed level.

APPENDIX A – SCATES TRAFFIC MODELLING (ECONOMIC ANALYSIS OUTPUTS)

TURRA.CMP
ANNUAL SUMMARY of FILES COMPARED
for SCATS OPERATION.

SCATES Program Version: 2005 XP
File: TURRA.CMP

Date: 29-NOV-05
Time:

DESCRIPTION of FILES

FILE
NAME

BASE 2005 EXISTING CONDITIONS
LEP FUTURE LEP VOLUMES
TOPTA FUTURE OPTION A VOLUMES
TOPTB FUTURE OPTION B VOLUMES
TOPTC FUTURE OPTION C VOLUMES
TOPTD FUTURE OPTION D VOLUMES
TOPTDNEW OPTION D WITH NEW VOLS
TOPTDA FUTURE OPTION DA VOLUMES
TOPTE FUTURE OPTION E VOLUMES
TOPTD1 FUTURE OPTION D1 1 WAY FULLERS ASSIGNMENT
TOPTD1A FUTURE OPTION D1A 2 WAY FULLERS ASSIGNMENT
TOPTD2 FUTURE OPTION D2 ROHINI OW OUT
TOPTD3 FUTURE OPTION D3 ROHINI SIGNALS REMOVED
TOPTD3SV OPTION D3 WITH SV OPTIMISATION
TOPTE3SV OPTION E3 VOLS WITH SV OPTIMISATION

TCS NUMBERS FOR INTERSECTIONS IN FILE

FILE
NAME

BASE	2895	425	1750	
LEP	2895	425	1750	
TOPTA	2895	425	1750	
TOPTB	2895	425	1750	
TOPTC	2895	425	1750	
TOPTD	2895	425	1750	
TOPTDNEW	2895	425	1750	
TOPTDA	2895	425	1750	
TOPTE	2895	425	1750	
TOPTD1	2895	425	1750	1
TOPTD1A	2895	425	1750	1
TOPTD2	2895	425	1750	1
TOPTD3	2895	425	1	
TOPTD3SV	2895	425	1	
TOPTE3SV	2895	425	1	

ANNUAL ROUTE COSTS AS CALCULATED

FILE Name	-----TOTAL COST-----			-----AADT's-----		--DELAY & STOPS COST--	
	Total \$Million	Fuel \$Million	\$Per Vehicle	Main Road	Side Roads	Total \$Million	\$Per Vehicle
BASE	7.38	0.73	0.27	64711	11284	3.99	0.14
LEP	9.54	0.98	0.33	67109	12354	6.02	0.21
TOPTA	21.93	2.15	0.70	69200	16221	18.30	0.59

TURRA.CMP

TOPTB	19.56	1.89	0.63	68860	15678	15.95	0.52
TOPTC	27.71	2.75	0.85	71281	17527	23.97	0.74
TOPTD	16.17	1.62	0.57	63491	14886	12.84	0.45
TOPTDNEW	18.03	1.80	0.59	69356	15012	14.40	0.47
TOPTDA	15.19	1.55	0.50	68451	14162	11.60	0.38
TOPTD1	19.39	1.97	0.62	69394	15739	15.75	0.51
TOPTD1A	21.69	2.18	0.67	68337	20411	16.74	0.52
TOPTD2	19.62	1.62	0.60	68553	20870	14.65	0.45
TOPTD3	19.36	1.51	0.59	70607	19581	14.25	0.43
TOPTD3SV	18.35	1.45	0.58	69541	17295	13.32	0.42
TOPTD3SV	11.56	1.17	0.35	72022	19379	6.34	0.19
TOPTD3SV	13.81	1.39	0.42	71934	18978	8.60	0.26

ANNUAL ROUTE STATISTICS AS CALCULATED

FILE Name	-----TOTALS-----						---DELAY AVERAGES---		
	Cruise	Total	Main	Stops	Fuel	Vehicle	-Seconds Per Vehicle -		
	Hours	Delay	Road	Million	Million	Km's	Total	Main	Side
		Hours	Delay		Litres	Million	Roads	Road	Roads
	-----Vehicles-----			-----Vehicles-----			-----Vehicles-----		
BASE	112980	141858	54350	22.05	1.80	6.78	18.41	8.28	76.49
LEP	117167	223896	103474	32.46	2.42	7.03	27.79	15.21	96.14
TOPTA	120818	766372	439283	73.65	5.32	7.25	88.49	62.61	198.89
TOPTB	120224	669504	367502	63.14	4.68	7.21	78.11	52.64	189.99
TOPTC	124450	997110	592005	96.94	6.79	7.47	110.74	81.92	227.97
TOPTD	110849	523393	276879	55.73	4.00	6.65	65.86	43.01	163.33
TOPTDNEW	121089	583651	312818	62.17	4.44	7.27	68.23	44.49	177.94
TOPTDA	119511	468515	276237	53.66	3.83	7.17	55.93	39.80	133.91
TOPTD1	121156	653929	393898	68.66	4.86	7.27	75.76	55.99	162.95
TOPTD1A	165039	707825	538138	72.62	5.38	9.90	78.66	77.67	81.99
TOPTD2	165560	690022	73650	37.99	3.99	9.93	76.11	10.60	291.29
TOPTD3	170521	696042	68270	30.21	3.73	10.23	76.12	9.54	316.21
TOPTD3SV	167948	647130	42442	29.64	3.58	10.08	73.50	6.02	344.85
TOPTD3SV	173940	230331	122464	36.19	2.89	10.44	24.85	16.77	54.90
TOPTD3SV	173727	331378	203077	44.15	3.44	10.42	35.95	27.84	66.68

ANNUAL PEDESTRIAN DELAY STATISTICS AS CALCULATED

	-----TOTALS-----			---DELAY AVERAGES---		
	Total	Cross	Cross	--Seconds Per Person--		
	Delay	Side	Main	Total	Cross	Cross
	Hours	Roads	Road	All	Side	Main
		Hours	Hours	Roads	Roads	Road
BASE	19755	6585	13170	64.8	43.2	86.4
LEP	20424	6808	13616	67.0	44.7	89.3
TOPTA	20942	6981	13962	68.7	45.8	91.6
TOPTB	21147	7049	14098	69.3	46.2	92.5
TOPTC	20778	6926	13852	68.1	45.4	90.8
TOPTD	21358	7119	14239	70.0	46.7	93.4
TOPTDNEW	21611	7204	14408	70.9	47.2	94.5
TOPTDA	19511	6504	13007	64.0	42.7	85.3
TOPTD1	20894	6965	13929	68.5	45.7	91.4
TOPTD1A	16282	6906	9376	47.8	36.7	61.5
TOPTD2	20853	8657	12196	61.2	46.0	80.0
TOPTD3	20905	8677	12228	61.4	46.1	80.2
TOPTD3SV	18941	8013	10927	61.2	46.5	79.9
TOPTD3SV	14346	6217	8129	46.4	36.0	59.4

TOPT3SV 14912 6437 8475 48.2 37.3 62.0

COST DATA USED IN ECONOMIC EVALUATION

Cost File Source: RTA DEC 2003

Traffic Condition Period	Hours/Year	Dollars/Hour
Off Peak	1000	19.89
Medium Off Peak	1650	19.89
Medium Business Hours	1650	24.59
Heavy Business Hours	1800	24.59
Early PM Peak Hour	400	15.91
PM Peak Hour	600	15.91
Early AM Peak Hour	400	15.91
AM Peak Hour	600	15.91
Light Off Peak (1am to 4am)	660	0.00
Total Hours per year	8760	

Light Off Peak Demand %	15
Medium Off Peak Demand %	40
Shoulder Peak Demand %	75
Days per Year	365

Fuel Cost/Litre.	\$ 0.4050
Vehicle Operating Cost/Kilometre.	\$ 0.1235
Vehicle Operating Cost/Hour.	\$ 0.0000
Vehicle Cost/Stop.	\$ 0.0390
Fuel Used/Stop & Minute of Delay Time.	0.0390
Litres/100 Kilometres.	9.0000

CYCLE LENGTHS USED
PEAK HOUR CYCLE LENGTH OPTIMISATION WAS USED

FILE Name	LIGHT OFF	MEDIUM OFF	MEDIUM BUS	PEAK BUS	MEDIUM AM	PEAK AM	MEDIUM PM	PEAK PM
BASE	34	54	88	122	98	131	102	136
LEP	34	54	88	122	105	140	105	140
TOPTA	34	58	98	140	105	140	95	127
TOPTB	34	58	98	140	105	140	98	131
TOPTC	34	58	98	140	105	140	92	124
TOPTD	34	58	96	136	105	140	105	140
TOPTDNEW	34	58	98	140	105	140	105	140
TOPTDA	34	54	88	122	92	122	105	140
TOPTE	34	58	96	136	105	140	98	131
TOPTD1	38	44	56	65	102	136	102	136
TOPTD1A	38	60	96	131	102	136	104	139
TOPTD2	38	60	96	132	102	136	104	139
TOPTD3	38	62	98	136	102	136	101	135
TOPTD3SV	38	42	52	58	102	136	99	132
TOPT3SV	38	44	58	68	102	136	99	132

PERCENTAGE OF MAXIMUM PEAK VOLUMES USED IN EACH PERIOD

LIGHT OFF	MEDIUM OFF	MEDIUM BUS	PEAK BUS	MEDIUM AM	PEAK AM	MEDIUM PM	PEAK PM
--------------	---------------	---------------	-------------	--------------	------------	--------------	------------

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15.0 35.9 67.2 100.0 75.0 100.0 75.0 100.0

END OF FILE

APPENDIX B – URBAN DESIGN OPTION TRAFFIC GENERATION TABLES

TURRAMURRA TOWN CENTRE:- TRAFFIC AND PARKING STUDY - PROPOSED TRAFFIC GENERATION

A 50/50 split between retail and professional development has been applied.

Thursday Traffic Generation rates have been applied to Supermarkets as this is worst case scenario.

Retail (SS) rates for Thursday have been applied to the remaining retail shops. (i.e. Speciality Retail)

A figure of 120m2 has been applied for the size of medium density residential dwellings. (Based on 80% 2 Bed at 110m2 and 20% 3 Bed at 150m2)

Traffic generation rates for the library have been based on usage information received from the existing Turramurra Library. (No increase in trips regardless of size increase.)

Traffic generation rates for the community centre have been based on office use i.e. 2 trips/100m2

Traffic Generation rates for the Leisure Centre are based on rates for a Gym + on rates calculated from the aquatic centre in Ryde. (i.e. 90 trips/hr - weekday)

OPTION A (Retail/Commercial/Residential)

Supermarkets at Ray Street.

Community Facilities at Gilroy Lane.

	Proposed GFA (m2)	Net Retail	Net Commercial (Offices) - GFA	Traffic Generation 1 (Veh trips/hr)	Net Residential	Dwellings (120m2)	Traffic Generation 2 (Veh trips/hr)	Community Facilities	Traffic Generation 3 (Veh trips/hr)	Total Traffic Generation	Net Trip Difference	Existing Trips
Area A	16329	481	481	22	11781	98	54	0		87	-192	279
Area B	3405				2724	23	12	0		12	12	0
Area C	11554	820	820	38	6559	55	30	0		86	56	30
Area D	43109	4977	4977	229	16175	135	74	0		1265	1008	257
		5500 Supermarkets		109								
Area E	41147	2887	2887	133	21220	177	87	2000 (Library)	45	370	211	159
				64				1500 (Community Facilities)	30			
Area F	2820				2256	19	10	0		10	3	7
Area G	5096				4077	34	19	0		18	-2	21
						540						
Total:-	123460									1849	1096	

OPTION B (Retail/Commercial/Residential)

Supermarket at Ray Street.

Supermarket at Gilroy Road.

Community Facilities at Gilroy Lane.

Library at Ray Street

	GFA (m2)	Net Retail	Net Commercial (Offices)	Traffic Generation 1 (Veh trips/hr)	Net Residential	Dwellings (110m2)	Traffic Generation 2 (Veh trips/hr)	Community Facilities	Traffic Generation 3 (Veh trips/hr)	Total Traffic Generation	Net Trip Difference	Existing Trips
Area A	16329	481	481	22	11781	98	54			87	-192	279
Area B	3405				2724	23	12			12	12	0
Area C	11554	820	820	38	9243	77	42			83	68	30
Area D	43109	4425	4425	204	17888	149	82	2000 (Library)	46	1049	792	257
		4000 Supermarket		97								
Area E	41147	2969	2969	137	21978	183	101	1500 (Community Facilities)	30	585	406	159
		1500 Supermarket		65								
Area F	2820				2256	19	10			10	3	7
Area G	5096				4077	34	19			18	-2	21
						583						
Total:-	123460									1840	1280	

OPTION C (Retail/Commercial/Residential)

Supermarket at Ray Street.
 Supermarket at Stonex Street
 Community Facilities at Gilroy Lane.
 Leisure Centre at Ray Street

	GFA (m2)	Net Retail	Net Commercial (Offices)	Traffic Generation 1 (veh trips/hr)	Net Residential	Dwellings (120m2)	Traffic Generation 2 (veh trips/hr)	Community Facilities	Traffic Generation 3 (veh trips/hr)	Total Traffic Generation	Net Trip Difference	Existing
Area A	16329	402		16	11186	93	51			311	32	279
		1500 Supermarket	402	233								
Area B	3405				2724	23	12			12	12	0
Area C	11554				9243	77	42			42	12	30
Area D	43109	3770		73	14482	121	68	5500	495	1438	1181	257
		4000 Supermarket	3770	83				(Leisure Centre)				
Area E	41147	2877		132	21220	177	97	2000 (Library)	46	369	210	159
			2877	63				1500 (Community Facilities)	30			
Area F	2820				2256	19	10			10	3	7
Area G	5096				4077	34	19			19	-2	21
						543						
Total:-	123460									2202	1449	

OPTION D (Retail/Commercial/Residential)

Supermarket at Gilroy Lane.
 Supermarket at Stonex Street.
 Community Facilities at Ray Street (Library)
 Community Facilities at Gilroy Lane. (HaC)
 Leisure Centre at Ray Street.

	Proposed GFA (m2)	Net Retail	Net Commercial (Offices) - GFA	Traffic Generation 1 (veh trips/hr)	Net Residential	Dwellings (120m2)	Traffic Generation 2 (veh trips/hr)	Community Facilities	Traffic Generation 3 (veh trips/hr)	Total Traffic Generation	Net Trip Difference	Existing
Area A	16616	1279		58	11902	99	55	0		374	95	279
		1500 Supermarket	1279	26								
Area B	3318	0	0		2654	22	12	0		12	12	0
Area C	11554	820		38	7057	59	32	0		88	58	30
			820	18								
Area D	43814	5721		263	9544	80	44	2000 (Library)	46	659	402	257
			5721	128				4000 Leisure Centre	180			
Area E	43035	3310		152	21529	179	99	1500	30	819	660	159
		3000 Supermarket	3310	73				(Community Facilities)				
Area F	2820	0	0		2256	19	10	0		10	3	7
Area G	10348	0	0		8277	69	38	0		38	17	21
						527						
Total:-	131503									2000	1152	

OPTION DA (Retail/Commercial/Residential)

Supermarket at Gilroy Lane.

Supermarket at Stonex Street.

Community Facilities at Ray Street (Library)

Community Facilities at Gilroy Lane. (HaC)

Leisure Centre REMOVED

	Proposed GFA (m2)	Net Retail	Net Commercial (Offices) - GFA	Traffic Generation 1 (veh trips/hr)	Net Residential	Dwellings (120m2)	Traffic Generation 2 (veh trips/hr)	Community Facilities	Traffic Generation 3 (veh trips/hr)	Total Traffic Generation	Net Trip Difference	Existing Trips
Area A	16616	1279		59	11902	99	55	0		374	95	279
			1279	28								
		1500 Supermarket		233								
Area B	3318	0	0		2654	22	12	0		12	12	0
Area C	11554	820		38	7057	59	32	0		88	58	30
			820	18								
Area D	43814	5721		283	9544	80	44	2000 (Library)	46	479	222	257
			5721	125				Leisure Centre Removed				
Area E	43035	3310		152	21529	179	99	1500	30	619	660	159
			3310	73				(Community Facilities)				
		3000 Supermarket		485								
Area F	2820	0	0		2256	19	10	0		10	3	7
Area G	10346	0	0		8277	69	35	0		35	17	21
						527						
Total:-	131503									1820	972	

OPTION E (Retail/Commercial/Residential)

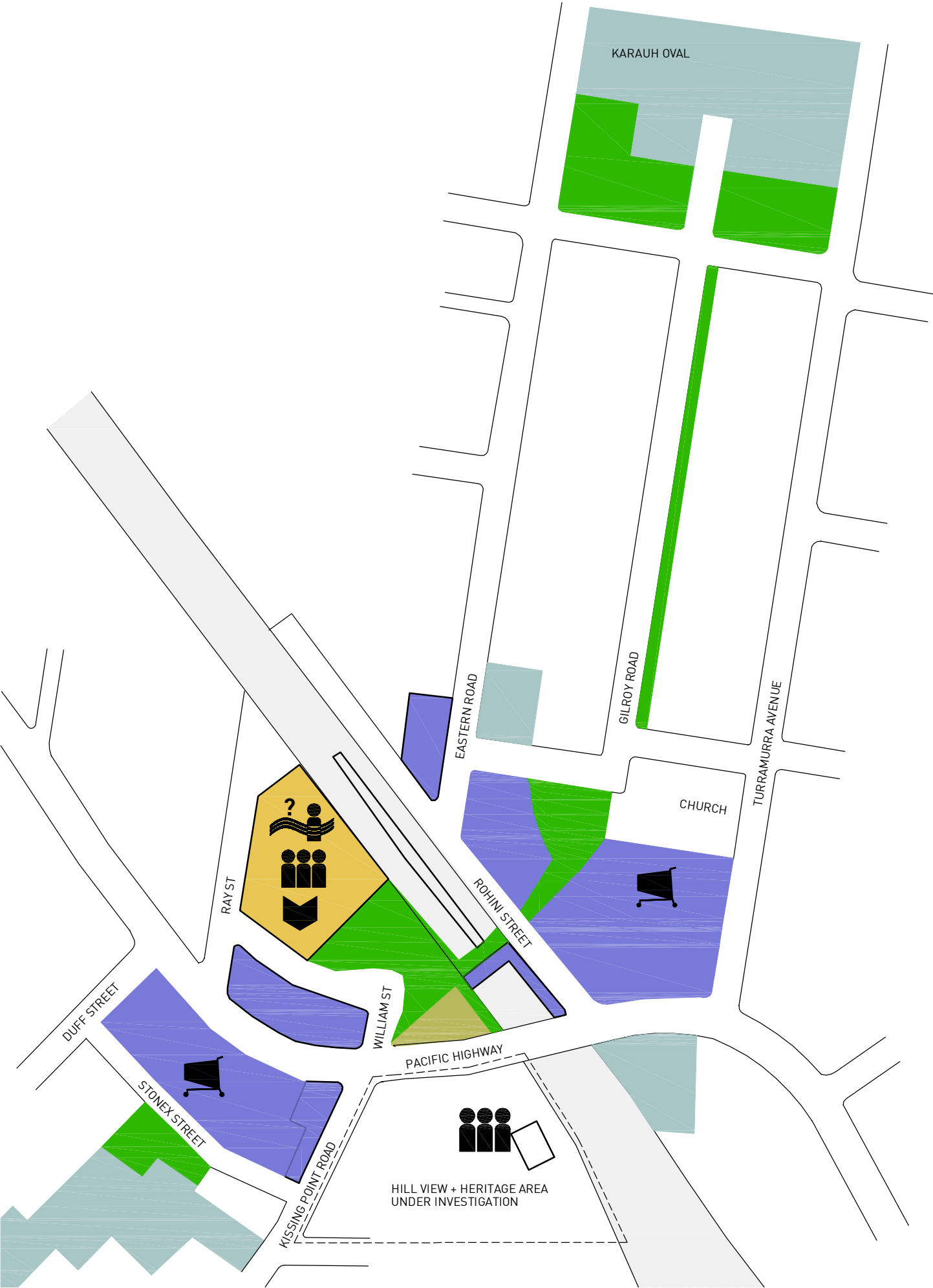
Supermarket at Ray Street (Expanded)

Supermarket at Stonex Street.

Community Facilities at Ray Street (Library)

Community Facilities at Gilroy Lane. (HaC)

	Proposed GFA (m2)	Net Retail	Net Commercial (Offices) - GFA	Traffic Generation 1 (veh trips/hr)	Net Residential	Dwellings (120m2)	Traffic Generation 2 (veh trips/hr)	Community Facilities	Traffic Generation 3 (veh trips/hr)	Total Traffic Generation	Net Trip Difference	Existing Trips
Area A	16616	1279		59	11902	99	55	0		374	95	279
			1279	28								
		1500 Supermarket		233								
Area B	3318	0	0		2654	22	12	0		12	12	0
Area C	11554	820		38	7057	59	32	0		88	58	30
			820	18								
Area D	43814	5795		287	9544	80	44	2000 (Library)	46	949	692	257
			5795	127								
		3000 Supermarket		486								
Area E	42569	3809		175	21529	179	99	1500	30	388	229	159
			3809	84				(Community Facilities)				
Area F	2820	0	0		2256	19	10	0		10	3	7
Area G	10346	0	0		8277	69	35	0		35	17	21
						527						
Total:-	131037									1859	1011	



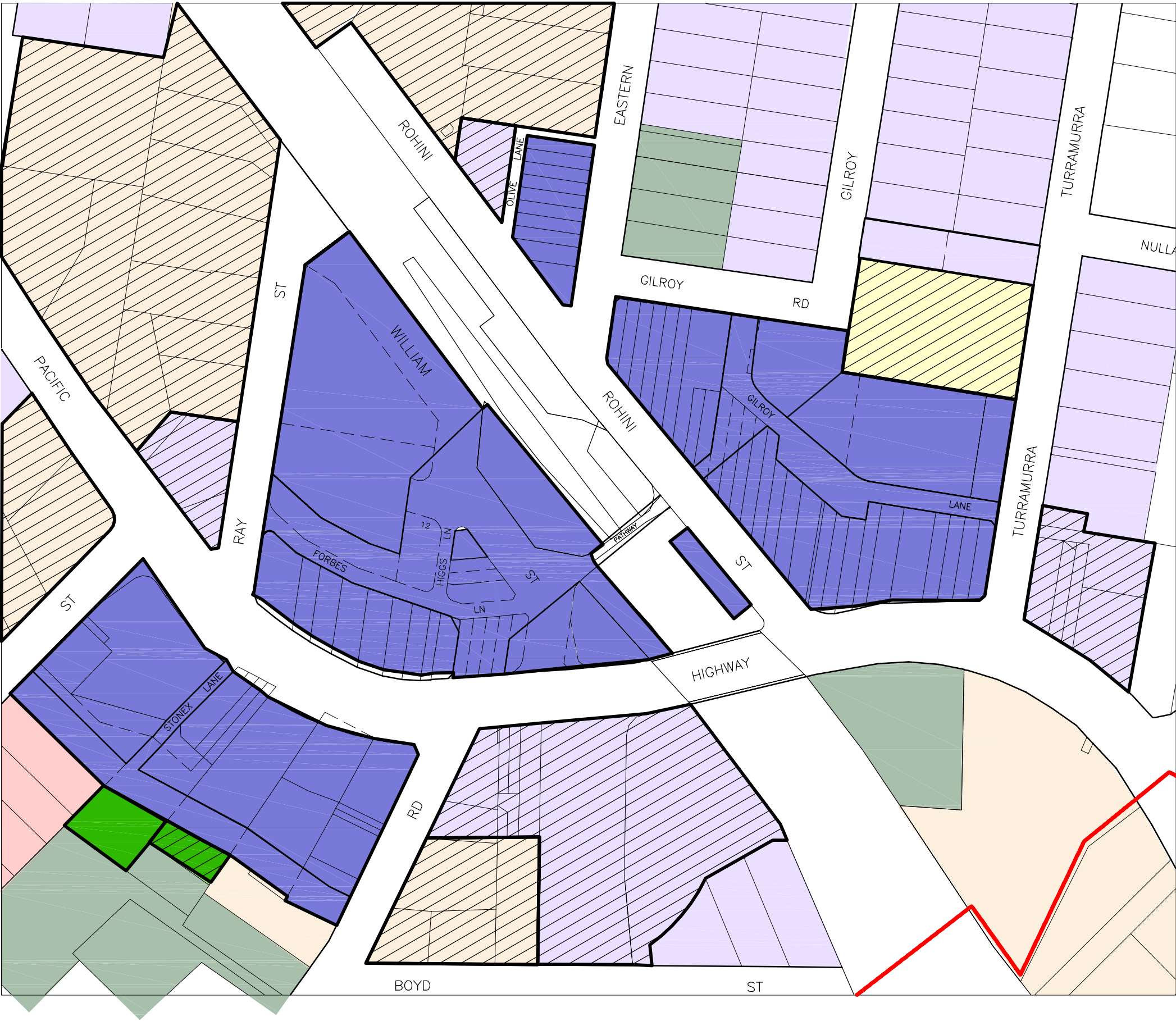
RECOMMENDED OPTION

-  LCOAL CENTRE RETAIL / COMMERCIAL ON GROUND FLOOR WITH RESIDENTIAL ABOVE
-  EXISTING OPEN SPACE
-  PROPOSED OPEN SPACE / CIVIC SPACE
-  MIXED USE + COMMUNITY FACILITIES ON GROUND FLOOR WITH RESIDENTIAL ABOVE
-  COMMERCIAL (ALTERNATE LOCATION FOR LIBRARY ON GROUND AND FIRST FLOOR)
-  SUPERMARKET
-  COMMUNITY FACILITIES
-  LIBRARY
-  POTENTIAL LEISURE CENTRE SITE

RECOMMENDED OPTION D
TURRAMURRA TOWN CENTRE

ATTACHMENT D

habitation



EXISTING

- EXISTING SPECIAL USES ZONE
- EXISTING LOW DENSITY RESIDENTIAL ZONE 2(c) 2(c2)
- EXISTING MEDIUM DENSITY RESIDENTIAL ZONE 2 (d) 2 (e)
- EXISTING HIGH DENSITY RESIDENTIAL ZONE 2(d3)
- EXISTING OPEN SPACE ZONE

PROPOSED

- PROPOSED INFRASTRUCTURE ZONE / PLACE OF PUBLIC WORSHIP
- EXISTING MEDIUM DENSITY RESIDENTIAL ZONE FOR FURTHER INVESTIGATION
- PROPOSED HIGH DENSITY RESIDENTIAL ZONE
- PROPOSED LOCAL CENTRE ZONE GROUND FLOOR RETAIL / COMMERCIAL UPPER FLOORS RESIDENTIAL
- PROPOSED NEW OPEN SPACE ZONE
- POTENTIAL NEW OPEN SPACE ZONE

COLOURED AREAS INDICATE LAND USE ZONES NOT BUILDINGS

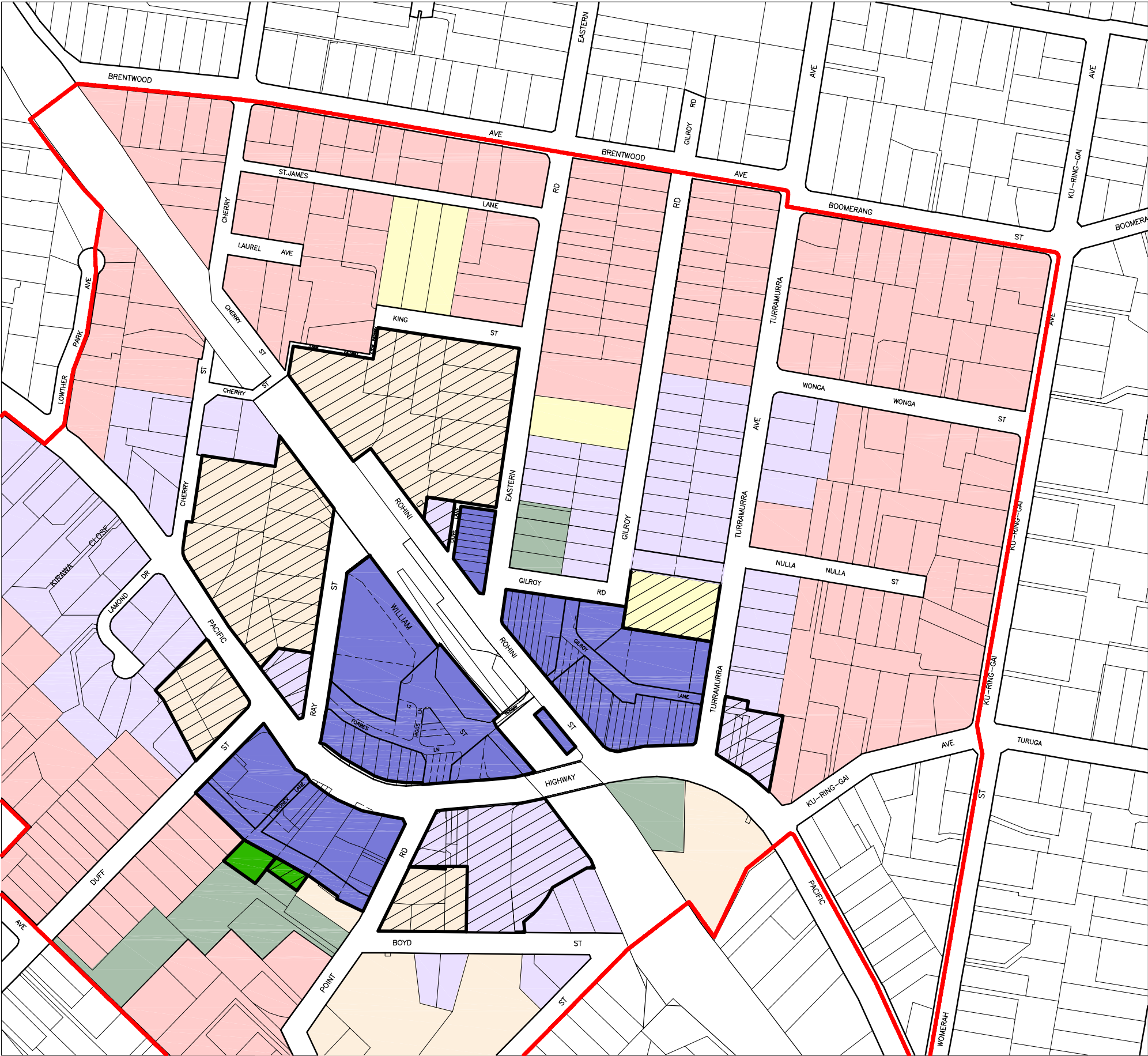
- SOLID BOUNDARY INDICATES CHANGED ZONING OR BOUNDARY

LAND ZONING PROPOSED - CORE
TURRAMURRA TOWN CENTRE

ATTACHMENT E



habitation



EXISTING

- EXISTING SPECIAL USES ZONE
- EXISTING LOW DENSITY RESIDENTIAL ZONE 2(c) 2(c2)
- EXISTING MEDIUM DENSITY RESIDENTIAL ZONE 2 (d) 2 (e)
- EXISTING HIGH DENSITY RESIDENTIAL ZONE 2(d3)
- EXISTING OPEN SPACE ZONE

PROPOSED

- PROPOSED INFRASTRUCTURE ZONE / PLACE OF PUBLIC WORSHIP
- EXISTING MEDIUM DENSITY RESIDENTIAL ZONE FOR FURTHER INVESTIGATION
- PROPOSED HIGH DENSITY RESIDENTIAL ZONE
- PROPOSED LOCAL CENTRE ZONE GROUND FLOOR RETAIL / COMMERCIAL UPPER FLOORS RESIDENTIAL
- PROPOSED NEW OPEN SPACE ZONE
- POTENTIAL NEW OPEN SPACE ZONE

COLOURED AREAS INDICATE LAND USE ZONES NOT BUILDINGS





- SOLID BOUNDARY INDICATES CHANGED ZONING OR BOUNDARY



LAND ZONING PROPOSED
TURRAMURRA TOWN CENTRE
ATTACHMENT F

habitation



-  EXISTING HERITAGE / POTENTIAL HERITAGE
 -  EXISTING OPEN SPACE RETAINED
 -  PROPOSED NEW OPEN SPACE ZONE
 -  POTENTIAL NEW OPEN SPACE
- COLOURED AREAS INDICATE LAND USE ZONES NOT BUILDINGS



OPEN SPACE AND HERITAGE
TURRAMURRA TOWN CENTRE

ATTACHMENT G

habitation



- ROADS RECOMMENDED TO BE CLOSED
- ROADS RECOMMENDED TO BE CREATED
- REMOVED BOUNDARY LINES

ROADS TO BE CLOSED / OPENED
TURRAMURRA TOWN CENTRE

ATTACHMENT H



PART 1: 1A - PRELIMINARY		Part 2: VISION, OBJECTIVES & STRATEGIES	Part 3: PUBLIC DOMAIN CONTROLS	Part 4: PRIMARY DEVELOPMENT CONTROLS	Part 5: GENERAL DEVELOPMENT CONTROLS	Public Domain Manual & Town Centre Style Guide
<div>1.1 Name of this DCP</div> <div>1.2 Commencement Date</div> <div>1.3 Land affected by this DCP</div> <div>1.4 Consistency of DCP with the EP&A Act 1979</div> <div>1.5 Purpose of the Plan</div> <div>1.6 General Aims of the Plan</div> <div>1.7 Which Applications does this DCP apply to?</div> <div>1.8 Relationship to SEPP 65 and NSW Residential Flat Design Code</div> <div>1.9 Relationship to Planning Instruments and Other Plans</div> <div>1.10 How to Use the DCP Design Objectives and Controls</div>		<div>TURRAMURRA CENTRE</div> <div>2.1 Vision Statement</div> <div>2.2 Objectives & Strategies</div> <div>2.2.1 Housing</div> <div>2.2.2 Activities & Uses</div> <div>2.2.3 Street Character</div> <div>2.2.4 Built Form</div> <div>2.2.5 Parks & Open Space</div> <div>2.2.6 Biodiversity</div> <div>2.2.7 Water Management</div> <div>2.2.8 Community Services & Facilities</div> <div>2.2.9 Pedestrian Access & Circulation</div> <div>2.2.10 Cycle Access & Circulation</div> <div>2.2.11 Public Transport</div> <div>2.2.12 Vehicle Access & Circulation</div> <div>2.2.13 Car Parking & Servicing</div>	<div>TURRAMURRA CENTRE</div> <div>3.1 Public Open Space</div> <div>3.1.1 Parks & Pocket Parks</div> <div>3.1.2 Urban Plazas & Squares</div> <div><ul style="list-style-type: none">UsesLandscape characterPark furnitureLightingPublic artworksOthers ...</div> <div>3.2 Streets & Public Access</div> <div>3.2.1 Primary Streets</div> <div>3.2.2 Secondary Streets</div> <div>3.2.3 Service Lanes</div> <div>3.2.4 Through Block Pedestrian Connections</div> <div>3.2.5 Residential Streets</div> <div><ul style="list-style-type: none">Adjoining building usesBuilding setbacksCarriagewayFootpathsLandscape character / Street tree plantingStreet furnitureLightingOverhead wiringOthers ...</div>	<div>TURRAMURRA CENTRE</div> <div>4.1 Site Amalgamations</div> <div>4.2 Building Alignments</div> <div>4.3 Awnings & Colonnades</div> <div>4.4 Active Street Frontages</div> <div>4.5 Site Specific Controls</div> <div><ul style="list-style-type: none">Building Uses & Ground Floor ActivitiesBuilding HeightsBuilding SetbacksBuilding Depth & SeparationDeep Soil Zones & Private Open SpaceVehicle Access & ParkingOthers ...</div>	<div>5.1 Building Depth & Separation</div> <div>5.2 Building Articulation</div> <div>5.2.1 Building Facades</div> <div>5.2.2 Corner Building Articulation</div> <div>5.2.3 Ground Floor Shopfronts</div> <div>5.2.4 Building Entries</div> <div>5.2.5 Roof Forms</div> <div>5.2.6 Materials & Finishes</div> <div>5.3 Awnings & Colonnades</div> <div>5.4 Private & Common Open Space Design</div> <div>5.5 Landscape Design</div> <div>5.6 Internal Amenity & Security</div> <div>5.6.1 Ceiling Heights</div> <div>5.6.2 Room Sizes</div> <div>5.6.3 Internal Common Circulation</div> <div>5.6.4 Storage</div> <div>5.6.5 External Clothes Drying Facilities</div> <div>5.7 Visual & Acoustic Privacy</div> <div>5.8 Natural Ventilation & Solar Access</div> <div>5.8.1 Natural Ventilation</div> <div>5.8.2 Solar Access</div> <div>5.8.3 Sun Shading</div> <div>5.9 Design of Flexible Buildings & Spaces</div> <div>5.10 Energy Efficiency</div> <div>5.11 Building Construction & Materials</div> <div>5.12 Water Management</div> <div>5.13 Waste Management</div> <div>5.13.1 Waste Storage & Recycling Facilities</div> <div>5.13.2 Construction, Demolition & Disposal</div> <div>5.13.3 Land Contamination</div> <div>5.14 Access & Servicing</div> <div>5.14.1 Access for People with Disabilities</div> <div>5.14.2 Vehicle Access</div> <div>5.14.3 Service Access & Loading Facilities</div> <div>5.15 On Site Parking</div> <div>5.15.1 Car Parking Design & Provision</div> <div>5.15.2 Parking for People with Disabilities</div> <div>5.15.3 Basement Car Parking</div> <div>5.15.4 Above Ground Car Parking</div> <div>5.15.5 Visitor Parking</div> <div>5.15.6 Bicycle Parking & Facilities</div> <div>5.16 Social Dimensions</div> <div>5.16.1 Adaptable Housing</div> <div>5.16.2 Apartment Mix & Sizes</div> <div>5.17 Professional Suites</div> <div>5.18 Child Care Centres</div> <div>5.19 Signage & Advertising</div> <div>5.20 Telecommunication & Radiocommunication</div> <div>5.21 Tree Preservation Order</div>	
1B- DEFINITIONS		<div>ST IVES CENTRE</div> <div>GORDON CENTRE</div> <div>PYMBLE CENTRE</div> <div>ROSEVILLE CENTRE</div> <div>LINDFIELD CENTRE</div>	<div>ST IVES CENTRE</div> <div>GORDON CENTRE</div> <div>PYMBLE CENTRE</div> <div>ROSEVILLE CENTRE</div> <div>LINDFIELD CENTRE</div>	<div>ST IVES CENTRE</div> <div>GORDON CENTRE</div> <div>PYMBLE CENTRE</div> <div>ROSEVILLE CENTRE</div> <div>LINDFIELD CENTRE</div>		

NOTICE OF RESCISSION

OPTIONS FOR COUNCIL WARD CHANGES, COUNCILLOR NUMBERS & METHOD OF MAYORAL ELECTION

Notice of Motion from Councillors I Cross, N Ebbeck & T Hall dated 23 November 2005.

"We, the undersigned, hereby rescind that part of the Council's Resolution "C" of Item GB.19 which resolved to conduct the constitutional referendum at the next Local Government Elections and is hereby rescinded."

RECOMMENDATION

That the above Notice of Rescission, as printed, be adopted.

Ian Cross
Councillor for Wahroonga Ward

Nick Ebbeck
Councillor for Wahroonga Ward

Tony Hall
Councillor for St Ives Ward

NOTICE OF MOTION

SEPP 53 EXEMPTION FOR ST IVES

Notice of Motion from Councillor L Bennett dated 25 November 2005.

When LEP 194 was gazetted streets within the Stage 1 area received exemption from SEPP 53. Although St Ives contributed over 900 dwellings under LEP 194 and LEP 200 not a single street in St Ives received such an exemption. St Ives is the first town centre to be rezoned under Stage 2 and it will provide in excess of a further 900 dwellings. This is in addition to the dual occupancies and SEPP 5's approved since 2000. This suburb has done its bit for urban consolidation. When Council submits the DLEP for the town centre a request for exemption from SEPP 53 for St Ives should be included and justified with reference to the amount of development which has occurred in St Ives and which will occur under the rezonings.

I move:

- "A. That when Council submit the DLEP for St Ives Town Centre to the Minister it also request exemption from SEPP 53 for the suburb of St Ives.
- B. that this request be supported with accurate figures of the number of dual occupancies and SEPP 5's approved since 2000 (inclusive), the number of additional dwelling rezoned for by LEP 194, LEP 200 and the DLEP for the St Ives Village Centre
- C. that maps showing the exemption granted under Stage 1 of the RDS and the lack of any such exemption for St Ives be added as supporting documentation."

RECOMMENDATION

That the above Notice of Motion as printed be adopted.

Cr Laura Bennett
Councillor for St Ives Ward