



**ORDINARY MEETING OF COUNCIL
TO BE HELD ON TUESDAY, 27 JUNE 2006 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

DECLARATIONS OF 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 13 June 2006

Minutes numbered 198 to 220

MINUTES FROM THE MAYOR

PETITIONS

- 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.3 **281 Mona Vale Road, Pymble - Demolition of Existing Structures & Construction of a Seniors Living SEPP Development for 5 Units & Basement Parking for 11 Vehicles** **149**

.
File: DA1444/05-2

Ward: St Ives
Applicant: Mr Francis Azar
Owner: Mr Gary Haddad

To determine development application No. 1444/05 which seeks consent for the demolition of existing structures and the construction of a Seniors Living development comprising a total of 5 units and basement parking for 11 vehicles.

Recommendation:

Approval.

GB.4 **1 Kintore Street, Wahroonga - Demolition & Construction of Seniors Living Development Comprising 4 Dwellings** **224**

.
File: DA0470/05

Ward: Wahroonga
Applicant: The Turnbull Group Pty Ltd
Owner: Robert Fechter

To determine Development Application No.470/05.

Recommendation:

Approval.

GB.5 **Adoption of Council's Companion Animal Management Plan** **274**

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File: S03449

To present Council's Companion Animal Management Plan (CAMP) to Council for formal adoption. The Plan sets out the intended actions for the period 2006-2011.

Recommendation:

That the Companion Animal Management Plan 2006-2011 be adopted for implementation and that Council's Companion Animals Management Committee be thanked for their commitment and effort in preparation of the plan.

GB.6 Disclosure of Interests Return 302

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File: S02167

To table Councillor J Anderson's Disclosure of Interests Return in accordance with the Local Government Act 1993.

Recommendation:

That the tabling of Councillor Anderson's Disclosure of Interests Return be noted.

GB.7 Investment Cash Flow & Loan Liability as at 31 May 2006 304

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File: S02722

To present to Council the investment allocation and the performance of funds, monthly cash flow and the details of loan liability for May 2006.

Recommendation:

That the summary of investments, daily cash flows and loan liability for May 2006 be received and noted.

GB.8 Energy & Water Savings Action Plan 313

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File: S02166

To adopt Council's draft Energy and Water Savings Action Plan and to seek Council approval to go to tender to enter into an Energy Performance Contract.

Recommendation:

That Council adopt the draft Energy and Water Action Plan (see Attachment 1) and present the adopted Energy and Water Action Plan to the Department of Energy, Utilities and Sustainability in accordance with the Administration Amendment (Water and Energy Savings) Act 2005 & that Council endures a tender process pursuant to the Local Government (General Regulation 2005) to select an Energy Performance Contractor. A report will then be presented to Council recommending the appointment of an Energy Performance Contractor.

GB.9 **Potential Heritage Item Review**

479

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File: S04325

For Council to consider the report and recommendations prepared by independent consultants Perumal Murphy Alessi on the review of 154 potential heritage items across the Ku-ring-gai Local Government Area and place the report on non-statutory public exhibition to seek comments from the public on the review.

Recommendation:

That the Consultant's report be put on non-statutory public exhibition for a period of 28 days seeking written submissions.

GB.10 **Design Options for Entry Signs**

540

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File: S02425

To report to Council on the preferred options for the design and locations for the erection of Council's entry signs.

Recommendation:

That the preferred design options for the entry signs be placed on public exhibition for a period of 28 days and that any comments reported back to Council.

EXTRA REPORTS CIRCULATED AT MEETING

MOTIONS OF WHICH DUE NOTICE HAS BEEN GIVEN

**BUSINESS WITHOUT NOTICE - SUBJECT TO CLAUSE 14 OF MEETING
REGULATION**

QUESTIONS WITHOUT NOTICE

INSPECTIONS COMMITTEE - SETTING OF TIME, DATE AND RENDEZVOUS

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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.*

MAYORAL MINUTE

QUEEN'S BIRTHDAY HONOURS 2006

I am pleased to inform you that 21 Ku-ring-gai citizens, through their outstanding achievements and services to the community, have been awarded 2006 Queen's Birthday Honours.

We are very proud to have so many dedicated and talented Australians as members of the Ku-ring-gai community.

I would like to read to you the names of these special Ku-ring-gai citizens and, on behalf of Council, congratulate them on their excellent contributions to Australian society.

Russell Ainley of Lindfield, for service to the forest industry

John Carrick of Lindfield, for service to the community through Rotary International

James Horrowell of Lindfield, for service to international relations

Cheryl and Graham Price of Wahroonga, for service to the community through support for people with coeliac disease

Margaret Hutchison of Lindfield, for service to nursing

John Mack of Lindfield, for service to mathematics education

Ross Pearson of Lindfield, for service to the community through museum and historical societies and through sporting, ex-service, nature conservation and children's organisations

Maxwell Whiddon of East Lindfield, for service to people with intellectual disabilities

Francis Lang of Killara, for service to medicine and to the Army Reserve

Tempe Merewether of Killara, for service to the community through musical societies and the Australian Red Cross

Peter Hebbes of West Pymble, for service to the community as a fundraiser, and to the music industry

Peter Perry of Pymble, for service to the community through health and youth organisations, and through Rotary International

Yvonne Henry of Turramurra, for service to the community, particularly to children as a swimming instructor for the Asthma Foundation

David Sandoe of Turramurra, for service to community health and to the insurance industry

Pamela Sandoe of Turramurra, for service to community health

William Broadbridge of Turramurra, for service to public administration and charitable and civic organisations

David Rumsey of St Ives, for service to education and training

Deborah Page of Wahroonga, for service to community health, and to commerce and accountancy

Judith Wheeldon of Roseville Chase, for service to secondary education, particularly as headmistress of Abbotsleigh School

John Watts of St Ives, for service to the community through bicycle and road safety education programs for children

John Watts is a St Ives resident who is very well known in Council circles. John has been involved in the Council's Traffic Committee for many years as the representative of the Bicycle Institute of NSW. He was involved in the compilation of Council's Bicycle Plan and gave valuable advice on each of the cycleways that Council has constructed throughout Ku-ring-gai.

John has also been active in the St Ives Progress Association over many years, at one stage as a Vice President, and he has also been involved in Probus, assisting elderly people with driving issues. John is a local resident who has given a lot back to his community.

On behalf of Council, I congratulate all these award winners on their outstanding achievements.

Ku-ring-gai should be proud that it has so many citizens being recognised at the highest levels for their selfless dedication, commitment and contribution to local, national and international communities.

RECOMMENDATION

That Council acknowledge the outstanding contribution made by these recipients of 2006 Queen's Birthday Honours to the Ku-ring-gai community and to the well-being of our society.

Elaine Malicki
Mayor

MAYORAL MINUTE

AQUATIC STUDY

As Councillors would be aware, there has been considerable concern in our community following the exhibition of Council's Aquatic Study. Emotions are running high in the community and it appears that there is a fair degree of misinformation and misunderstanding about the matter. Many people have expressed concern that Council has not given sufficient notice of the exhibition and that we have therefore limited people's opportunity to comment.

At present the profile of this study has been raised through the Press and through information being disseminated by various groups. This gives us an opportunity to extend the exhibition process to allow more of our public to comment.

RECOMMENDATION

Therefore, I move that the exhibition period for the Aquatic Study be extended for two weeks until 14 July.

Elaine Malicki
Mayor

PETITION

SAVE TURRAMURRA MEMORIAL PARK & KARUAH OVAL - PROPOSAL FOR AN AQUATIC CENTRE - (FOUR HUNDRED & FIFTY-FOUR [454] SIGNATURES)

Councillor Ebbeck presented the following Petition to Council:

"Ku-ring-gai Council are proposing a 3-storey Aquatic Centre for Turramurra & Karuah Parks. We, the undersigned, object to this proposal and believe better social, environmental and economic outcomes are available at alternative sites. We support continued use of Karuah Park for football, cricket and other recreational activities, not car parking"

RECOMMENDATION

That the Petition be received and referred to the appropriate officer of Council for attention.

PETITION

REQUEST KU-RING-GAI COUNCIL TO DECLARE ACRON OVAL AS AN OFF-LEASH AREA - (FOUR HUNDRED & SEVENTY-EIGHT [478] SIGNATURES)

Councillor Hall presented the following Petition to Council:

"We, the undersigned, request Ku-ring-gai Council declare Acron Oval an Off-Leash Area from 6pm to 8am daily."

RECOMMENDATION

That the Petition be received and referred to the appropriate officer of Council for attention.

Item 1

DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	29 TO 33 DUMARESQ STREET, GORDON - DEMOLITION OF 3 DWELLING HOUSES AND CONSTRUCTION OF 2 RESIDENTIAL FLAT BUILDINGS COMPRISING 35 UNITS AND BASEMENT CAR PARKING FOR 46 VEHICLES
WARD:	Gordon
DEVELOPMENT APPLICATION N^o:	581/05
SUBJECT LAND:	29 to 33 Dumaresq Street, Gordon
APPLICANT:	Dugald Mackenzie
OWNER:	Mr J A Johnson and Mrs H F Johnson; Johnson Media Management Pty Ltd; Mr P & Mrs H Zwolanski
DESIGNER:	Dugald Mackenzie
PRESENT USE:	Residential
ZONING:	Residential 2(d3)
HERITAGE:	No
PERMISSIBLE UNDER:	Ku-ring-gai Planning Scheme Ordinance
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:	SEPP55, SEPP65, SEPP BASIX
COMPLIANCE WITH GOVERNMENT POLICIES:	Yes
DATE LODGED:	10 June 2005
40 DAY PERIOD EXPIRED:	20 July 2005
PROPOSAL:	Demolition of 3 dwelling houses and construction of 2 residential flat buildings comprising 35 units and basement car parking for 46 vehicles
RECOMMENDATION:	Approval

Item 1

DEVELOPMENT APPLICATION N^o	581/05
PREMISES:	29-33 DUMARESQ STREET, GORDON
PROPOSAL:	DEMOLITION OF 3 DWELLING HOUSES AND CONSTRUCTION OF 2 RESIDENTIAL FLAT BUILDINGS COMPRISING 35 UNITS AND BASEMENT CAR PARKING FOR 46 VEHICLES
APPLICANT:	DUGALD MACKENZIE
OWNER:	MR J A JOHNSON AND MRS H F JOHNSON; JOHNSON MEDIA MANAGEMENT PTY LTD; MR P & MRS H ZWOLANSKI
DESIGNER	DUGALD MACKENZIE

PURPOSE FOR REPORT

To determine development application No 581/05, which seeks consent for the demolition of 3 residential dwelling houses and construction of 2 residential flat buildings comprising a total of 35 units and basement car parking for 46 vehicles.

EXECUTIVE SUMMARY

Issues:	<ul style="list-style-type: none">• adequacy of rear setback to riparian zone• reduced front setback• isolated site at No. 27 Dumaresq Street, Gordon
Submissions:	Three (3) submissions received.
Pre-DA:	No
Land & Environment Court Appeal:	Not applicable.
Recommendation:	Approval.

HISTORY

Site history:

The site is currently used for residential purposes. The following matters are of relevance to the subject site.

Item 1

Rezoning history:

The site was rezoned to Residential 2(d3) as part of LEP194 which was gazetted on 28 May 2004. The rezoning was at the direction of Assisting Minister for Planning, Dianne Beamer. It conferred upon the site a development potential of five (5) storeys.

Development application history:

10 June 2005	DA lodged (no pre-DA consultation)
11 July 2005	Council requests additional information justifying setback to riparian zone at rear of site, front setback to Dumaresq Street, raises concerns regarding design of driveway and access and seeks photomontages.
8 August 2005	Applicant advised that a front setback of 13-15 metres is required due to the site being more than 35 metres in width and more than 45 metres in depth.
12 October 2005	Applicant provides information requested by Council.
18 November 2005	Amended plans lodged.
15 February 2006	Meeting held with Council staff and applicant to discuss problems with impact of development on riparian zone
8 March 2006	Amended plans lodged, increasing width of rear setback but moving building back to 11-13 metres from front boundary.
13 March 2006	Report received from applicant justifying reduction in front setback.
21 March 2006	Isolated sites report received from applicant dealing with No. 27 Dumaresq Street, Gordon.
7 April 2006	Applicant advised amended plans are unacceptable due to inadequate access to basement for a waste collection vehicle.
10 April 2006	Revised hydraulic plans submitted by applicant; Council's Technical Officer Biodiversity, David Wilkes, advises he is satisfied with the width of the proposed riparian area and the rear setback of the building shown in amended plans.
13 April 2006	Revised plans submitted resolving access issues.
18 April 2006	Revised deep soil planting plan received from applicant.

Item 1

23 May 2006

Revised compliance tables submitted by the applicant.

THE SITE AND SURROUNDING AREA

The site

Zoning:	Residential 2(d3)
Visual Character Study Category:	1920-1945
Legal Description:	Lot 1, DP 973595, Lot 1, DP 577709 and Lot DP 956367, Nos 29-33 Dumaresq Street, Gordon
Bush Fire Prone Land:	No
Endangered Species:	No
Urban Bushland:	No
Contaminated Land:	No

The site is comprised of three contiguous properties, being Nos 29-33 Dumaresq Street, Gordon. Together they form a regular-shaped parcel fronting Dumaresq Street, with a total site area of 3003m². The frontages to Dumaresq Street (southern boundary) and the rear (northern) boundary are both 43.92 metres wide. The eastern and western side boundaries are both 68.375 metres in length.

The site slopes moderately in two directions, south to north by approximately 7 metres (front to rear boundary) and east to west by approximately 3 metres.

There are three existing single storey cottages on the site, one on each of the 3 lots which form the site.

The site currently supports 32 existing trees.

Surrounding development:

The surrounding area is a mix of residential development, including dwelling houses and medium density development to the east comprising a SEPP 5 development and townhouses.

The site is within walking distance (approximately 378m) of the Pacific Highway, Gordon Town Centre and Gordon Railway Station and is therefore well located in terms of proximity to services.

THE PROPOSAL

The proposed development involves the following:

- Demolition of existing dwellings and associated structures;
- A residential flat development consisting of two (2) apartment blocks connected at first floor level by a bridge walkway;

Item 1

- The southern building closest to the street contains 15 x 2 bedroom apartments and 2 x 3 bedroom apartments. The northern building at the rear of the site contains 4 x 2 bedroom apartments; 12 x 3 bedroom apartments, 2 x 4 bedroom apartments;
- Two basement levels containing 9 visitor and 46 resident car parking spaces, secure storage compartments, plant rooms, pump rooms and a garbage/recycling room; and
- Vehicular access is proposed at the lower end of the site, at the point where there is an existing driveway to the existing dwelling at No. 33 Dumaresq Street.

Of the 32 existing trees on the subject site, 9 trees are proposed to be removed and 23 retained. A further 14 canopy trees are to be planted. The development is to be extensively landscaped with 51.84% of the site being deep soil area available for soft landscaping.

CONSULTATION - COMMUNITY

In accordance with Council's Notifications DCP, owners of surrounding properties were given notice of the application. Submissions were received from:

1. *John T Knowles, of 36 Dumaresq Street, Gordon*
2. *Diane Haskell and Ken Robinson of 44 Dumaresq Street, Gordon*
3. *Mrs Anne Carroll, President of FOKE*

The submissions raised the following issues:

The proposed 5-storey development is an overdevelopment

The proposal complies with the standards in LEP 194 for site cover, landscaping, parking, height and number of storeys. The proposed FSR is 1.24:1 which is less than the maximum FSR allowed under the DCP (1.3:1). Accordingly, the proposal is not considered to be an overdevelopment.

The proposed development is overly dominant, aesthetically incompatible and unsympathetic with adjoining development.

The rezoning of the subject site under LEP194 to a Residential 2(d3) zone confers a development potential pursuant to the development standards and controls set out in LEP194 and DCP55. In accordance with this statutory planning instrument and Council's DCP 55, sites within the 2(d3) zones have the potential to be developed for the purposes of residential flat buildings to a maximum height of five storeys. The intent of rezoning for multi-unit development is to establish high density living in proximity to transport nodes.

The development complies with the prescribed controls of LEP194. In particular, maximum height, number of storeys, site coverage, setbacks, deep soil landscaping and large tree planting consistent with the established landscaped character of the area has been achieved. To this end, the scale and bulk of the proposed development, is as anticipated for the area and compliance with relevant LEP controls indicates an appropriate transition in scale to adjoining development, as is likely to occur in the future.

Item 1

Loss of privacy to adjoining dwellings

The owners of Nos 27 and 35 Dumaresq Street, which are properties immediately adjacent to the subject site, have not objected. The side setback to No. 27 Dumaresq Street will be well screened to maximise privacy. The adjoining property to the west, No. 35 Dumaresq Street, is part of a development parcel (ie Nos. 35-37 Dumaresq Street) which is also likely to develop for residential flats. In the interim, privacy to this property will be assisted by the planting of 27 Cascade Lilly Pillies (2.5m height) and 10 Native Frangipanis (8-10m height), adjacent to the dividing boundary with No. 35 Dumaresq Street. The owner of this property has not made submissions to the present development application.

Inadequate landscaping - The Gordon Valley has a specific bushland/garden character. This development makes no attempt to reflect or enhance this characteristic. There is no provision for streetscaping through the retention of existing trees and landscaping.

In the proposal, 23 of 32 existing trees are to be retained and 14 additional canopy trees are to be planted. As such it is considered that the development will be adequately landscaped. Furthermore, there will be specific planting at the rear of the site to re-generate the watercourse as a riparian area.

The development makes no provision for maintaining existing tree cover and fails to acknowledge the presence of the wildlife, which proliferates in the street (ring tailed and brush tailed possums and native birds). This development will remove a significant and critical element of this wildlife habitat.

As stated above, 23 of 32 existing trees are to be retained. The additional 14 canopy trees should provide further habitat for native fauna. The rear of the site is to be restored as a riparian area and this will provide an enhanced environment for native fauna, particularly when connected by similar riparian areas being required as part of another development occurring in this locality ie 8-14 McIntyre Street. This will ultimately provide a wildlife corridor in the midblock area between Dumaresq Street and McIntyre Street, which is a positive outcome of the development.

Loss of heritage items - The development involves the demolition of two weatherboard cottages, which are both in good condition.

The items are not listed heritage items and Council's Heritage Advisor has not sought that they be retained.

Concerns about increase in traffic and added pressure of parking in Dumaresq Street. Concerns about access from objector's private driveway and to the Pacific Highway.

There will be some increase in traffic and added pressure for street parking in Dumaresq as the area develops for 5 storey residential flats in accordance with the new zoning. However, it is the view of Council's engineers that there is sufficient capacity in the roads to accommodate the additional traffic from the development proposal and that, at this stage, no change to traffic management in the area is required.

Item 1

The setback from the street is 10m instead of 12m

The plans have been amended on two occasions and both amendments have detailed changes to the front setback distances. The most recent amended plans provide a setback of 11-13 metres which enables adequate setback from the watercourse at the rear of the site and adequate area in which to restore a riparian corridor. Given the existing front building setback of 6 metres at Nos. 23-25 Dumaresq Street (a SEPP5 development) and 9 metres to No. 27 Dumaresq Street (this dwelling is proposed to remain as is and may redevelop in future), the proposed setback of 11-13 metres is considered consistent with the existing streetscape and is satisfactory, despite being non-compliant.

Poor design quality - the design is unattractive with a large amount of flat surfaces and a covered walkway between the two buildings. The development fails to incorporate the site's natural advantages or consider the visual amenity of the street/area.

Safety concerns over the pedestrian entrance

Council's Urban Design Consultant, Russell Olsson, supports the proposal. The bridge connection will not have any impact on the streetscape, and as it is in the centre of the site, will not impact on the privacy of adjoining properties.

The original pedestrian entry was considered unsatisfactory and has been amended in the current plans. (Refer to plans at **Attachment 1**) The new pedestrian entry is via a pathway at the centre of the site. The entry will be clearly visible and easily accessible from the street.

Overshadowing of adjoining properties

The extent of solar access meets Council's Code requirements of a minimum of 3 hours of solar access per day to habitable rooms and the principal portion of the outdoor living area for any affected property, of which there are two ie Nos. 27 and 35 Dumaresq Street. Both properties will receive adequate levels of solar access.

Complaint that objector was not notified in writing

The extent of properties notified in writing can be seen on the plan at **Attachment 1** and the procedure for identifying properties to receive letters is detailed in Council's Notification DCP 56. The DA was notified in accordance with the DCP guidelines. The breadth of notification was quite substantial and the lodgment of submissions is not limited to those people who received a letter. Anyone who is alerted to the DA by way of the on-site notice or by the advertisement in the local newspaper can also make a submission.

CONSULTATION - WITHIN COUNCIL

Urban Design Consultant

Council's Urban Design Consultant, Mr Russell Olsson, commented on the proposal as follows:

Item 1

1.0 Design Review

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

Comment:

The proposed site is located near Gordon Shopping Centre, Gordon Railway Station and the Pacific Highway .

The built form context is comprised of -

- *3 detached dwelling houses on the proposed site.*
- *predominately single dwelling houses on the sites adjoining to the north, south, east and west which are all zoned 2(d3).*

There is very little significant vegetation except near the rear northern boundary, the developer proposes to retain this vegetation and incorporate it into a new landscape plan.

The Residential 2 (d3) zoning of this site and adjoining sites establishes the future scale of development on these sites as being 5 storeys maximum.

The relationship to the future planned 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.

Comment:

The scale of the proposed building is acceptable, as it complies with the height controls in LEP 194.

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...

Item 1

Comment:

The north, east and west boundaries have setbacks of 6m which is acceptable as all the adjacent sites are zoned 2(d3).

The street boundary has a setback of 13m-15m in compliance with the DCP 55 controls.

The proposed building complies with the LEP 194 and DCP 55 setback controls with the exception as stated in Principle 7: Amenity.

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 34.69% of the site, in compliance with LEP 194. The 5th level occupies 60% of the floor area of the lower floors.

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.

More than 25% of kitchens are located on external walls as recommended in the Residential Flat Design Code.

More than 60% of apartments are naturally ventilated as recommended in the Residential Flat Design Code. Units 2, 3, 4 and 5 achieve natural ventilation through the stack effect.

To assist further with ventilation it is recommended that the windows of the common corridor on the ground floor (opposite units 3 and 4), the first floor (opposite units 23 and 24), the second floor (opposite units 9 and 10) and the third floor (opposite units 13, 14, 31 and 32) be openable.

The development has a deep soil landscaping area of 51.84% and a water retention system.

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.

Item 1

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.

To ensure privacy for the studies and kitchens from the public corridor it is recommended that openable (to assist ventilation) highlight windows be provided to the following units; 3, 4, 9, 10, 13, 14, 19, 20, 23, 24, 27, 28, 31 and 32.

Openable highlight windows should also be provided for bedrooms 2 and 3 and the ensuite in unit 18; and bedroom 2 and ensuite in unit 21.

Highlight windows have been provided in bedroom 3 in the following units; 22, 24, 26, 29, 30, 33, 34 and 35, the study in units 34 and 35. It is recommended that these be replaced with full size windows to allow more light and ventilation. It is also recommended that windows be provided in the south walls of bedroom 2 of these units and bedroom 2 of unit 25.

The drawings do not note the form of materials of the pedestrian bridge. As the bridge has the potential to overlook many units, it should be clad in of translucent or opaque materials to above eye level to ensure privacy.

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 is acceptable.

Principle 10: Aesthetics

Item 1

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.

The façade is composed of a variety of horizontal and vertical elements and is articulated into a defined base, middle and top. The top of the building recedes due to the change in material and paint finish.

The aesthetic quality is acceptable.

2.0 Conclusion and recommendations

It is recommended that:

- *openable highlight windows be provided in the kitchens and studies of the following units; 3, 4, 9, 10, 13, 14, 19, 20, 23, 24, 27, 28, 31 and 32.*
- *openable highlight windows be provided for Bedrooms 2 and 3 and the ensuite in unit 18; and bedroom 2 and ensuite in Unit 21.*
- *highlight windows in Bedroom 3 of Units 22, 24, 26, 29, 30, 33, 34 and 35; and the study in units 34 and 35 be replaced by full size windows.*
- *windows be provided in the south wall of Bedroom 2 of the following Units 22, 24, 25, 26, 29, 30, 33, 34 and 35.*
- *the bridge should be clad in translucent or opaque material to above eye level to ensure privacy.*
- *windows within the common corridor on the ground floor (opposite Units 3 and 4), the first floor (opposite Units 23 and 24), the second floor (opposite Units 9 and 10) and the third floor (opposite Units 13, 14, 31 and 32) be openable.*

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

The recommendations of the Urban Design Consultant have been addressed in **Conditions 71-76.**

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 two five storey residential flat buildings with basement car parking on the amalgamated site area of 3 003sqm with vehicular access from Dumaresq St. The site is characterised by an

Item 1

established landscape setting with mature trees and shrubs within formal garden beds and grassed expanses. The site has an identified watercourse located adjacent to the rear site boundary, which has substantial weed invasion including mature trees. The site frontage is dominated by a mature Argyle Apple (Eucalyptus cinerea) located adjacent to the southeast site corner.

Impacts on trees/trees to be removed/tree replenishment

The proposed development will result in the removal of all the existing trees and vegetation on site with the exception of the Argyle Apple (Eucalyptus cinerea). Tree removal will include the removal of the Cinnamomum camphora (Camphor laurel) located adjacent to the eastern (side) site boundary on the neighbouring property. It is necessary to remove the tree as the proposed development works are within the trees primary and critical root zone which would adversely impact upon the health and stability of the tree, creating a hazard. The neighbour has given consent for the removal of the tree and Council raises no objections to the tree's removal as it is a declared noxious weed. Subject to adequate tree replenishment being undertaken on site, Landscape Services raises no objection to the proposed tree removal.

The proposed development will result in fifteen canopy trees (fourteen proposed, one existing) being located on site. This complies with DCP55 minimum requirements, although compliant with minimum numbers, no 'tall' trees have been proposed within the side setbacks as required by the aims and objectives of LEP194. It can and will be conditioned for additional tall tree species to be located appropriately within the side setbacks to ensure compliance with LEP194 and to enhance and maintain neighbour amenity. (Condition No. 62)

Deep soil

By the applicant's calculations the proposed development will have a deep soil landscape area of 1557.11sqm or 51.84% of the site area, which complies with the DCP.

Drainage plan

Landscape Services can support the Concept Stormwater Drainage Plan as submitted.

Landscape plan

Subject to some design changes, that can be conditioned, the landscape plan can be supported. Screen planting and tree replenishment within setback areas is considered inadequate. It will be specifically conditioned for additional trees to be planted within the side setback areas to comply with the aims and objectives of LEP194. (Condition No. 62)

Riparian zone

The proposed development has been relocated further to the south to increase the riparian planting surrounding the water course. The increased setback of 7.9m to the basement from the rear site boundary allows for a minimum 5.5m of riparian planting area as measured

Item 1

from the centre of the relocated watercourse. This proposed setback does not comply with Council's minimum 10.0m setback as specified with Council's Riparian Policy. Further comment has been sought from Open Space – David Wilks.

Fencing

*As proposed a 1.8m high timber fence (assumed paling or lap and cap) is located forward of the building line within the front setback. The proposed fence forward of the building line cannot be supported as it visually divides the landscape setting within the front setback which is uncharacteristic of the existing and proposed streetscape character. No objection is raised to having an open palisade fence style. This can and will be conditioned. (**Condition No. 60**)*

*The proposal can be supported, subject to conditions by Landscape Services. Refer **Conditions 59-70, 109-111, 122-128, and 144-146.***

Engineering

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

The application is for the demolition of the three existing dwellings and the construction of two buildings comprising a total of 36 units (32x2br and 4x3br). Strata subdivision is not indicated on the application form, so subdivision conditions have not been included.

The following documentation was used for the assessment:

*D. Katauskas Geotechnical Assessment, dated 13th May 2005;
Ian Sutherland & Associates survey plan dated 14/02/2005;
Stephen R. Fryer Stormwater drainage drawings, SW01 to SW03, all Issue C, dated 31.03.06;
Brown Consulting Riparian Report, dated November 2005;
Gennaoui Consulting Traffic & Parking Report, dated May 2005;
Project Planning Associates letter dated 17 November 2005;
Dugald Mackenzie & Associates Drawings SK01c, SK05c, SK06c, SK16c, SK17c, all dated April 2006;
Chalmers Paige Statement of Environmental Effects, May 2005.*

Water management

The amended stormwater drainage design includes two large rainwater tanks with a total volume of 60m³ and two above ground on site detention storages. The drawings indicate re-use of rainwater for toilet flushing, clothes washing, car washing and irrigation. This is in accordance with DCP 47. Since the application was lodged, the current edition of DCP 47 has been adopted. It allows for 1m³ retention per unit (total required 36m³) and a concessional on-site detention storage of 75% of the site storage requirements (40m³ required). The detention volume provided may need to be increased to comply with these figures, due to the 20% factor required for above ground storage, but this appears to be possible by increasing the area of the storages.

Item 1

The on site detention basins, if carefully detailed, will most likely be suitable for inclusion in the deep soil zone.

The site drains to the Category 3 stream just within the rear boundary. The rehabilitation of this stream with riparian plantings etc is proposed in conjunction with the subject development. Reference to the survey plan and landscape plan indicate that it is not proposed to relocate the watercourse. The final cross-sectional area should be sufficient to ensure that the watercourse has capacity for the 100 year ARI flow. Given the small catchment this should not be difficult, and the detailed engineering design may be done at Construction Certificate stage.

Traffic generation

The development is likely to generate about 16-20 vehicle trips per peak hour, which is not expected to significantly affect the road network.

Vehicular access and parking

The parking and traffic study report contains an assessment of the parking under DCP 43. This is not correct and LEP194 parking rates should have been used. The development requires 40 resident and 9 visitor parking spaces. The amended architectural drawings show 10 visitor spaces and 46 resident spaces and therefore comply.

The report contains a recommendation that on-street parking be prohibited for 6 metres each side of the driveway, to improve sight distance. Parking in Dumaesq Street is at a premium. It is unlikely that the Traffic Committee would approve such a request. Other medium density developments in Dumaesq Street do not have parking restrictions at their vehicular crossings. For those reasons, the recommendation has not been incorporated into the recommended conditions.

Deep soil planting requirements meant that the parking layout has been amended, and that short, steep ramps were preferred over the original generous curved ramps. All ramps now have a minimum width of 6 metres which is adequate given that the ramps have grades up to 25%. The entry drive has a nominal grade of 25%, however, it is considered that this can be reduced to about 23%, which is more desirable for the laden waste collection vehicle.

Construction management

*A detailed construction management plan will be required prior to commencement of any works on site. A Works Zone will be required. The procedure for arranging this is included in the recommended **Conditions 119 and 120**.*

Geotechnical

Item 1

The letter report is based on a site inspection. The maximum depth of excavation for this development will be about 5-7 metres. The site is likely to be close to the boundary between Ashfield Shale and Hawkesbury Sandstone. Excavation methods, vibration control and dilapidation survey are not covered in detail in the letter, but can be addressed once a subsurface investigation is completed and a report prepared. Such investigation should be carried out after demolition and before commencement of bulk excavation. The recommended conditions include a requirement for this to be done. It is expected that dilapidation reporting of structures at 27 and 35 Dumaresq Street will be required, and this has been included in the recommended conditions. Refer to Condition 116.

*The application is supported subject to conditions. Refer to **Conditions 46-58, 88, 95-96, 100-108, 114-121, and 131-145.***

STATUTORY PROVISIONS

State Environmental Planning Policy No 55 - Contaminated Lands

The provisions of SEPP55 require Council to consider the potential for a site to be contaminated. The subject site has a history of residential use and, as such, is unlikely to contain any contamination. Therefore, further investigation is not warranted in this case.

State Environmental Planning Policy - BASIX

The application was lodged prior to the gazettal of SEPP BASIX on 1 July 2005 and has therefore been assessed on the basis of NATHERs. The application complied with the requirements of NATHERs for residential flat buildings at the time of lodgement. The SEPP has savings provisions for applications lodged prior to 1 July 2005 in terms of the BASIX requirements.

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

SEPP 65 aims to improve the design quality of residential flat buildings across NSW and to provide an assessment framework and design code for assessing 'good design'.

A Design Verification Statement has been submitted by the registered Architect Dugald Mackenzie in accordance with the requirements of the Policy.

Part 2 sets out design principles against which design review panels and consent authorities may evaluate the merits of a design. This section is to be considered in addition to the comments of Council's *Urban Design Consultant* above. The proposal has been assessed against the heads of consideration specified in SEPP 65, as follows:

Principle 1: Context:

Item 1

The site is located within walking distance of the Gordon Town Centre and railway station and has been re-zoned for 2(d3) development, as have adjoining properties to the north, east, west and south. Properties further west in the lower part of Dumaresq Street have been rezoned to a less dense form of development, ie townhouses (2c2).

The core objectives of LEP 194 and DCP 55 are to create buildings which are placed within a landscaped setting. The topography and location of the site, with retention of trees at the rear, and planting of 14 additional canopy trees, attains this objective.

A unique feature of the development site is a natural watercourse at its rear which is to be restored as a riparian area in accordance with Council's Riparian Policy. The development has been designed to adequately accommodate and rejuvenate this riparian area, following consultation with Council as to the most appropriate manner in which this can be done given the site circumstances, existing adjoining development and the prospects of future redevelopment on adjoining properties.

Principle 2: Scale:

The development meets the prescribed building envelope requirements of LEP194, including building height, deep soil landscaping, site coverage and setbacks. Its scale is considered acceptable and in accordance with what was envisaged by LEP 194.

Principle 3: Built form:

Adjoining properties are zoned 2(d3) although it is unlikely that the existing medium density development on Nos.23-25 Dumaresq will redevelop in the near future. As such the property immediately to the east (No. 27 Dumaresq) will become isolated. The developers attempted to include this property in the development site but were not successful. Documentation in this regard has been supplied at **Attachment 11**.

As No. 27 Dumaresq Street is 20 metres wide and 1285m², it will be able to be redeveloped for apartments on a smaller scale. Such a development form would provide a desirable transition from the existing medium density development at Nos. 23-25 Dumaresq Street and the proposed new 5-storey development on the subject site. Properties across the road are also zoned 2d3 and likely to be redeveloped for 5-storey residential flat buildings.

A similar development to that proposed is likely to occur in the future on Nos. 35, 37 and 39 Dumaresq Street, to the west and below the development site.

The built form comprises two separate 5-storey buildings linked by common basement and a bridge at first floor level. The buildings are separated by an average distance of approximately 8m. This area will be fully landscaped and will serve partly as communal and recreational space.

The side boundary setbacks meet DCP requirements. The proposal maximises setbacks to the watercourse (to be relocated) which is a requirement under Council's riparian policy. The width of the riparian zone is maximised where possible so that existing trees can be retained and additional riparian plantings can be undertaken. This approach has required the front building to be set back at

Item 1

11-13 metres from the front boundary rather than 13-15 metres as required by the DCP (this is explained further in the report in the Section on DCP non-compliances.) In general, the setbacks proposed create sufficient space and landscaping to provide an adequate landscaped setting for the building.

Principle 4: Density:

The development complies with the floor space control in DCP 55. It has a floor space ratio of 1.24:1 which is well within the 1.3:1 DCP limit.

Principle 5: Resource, energy and water efficiency:

All the apartments achieve 3 hours sunlight to their living areas. Greater than 60% of apartments have natural cross ventilation (21 of 36). The lift lobby is naturally lit and ventilated on each floor. Water retention and detention tanks are provided in accordance with DCP No. 47.

Principle 6: Landscape:

The proposal provides for 51.84% of the site being a deep soil zone and complies with the prescribed standard in LEP 194.

The proposed landscaping is consistent with the desired future character of the area, maintaining existing large canopy trees at the site perimeters which will soften the building's appearance and contribute to the streetscape.

Principle 7: Amenity:

The proposed units will have good solar access and visual and acoustic privacy. Terraces and balconies are reasonably functional in terms of access from living areas, although variably sized, ranging from 10² to 15.5m² with larger balconies to the larger dwellings and penthouses. Each individual unit has its own entry lobby and secure internal access to the basement car park by lift or stairs.

There are two communal open spaces, one in the area between the buildings occupying 380m² and a second space of 160m² at the south-eastern corner of the site.

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.

The development addresses the street and provides pedestrian connection and reasonable passive surveillance. The development is acceptable with respect to Principle 8.

Principle 9: Social dimensions:

Item 1

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

The proposal provides housing 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:

The southern building will make a positive contribution to the streetscape. The northern building is directly behind, and will therefore only be visible from adjoining properties, and on approach to the site from Dumaresq Street.

The front elevation of the southern building has adequate articulation, which is enhanced by changes in materials and colours.

External materials comprise a combination of masonry surfaces, glass, timber and steel, which are considered acceptable architectural compositions, creating a modern development in natural and recessive colour tones.

Residential Flat Building Code

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

- **Relationship of development to local context**

The development comprises two buildings, and has been designed to respond to the shape and topography of the site. It retains existing large trees, mainly adjacent to the northern boundary.

The development is proposed over 3 existing allotments and will require consolidation. Council's Development Engineer has recommended a suitable condition. Refer **Condition No 95**.

The height, building depths, separations, setbacks and landscaping are considered satisfactory and have been assessed in more detail under DCP55 assessment of this report.

- **Site analysis**

A satisfactory site analysis was submitted, indicating the merits of the development in regards to the design layout, landscape response, access and parking and overall building performance in respect of energy sustainability. These requirements have also been supported by specialist reports addressing impacts of the proposed development on the subject site and surrounding locality.

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

Item 1

The orientation of the development ensures adequate solar access to habitable areas and private open space, both internally and to adjoining residential development, with an appropriate frontage provided to Dumaresq Street.

- Building design**

The proposed development is satisfactory in terms of its internal layout, natural ventilation and solar access. As all apartments have orientation towards north, all apartments receive a minimum of 3 hours solar access during the winter solstice. Also, 50 % of the common open space area at any one time receives at least 3 hours solar access during this period.

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

Ku-ring-gai Planning Scheme Ordinance (KPSO)

COMPLIANCE TABLE		
Development standard	Proposed	Complies
Site area (min): 2400m ²	3003m ²	YES
Deep landscaping (min): 50%	51.84% or 1557.11m ²	YES
Street frontage (min): 30m	43.92m	YES
Site coverage (max): 35%	34.69%	YES
Top floor area (max): 60% of level below	60%	YES
Storeys and ceiling height (max): 5 storeys and 13.4m	5 storeys Max height is 12.6m	YES
Car parking spaces (min): <ul style="list-style-type: none"> 9 (visitors) 35 (residents) 44 required in total 	9 visitor spaces 46 resident spaces 55 total	YES YES YES
Manageable housing (min): 10% or 5 units	4 units - 10% Units Nos. 9, 10, 13 and 14	YES
Lift access: required if greater than three storeys	Provided to both buildings. All lifts service all floors including basement levels.	YES

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

COMPLIANCE TABLE		
Development control	Proposed	Complies

Item 1

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 4.1 Landscape design:		
Deep soil landscaping (min)		
<ul style="list-style-type: none"> Concentrated area of 150m² per 1000m² of site area = 510m² 	500m ² in the area at the rear of the site 350m ² in the area between the buildings	YES
No. of tall trees required (min): 15 trees	15 proposed (14 new, 1 existing)	
Part 4.2 Density:		
Building footprint (max): <ul style="list-style-type: none"> 35% of total site area 	34.69%	YES
Floor space ratio (max): <ul style="list-style-type: none"> 1.3:1 	1.24:1	YES
Part 4.3 Setbacks:		
<ul style="list-style-type: none"> Front setback control 13-15m for a site which exceeds 35m in width and 45m in depth 	11-13m	NO
<ul style="list-style-type: none"> 10-12 metres (<40% of the zone occupied by building footprint) 	Only 6m ² or 7% of the front building at the south eastern portion of the site encroaches into the 10-12m area boundary.	YES
Rear boundary setback (min): <ul style="list-style-type: none"> 6m 10m to top of bank of watercourse 	7.994m 5.5m	YES NO
Side boundary setback (min): <ul style="list-style-type: none"> 6m 	6m	YES
<ul style="list-style-type: none"> Ground floor private terraces/courtyards setback 11m from front boundary (where the 13-15m front setback distance applies) 	No courtyards within the front setback area.	YES
Part 4.4 Built form and articulation:		
Façade articulation: <ul style="list-style-type: none"> Wall plane depth >600mm 	>600mm	YES

Item 1

COMPLIANCE TABLE		
Development control	Proposed	Complies
<ul style="list-style-type: none"> Wall plane area <81m² 	<81m ²	YES
Built form: <ul style="list-style-type: none"> Building width < 36m Balcony projection < 1.2m 	27m 2m	YES 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 >50% of the principle common open space of the development receives 3+ hours direct sunlight in the winter solstice <15% of the total units are single aspect with a western orientation 	100% Rear, north-facing communal space receives full sun, and the area in between the buildings receive 2 hours per day at the winter solstice No units have a western orientation	YES YES YES
Visual privacy: Separation b/w windows and balconies of a building and any neighbouring building on site or adjoining site Storeys 1 to 4 <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 5 th 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 	7.8m to adjoining dwelling at No. 27 Dumaresq 10m ground level distance between east-facing walk in robe window of Unit 16 and No. 27 Dumaresq Street	 NO NO
Internal amenity:		

Item 1

COMPLIANCE TABLE		
Development control	Proposed	Complies
<ul style="list-style-type: none"> Habitable rooms have a minimum floor to ceiling height of 2.7m 	2.7m	YES
<ul style="list-style-type: none"> Non-habitable rooms have a minimum floor to ceiling height of 2.4m 	2.7m	YES
<ul style="list-style-type: none"> 1-2 bedroom units have a minimum plan dimension of 3m in all bedroom 	3m	YES
<ul style="list-style-type: none"> 3+ bedroom units have a minimum plan dimension of 3m in at least two bedrooms 	3m	YES
<ul style="list-style-type: none"> Single corridors: <ul style="list-style-type: none"> - serve a maximum of 8 units - >1.5m wide - >1.8m wide at lift lobbies 	<8 units >1.5m wide >1.8m wide	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"> - 12m² - 2 bedroom unit - 15m² - 3 bedroom unit NB. At least one space >10m ²	No ground level courtyards. Units 1, 2, 3, 4, 5, 18, 19, 20 and 21 all have terraces which fall significantly under the requirement. Units 2, 3, 4, 5, 19 and 20, 24, 27, 28, 31 and 32 - 10.06m ² Units 22, 25, 26, 29, 30 and 33 - 11.53m ²	NO NO NO
<ul style="list-style-type: none"> primary outdoor space has a minimum dimension of 2.4m 	2.2m	NO
Part 4.7 Social dimensions:		
Visitable units (min): <ul style="list-style-type: none"> 70% 	88% of units are visitable	YES
Housing mix: <ul style="list-style-type: none"> Mix of sizes and types 	Satisfactory mix of 2 and 3 bedroom units	YES

Item 1

COMPLIANCE TABLE		
Development control	Proposed	Complies
Energy efficiency:		
<ul style="list-style-type: none"> • >65% of units are to have natural cross ventilation 	>65% have natural cross ventilation	YES
<ul style="list-style-type: none"> • single aspect units are to have a maximum depth of 10 metres 	12 metres	NO
<ul style="list-style-type: none"> • 25% of kitchens are to have an external wall for natural ventilation and light 	16 units have kitchens with external walls. (Units 1, 5, 6, 7, 8, 11, 12, 15, 18, 21, 22, 25, 26, 29, 30, 33)	YES
<ul style="list-style-type: none"> • Energy Efficiency 	90% of Units achieve at least 4.5 stars, with the remaining 10% achieving 3.5 stars (NATHERS)	YES

Part 4.3 Setbacks:

The stepped building configuration provides for a variety of front, side and rear setbacks in order to achieve good articulation and interest to the streetscape.

The proposed development proposes an average setback of 11-13 metres from the front property boundary.

Whilst initially, full compliance with 13-15 metres setback control was sought and the applicant duly provided amended plans, this meant that setbacks at the rear were reduced, thereby reducing the potential for a regenerated riparian area of adequate width along the rear boundary.

Further amended plans moved the building forward to the original 11-13 metres setback. This was considered satisfactory as adjoining development on No. 27 Dumaresq Street is at 9 metres, and the SEPP5 development further east of No. 27 Dumaresq Street (ie Nos. 23-25 Dumaresq Street) is set back 6 metres. This means that the front setbacks of the various developments in Dumaresq Street will gradually increase in depth as one travels west down Dumaresq Street. This is considered satisfactory.

Part 4.4 Built form and articulation:**Part 4.5.5 Outdoor living**

There are effectively two areas suitable as communal spaces in the development, ie the area between the two buildings and the area abutting and including the riparian corridor at the rear. Ground floor private courtyards extending from ground level units are to be minimised in favour of communal areas at the perimeters of the site and in the area between the two buildings.

Item 1

A number of balconies and terraces have been identified as being below the required size, and this is addressed in **Conditions 89 and 91**. The increase in size for balconies is to be achieved through a reduction in the living area rather than extending the balcony beyond the allowable 1.2m in Council's DCP 55 (Control C6 of Section 4.4).

Where ground level terraces are undersized, they may extend beyond the building but only to achieve the minimum size of 25m² and no greater. This is because the side setbacks are required as either communal area, detention basin area, or for screen planting to adjoining properties and should not be privatised. Terraces may not be extended on the northern elevations of the northern building as this would be detrimental to the riparian zone. The terraces of Units 19 and 20, which extend further forward than other units, may not be further extended beyond what is indicated as their terrace areas on the plans. Terraces for Units 18 and 21 may not extend for more than 3 metres from the north-facing building wall. Compliance with the 25m² requirement must be achieved by reducing the size of their living areas or number of bedrooms if necessary.

Similarly, ground level terraces on the northern elevation of the southern building should not be extended into the communal area separating the two buildings as this will detract from the ability of the area to function as a communal area. Units 2, 3, 4 and 5 should have additional balcony areas provided by the addition of a further balcony extending from a bedroom at their upper levels.

Part 4.5.2 Visual Privacy

Although an adequate setback of 6 metres is provided to the side boundary, the separation distance at Levels 1 - 4 from the adjoining property at No. 27 Dumaresq Street, which has habitable rooms on its western side facing the proposed development, is only 7.8 metres, rather than the required 12 metres. The separation distance from the 5th floor is 10 metres in lieu of the required 18 metres. Although No. 27 Dumaresq Street will be able to develop in the future for a small apartment complex, it is considered that amenity to the existing occupant must be considered. The development will not be permitted to have ground level private courtyards in the side setback area adjoining No. 27 Dumaresq Street, so as to enable additional screen planting in this area. Refer **Condition 90**.

A similar reduced separation distance occurs with No. 35 Dumaresq Street, although this property is one of 3 remaining properties in the 2D3 zone and likely to redevelop as a parcel at a similar density to the subject site. As such, the future development of No. 35 Dumaresq will be required to provide a 6 metres setback to the side boundary, so that ultimately the 12 metres separation distance between habitable rooms and balconies will be achieved.

Part 4.6 Safety and security

The entrance of the development is oriented to the street and there are no safety and/or security concerns associated with the design.

Part 4.8 Resource energy and water efficiency

Item 1

Single aspect Units 19 and 20 have a depth of 12 metres but are in two levels and oriented towards north. They are also over 10 metres in width, such that their degree of sun penetration is satisfactory.

A screened drying area has not been indicated on the plans but will be required in the communal area in the eastern side setback. Refer **Condition 92**.

Riparian Policy

The proposed development has been relocated further to the south to increase the riparian planting surrounding the watercourse. The increased setback of 7.9 metres to the basement from the rear site boundary allows for a minimum 5.5 metres of riparian planting area as measured from the centre of the relocated watercourse. This setback does not comply with Council's minimum 10 metres setback specified in Council's Riparian Policy but is a reasonable outcome given the constraints of the site.

Council's Technical Officer Biodiversity, David Wilkes, of Council's Open Space Department has advised that he has no objections to the proposed development.

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 by Council's Engineering Assessment Team Leader, who raises no objection to the proposal, subject to conditions.

Section 94 Plan

The development attracts a section 94 contribution of \$752,413.35 which is required to be paid by **Condition No 99**.

This figure is calculated on the following basis, utilising the Ku-ring-gai Section 94 Contributions Plan 2004-2009 Residential Development as of 30 June 2004:

Item 1

22 x medium dwellings (75-110m ²) at \$19, 468.88	\$428,315.36
13 x large dwellings (110m ² - 150m ²) at \$28,000.18	\$364,002.34
	Total \$792,317.70
Less 3 x very large dwellings (150m ²) at \$13,301.45	\$39,904.35
	Total \$752,413.35

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.

Public interest

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

Any other relevant matters/considerations not already addressed

There are no other matters for consideration.

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, subject to appropriate conditions of consent.

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 581/05 for the demolition of three (3) dwellings and associated structures and the construction of two residential flat buildings, comprising thirty five(35) units and basement parking, for a period of two (2) years from the date of the Notice of determination, subject to the following conditions:

GENERAL

1. The development to be in accordance with Development Application No 581/05 and Development Application plans prepared by Dugald Mackenzie and Associates Architects, dated 12 May 2005, Revision C, dated 10 April 2006, SK01c, SK05c, SK06c, SK07c, SK08c,

Item 1

SK09c, SK10c, SK11c, SK12c, SK13c, SK14c, SK16-SK19c, SK22, SK23 and Landscape Plan Drawing No LPP/01/C, dated 19 April 2006 and lodged with Council on 8 May 2006.

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 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.

Item 1

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. 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.
16. For the purpose of maintaining visual amenity, no permanent electricity supply poles are to be erected forward of the building setback without the prior Consent of Council. It is the onus of the applicant to consult with the authorised statutory electricity provider prior to construction commencing to ensure that direct connection to the building is possible. Details of any proposed permanent pole must be submitted to and approved by Council prior to installation.
17. The applicant is advised that the Construction Certificate plans and specifications must comply with the provisions of the Building Code of Australia.
18. 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.

Item 1

19. 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.

20. 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.
21. 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 occupation certificate.
22. 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 or Occupation. 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.
23. If the work involved in the erection or demolition of a building:
- is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or
 - 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.

Item 1

24. 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.
25. The fence and footings shall be constructed entirely within the boundaries of the property.
26. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
27. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
28. 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.
29. 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.
30. 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.
31. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.
32. 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.

Item 1

- 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.
- 33. 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.
- 34. 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.
- 35. 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.
- 36. All combustible material shall be removed from the site on a daily basis. Material shall not be burnt on the site.
- 37. Trees and vegetation on a site shall not be disturbed except with the approval of the Council.
- 38. Fire hoses are to be maintained on site during the course of demolition.
- 39. Adequate precautions shall be taken to ensure the protection of adjoining premises and persons therein from damage and injury during the process of demolition.
- 40. A traffic management plan shall be submitted to and approved by the Principal Certifying Authority, where major demolitions are likely to impact on arterial or main roads.
- 41. 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.
- 42. 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.
- 43. A photo record of the buildings to be demolished and vegetation on site is to be submitted to Council for archival purposes.
- 44. 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

Item 1

- 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.
- 45. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.
- 46. Stormwater runoff from new hard surfaces generating runoff or landscaped areas that are not at natural ground level shall be piped to the watercourse within the site. New drainage line connections to the watercourse shall conform and comply with the requirements described in sections 5.5 of Councils Water Management Development Control Plan 47, available in hard copy at Council and on the Council website.
- 47. 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).
- 48. 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.
- 49. 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.
- 50. 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.
- 51. 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.
- 52. 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

Item 1

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.

53. 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.
54. 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.**
55. 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.
56. 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".
57. 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.

Item 1

58. 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.
59. To maintain fauna egress through the site and riparian zone, fencing located within the riparian zone is to be an open palisade style rather than a solid paling or lap and cap timber fence.
60. To maintain existing and future landscape amenity, the proposed 1.8m high fence proposed adjacent to the eastern and western site boundaries within the front setback is to be an open palisade style.
61. Removal, or pruning of the following trees, is not approved as part of this Development Application:
Tree/ Location
#1 *Pistacia chinensis* (Chinese Pistacio)
Dumaresq St nature strip
#2 *Pistacia chinensis* (Chinese Pistacio)
Dumaresq St nature strip
#3 *Eucalyptus cinerea* (Argyle Apple)
Adjacent to south- east site corner
62. Landscape works shall be carried out in accordance with Landscape Drawing No LPP/01/C prepared by JCA and dated 19/04/2006 submitted with the Development Application, except as amended by the following:
 - An additional endemic 'tall' canopy tree is to be planted within the front setback located equidistant between the pedestrian and vehicular access.
 - A grove of three *Syncarpia glomulifera* (Turpentine) is to be located between the two proposed buildings adjacent to the western site boundary, with a minimum setback from the western side boundary of three metres.
 - An additional two *Syncarpia glomulifera* (Turpentine) are to be planted between the two proposed buildings adjacent to the eastern site boundary with a minimum setback of three metres from the eastern side boundary.
 - An additional 'tall' canopy tree that can attain a minimum height of 13.0m is to be located centrally between the two proposed buildings within the deep soil landscape area.
 - The proposed *Eucalyptus paniculata* (Grey Ironbark) and *Angophora costata* (Sydney Redgum) are to be planted with a minimum setback from the northern rear site boundary of 3.0m.
 - Three additional trees with a minimum mature height of 13m are to be planted within the western side setback to the rear building.
63. All disturbed areas, which are not to be built upon or otherwise developed, shall be rehabilitated to provide permanent protection from soil erosion within fourteen (14) days of final land shaping of such areas.

Item 1

64. 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
65. 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
#1 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	5.0m
#2 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	5.0m
#3 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to south-east site corner	6.0m

66. 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
#1 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	5.0m
#2 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	5.0m
#3 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to south-east site corner	6.0m

67. 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.
68. The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along Dumaresq St as an evenly spaced formal avenue planting. The tree/s used shall be a minimum 25 litres container size specimen/s trees:

Tree Species	Quantity
<i>Syncarpia glomulifera</i> (Turpentine)	3

69. 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.
70. The canopy replenishment 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.
71. Openable highlight windows are to be provided in the kitchens and studies of the following; Units 3, 4, 9, 10, 13, 14, 19, 20, 23, 24, 27, 28, 31 and 32.

Item 1

72. Openable highlight windows are to be provided for Bedrooms 2 and 3 and the ensuite in Unit 18; and Bedroom 2 and ensuite in Unit 21.
73. Highlight windows in Bedroom 3 of Units 22, 24, 26, 29, 30, 33, 34 and 35; and the study in Units 34 and 35 are to be replaced by full size windows.
74. Windows are to be provided in the south wall of Bedroom 2 of the following; Units 22, 24, 25, 26, 29, 30, 33, 34 and 35.
75. The bridge connecting the two buildings is to be clad in translucent or opaque material to above eye level to ensure privacy.
76. Windows within the common corridor on the ground floor (opposite Units 3 and 4), the first floor (opposite Units 23 and 24), the second floor (opposite Units 9 and 10) and the third floor (opposite Units 13, 14, 31 and 32) are to be openable.
77. The burning of undergrowth, foliage, building refuse and like matter on the site is prohibited.
78. Under no circumstances shall building materials, demolition waste, fill, soil or any other material from any source be placed or stored within any public reserve.
79. To preserve and enhance the natural environment, all soil erosion and sediment control structures shall be inspected following each storm event and any necessary maintenance work shall be undertaken to ensure their continued proper operation. Sediment shall be removed from the soil erosion and sediment control structures when no more than forty percent (40%) capacity has been reached. These structures shall continue in proper operation until all development activities have been completed and the site fully stabilised.
80. 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.
81. To preserve and enhance the natural environment, sediment removed from erosion and sediment control structures shall be disposed of to an approved sediment dump.
82. 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.
83. 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.
84. 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.
85. 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.
86. 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

Item 1

days stock-piles are to be sprayed with an appropriate emulsion solution or seeded to minimise particle movement.

87. 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. In this regard, please note that disability access must be provided at all communal areas of the development including the riparian area at the rear and the required drying area. You are advised to seek advice from the Human Rights and Equal Opportunity Commission (phone (02) 9284 9600) in respect of your application.
88. All areas of common property, including visitor car parking spaces and on-site stormwater detention shall be included on the final plans of subdivision.
89. The balconies of Units 2, 3, 4, 5, 19, 20, 24, 27, 28, 31 and 32 do not comply with the minimum requirement of 12m² and shall be increased in size to comply. The balconies of Units 22, 25, 26, 29, 30 and 33 do not comply with the minimum requirement of 15m² and shall be increased in size to comply. The increase in balcony sizes shall be achieved by reducing the living areas of the respective units and not by extending their balconies beyond the allowable 1.2m from the building wall as referred to in Control C-6 of Section 4.4 of DCP55.
90. Private courtyards in the eastern side setback area of the development adjoining No. 27 Dumaresq Street shall not be permitted. This area shall be communal area and shall be provided with additional screen planting to a height of 6m to improve privacy to the dwelling at No. 27 Dumaresq Street.
91. Ground level terraces are to achieve a size of 25m² which may be achieved by extending into the communal area, in which case, the 25m² is to be the maximum size of the terrace. Units 19 and 20 are exceptions and may not extend any further into the communal area (riparian zone). Units 18 and 21 may not extend more than 3 metres from the northern wall of the building. Where the 25m² cannot be achieved, the living area or number of bedrooms of units should be reduced to comply with this control.
92. A screened drying area shall be provided in the eastern side setback of the development.

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

93. 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.

94. 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,

Item 1

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).

95. 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.
96. 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.
97. To protect the amenity of the adjoining property, all fill under the slab is to be contained by dropped edge beams. Engineers details are to be submitted to and approved by the Principal Certifying Authority prior to the issue of the Construction Certificate.
98. All bathroom windows are to be of translucent glazing to minimise overlooking to the adjoining properties. Details are to be shown on the Construction Certificate plans.
99. 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.

Item 1

TOTAL CONTRIBUTION FOR THIS DEVELOPMENT OF 33 ADDITIONAL DWELLINGS IS CURRENTLY \$752,413.35. 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 - Gordon	\$8,223.35
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 75sqm)	1.27 persons
Medium dwelling (75 - under 110sqm)	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	1.3 persons

100. 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.
101. Prior to issue of the Construction Certificate, driveway and associated footpath levels for any fully new, reconstructed or extended sections of driveway crossings 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

Item 1

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.

102. 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 23% maximum (to allow the laden garbage collection vehicle to exit the site, all efforts are to be made to reduce the grades to 20% or below), 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.

103. 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.

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

104. 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

Item 1

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.

105. 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.
- Water quality measures as required by DCP 47 Chapter 8.
- 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.
- 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 the stormwater drainage plans prepared by Stephen R. Fryer (Issue C) for Development Application approval, which are to be advanced as necessary for construction issue purposes.

106. 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 proposed works on the watercourse at the rear boundary. The plan(s) must include cross-sectional detail which demonstrates that the watercourse will have sufficient capacity for the 100 year ARI flow, or if not, how such flow is to be managed, and that the works will not adversely impact the subject development or neighbouring properties. The 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.

Item 1

107. 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.
108. 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.
109. To preserve the following tree/s, footings of the proposed front fence shall be isolated pier or pier and beam construction within the specified radius of the trunk/s. The piers shall be located such that no roots of a diameter greater than 30mm shall be severed or injured in the process of any site works during the construction period. The beam/s shall be located on or above existing soil levels.

The location and details of the footings shall be submitted to the Principal Certifying Authority and be approved prior to release of the Construction Certificate.

Tree/Location	Radius in Metres
#1 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	5.0m
#2 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	5.0m
#3 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to south-east site corner	6.0m

110. 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.

Item 1

111. A CASH BOND/BANK GUARANTEE of \$4 000.00 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 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
#1 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	\$1,000.00
#2 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	\$1,000.00
#3 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to south-east site corner	\$2,000.00

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

112. So as to minimise glare, the roof is to be of subdued colour which is compatible with the surrounding environment. A schedule of external finishes is to be submitted to and approved by the Council prior to the commencement of work.
113. 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.
114. Prior to the commencement of bulk excavation, a geotechnical investigation comprising at least three boreholes drilled to 1 metre below basement level is to be carried out. The report of this investigation is to be submitted to the Principal Certifying Authority, or Council if no PCA has been appointed. Recommendations for excavation methods and support, vibration monitoring, frequency of geotechnical inspections and groundwater management are to be included in the report.
115. The geotechnical and hydrogeological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the report submitted in accordance with another condition of this consent. 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 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.

Item 1

116. 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. 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.
117. 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.
 - 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.

118. Prior to the commencement of demolition 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 structures at 27 and 35 Dumaresq Street.

The report must be completed by a consulting structural/geotechnical engineer. 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.

Item 1

119. 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

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:

- 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 shall be provided in the basement as soon as practicable, with a timeframe included in the TMP for this.

Item 1

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.

120. 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.
121. 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 Dumaresq Street over the site frontage.
 - All driveway crossings and laybacks 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.

The developer may be held liable for 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.

122. 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

Item 1

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
#1 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	2.0m
#2 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	2.0m
#3 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to south-east site corner	6.0m

123. 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.
124. 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.
125. 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.
126. To preserve the following tree/s, no work shall commence until temporary measures to avoid soil compaction (eg rumble boards) beneath the canopy of the following tree/s is/are installed if repeated pedestrian or vehicular access is proposed:

Tree/Location
 #3 *Eucalyptus cinerea* (Argyle Apple)
 Adjacent to south-east site corner

127. Existing trees and vegetation on the site shall not be disturbed except with the written approval of Council and the following tree/s shall be fenced off before demolition commences.

Tree/Location	Radius From Trunk
#1 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	2.0m

Item 1

#2 <i>Pistacia chinensis</i> (Chinese Pistacio) Dumaresq St nature strip	2.0m
#3 <i>Eucalyptus cinerea</i> (Argyle Apple) Adjacent to south-east site corner	6.0m

128. 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.

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. A survey report shall be submitted to the Principal Certifying Authority prior to occupation, which certifies that the development has been constructed in accordance with the terms of this consent in relation to built upon area, building levels and setbacks.
131. 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.
 - 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.

Item 1

132. 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.

133. Prior to issue of an Occupation Certificate the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.

134. 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 car park 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.
- That no doors, gates, grilles or other structures have been provided in the access driveways to the basement car park, 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.

135. 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.

Item 1

- 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.
- 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.

136. 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.

Item 1

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.

137. 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.

138. 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 any approved Geotechnical report undertaken for the development, and
- In a manner that ensures that the structural amenity of adjoining structures and property is fully maintained.

139. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring with certifications as specified in the report submitted before commencement of works, 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.

140. 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 at 27 and 35 Dumaresq Street.

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 any of the structures have been demolished in the meantime under a separate approval, then no follow-up report is required.

141. 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 on-site stormwater detention facilities on the property. 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. 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.

Item 1

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.

142. 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.

143. Prior to the issue of the Occupation Certificate, 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.
144. Noxious and/or environmental weed species shall be removed from the property prior to the issue of the Occupation Certificate. Documentary evidence of the compliance with conditions of consent in this regard shall be submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate:
145. 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.
146. 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.

Item 1

147. Units 1, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15 shall have storage space provided in accordance with the requirements of Control C-6 of Section 4.5.4 of DCP 55 (ie 8m³ for two-bedroom units and 10m³ for three-bedroom units.).

U Lang
Acting Team Leader
Development Assessment -
Central

R Kinninmont
Acting Manager
Development Assessment
Services

M Miocic
Director
Development &
Regulation

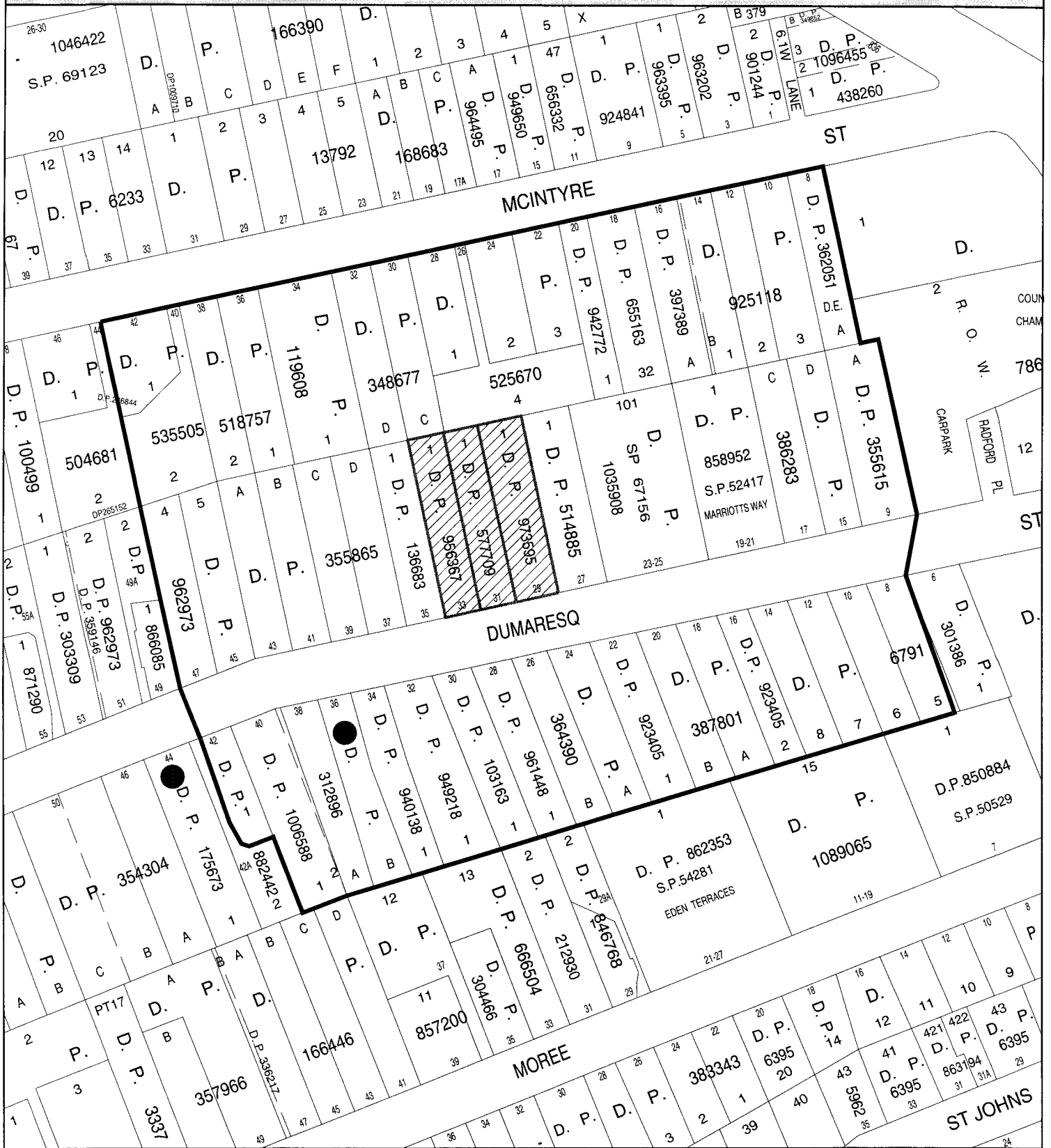
- Attachments:**
- 1. Location Sketch - 629430**
 - 2. Zoning extract - 629431**
 - 3. Site plan/roof, basement car parking - 629444**
 - 4. Elevations - 629449**
 - 5. Shadow diagrams - 629456**
 - 6. Construction Management Plan -629460**
 - 7. Stormwater Management & Environmental Site Management Concept Plan - 629461**
 - 8. Photomontages - 556015**
 - 9. Isolated Site Report for No 27 Dumaresq Street – 594094**

Confidential attachments –Floor plans, sections, amended landscape plans

LOCATION SKETCH

29,31,33 DUMARESQ ST GORDON

DEVELOPMENT APPLICATION No 0581/05



Scale : 1:2000

07-06-2006



AGREEMENT
OBJECTION
SUBJECT LAND



PETITION
SUBMISSION
CIRCULATED AREA

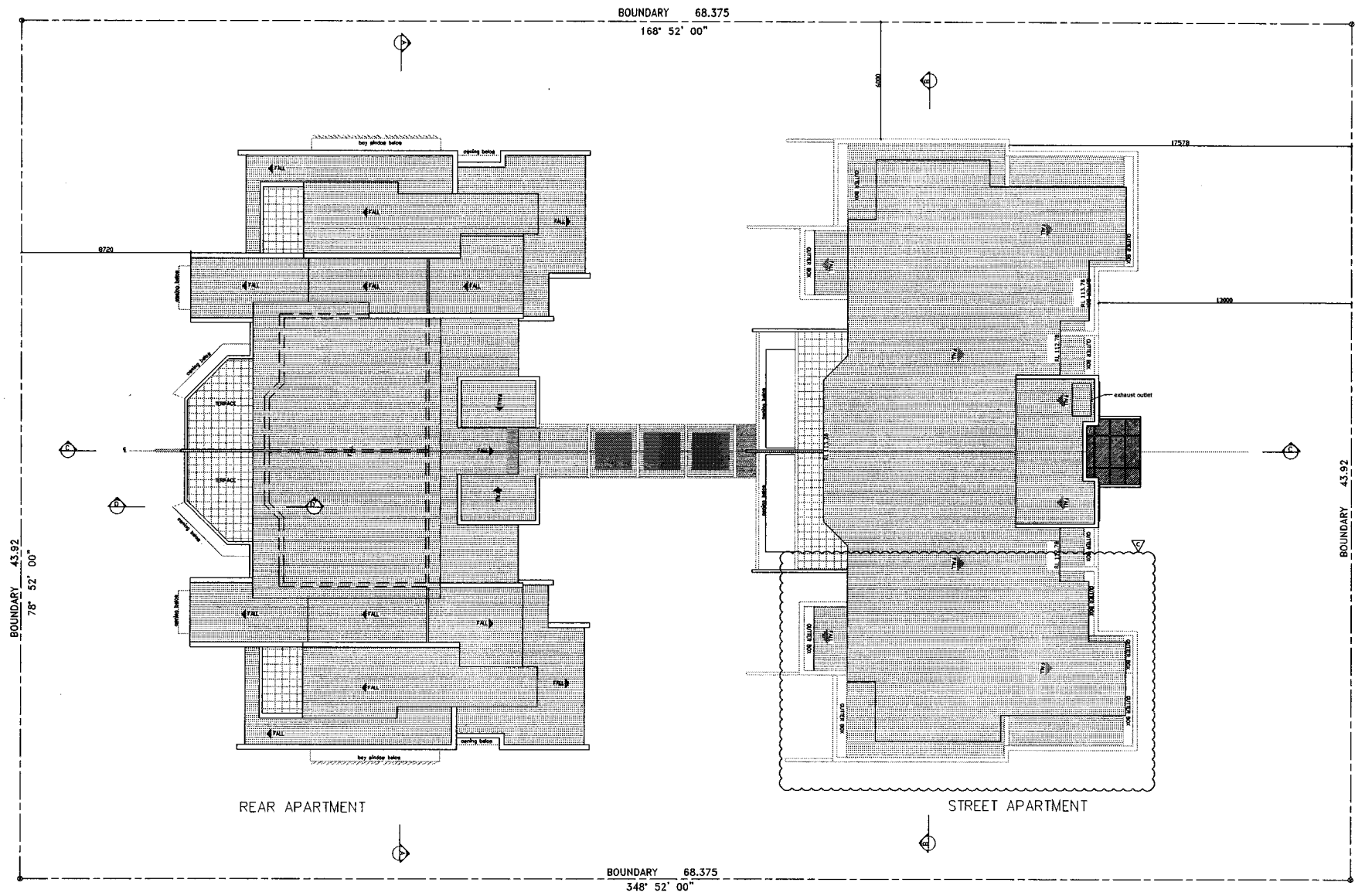


Zoning Extract

29-33 DUMARESQ STREET GORDON DA 0581/05



ZONES		RESERVATIONS		GENERAL	
2. RESIDENTIAL (a) RESIDENTIAL A (b) RESIDENTIAL B (c) RESIDENTIAL C (c1) RESIDENTIAL C1 (c2) RESIDENTIAL C2 (d) RESIDENTIAL D (d3) RESIDENTIAL D3 (e) RESIDENTIAL E (f) RESIDENTIAL F (g) RESIDENTIAL G (h) RESIDENTIAL H		5. SPECIAL USES (a) SPECIAL USES A (Schools etc) (a1) SPECIAL USES A1 (b) SPECIAL USES (Railway) 6. OPEN SPACE (a) RECREATION EXISTING (b) RECREATION PRIVATE (c) RECREATION PROPOSED		OPEN SPACE (a) OPEN SPACE (Public Parks & Recreation) (b) COUNTY OPEN SPACE SPECIAL USES SPECIAL USES (Parking etc) ROADS (a) COUNTY ROAD PROPOSED (b) COUNTY ROAD WIDENING (c) LOCAL ROAD PROPOSED (d) LOCAL ROAD WIDENING	
3. BUSINESS (a) RETAIL SERVICES FLOOR SPACE RATIOS A1 2.0:1 A2 1.0:1 A3 0.75:1 (b) COMMERCIAL SERVICES FLOOR SPACE RATIOS B1 1.0:1 B2 1.0:1		3(a) 3(a)-(A1) 3(a)-(A2) 3(a)-(A3) 3(b) 3(b)-(B1) 3(b)-(B2)		EXISTING COUNTY ROAD OTHER PLANNING INSTRUMENTS 	
				Scale: 1:2000 Date: 07-06-2006	



DUMARESQ STREET

REV	AMENDMENT	DATE
C	Amendments made to the roof of the street apartment block	10.04.06

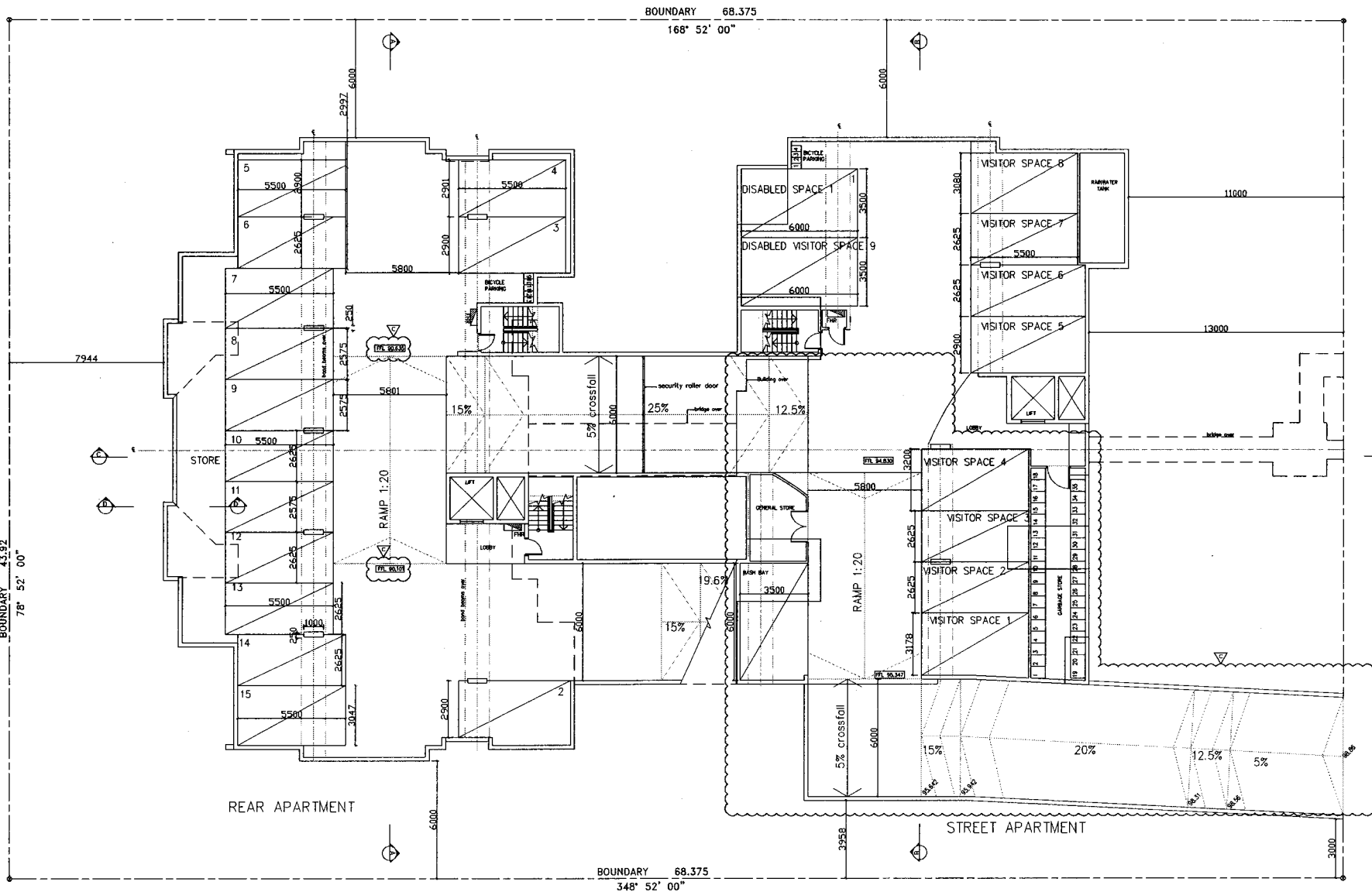
DUGALD C. MACKENZIE & ASSOCIATES
 Chartered Architects & Strategic Planners
 Caron Pty. Ltd. ACN 084 330 543
 255A Salkins Bay Road
 Northbridge - NSW - 2063
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 Fax: (02) 9957 9977
 Email: dcmack@ccemail.com.au

Job:
PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON

Drawing title:
ROOF PLAN

North point:

Scale: **1:100** Date: **12.05.2005**
 Drawn: Checked:
 Drawing no.: **SK12c**
 Copyright:
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CAR PARK/ BASEMENT LEVEL 1

FFL 95.08

SCALE 1:100

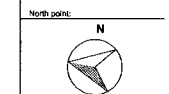
REV	AMENDMENT	DATE
-----	-----------	------

C	Amendment made to the length & grades of the driveway. Amendments made to the finish floor levels of the basement car park. Amendments made to the length of the internal ramp. Amendments made to the entry of the basement carpark. Amendments made to the location of the garbage store and wash bay.	11.04.06
---	--	----------

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Job:
PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON

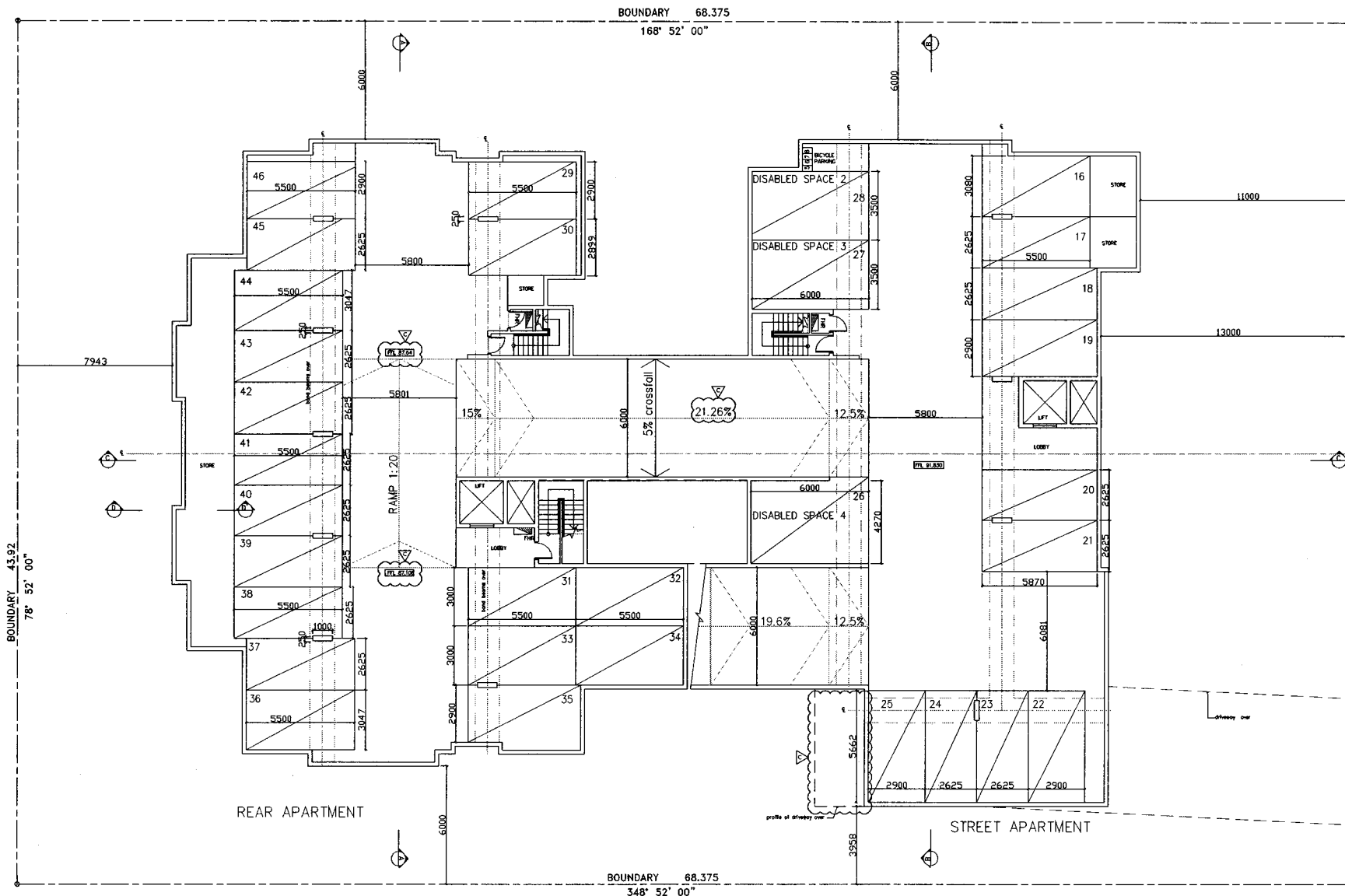
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CAR PARK/ BASEMENT
LEVEL 1



Scale: 1:100
Date: 12.05.2005
Drawn: [blank]
Checked: [blank]

Drawing no.:
SK06c

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CAR PARK/ BASEMENT LEVEL 2

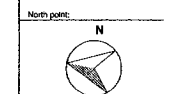
F.F.L. 91.59

SCALE 1:100

REV	AMENDMENT	DATE
C	Amendment made to the Basement level of the basement carpark. Amendment made to the ramp grades.	11.04.08

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& ASSOCIATES**
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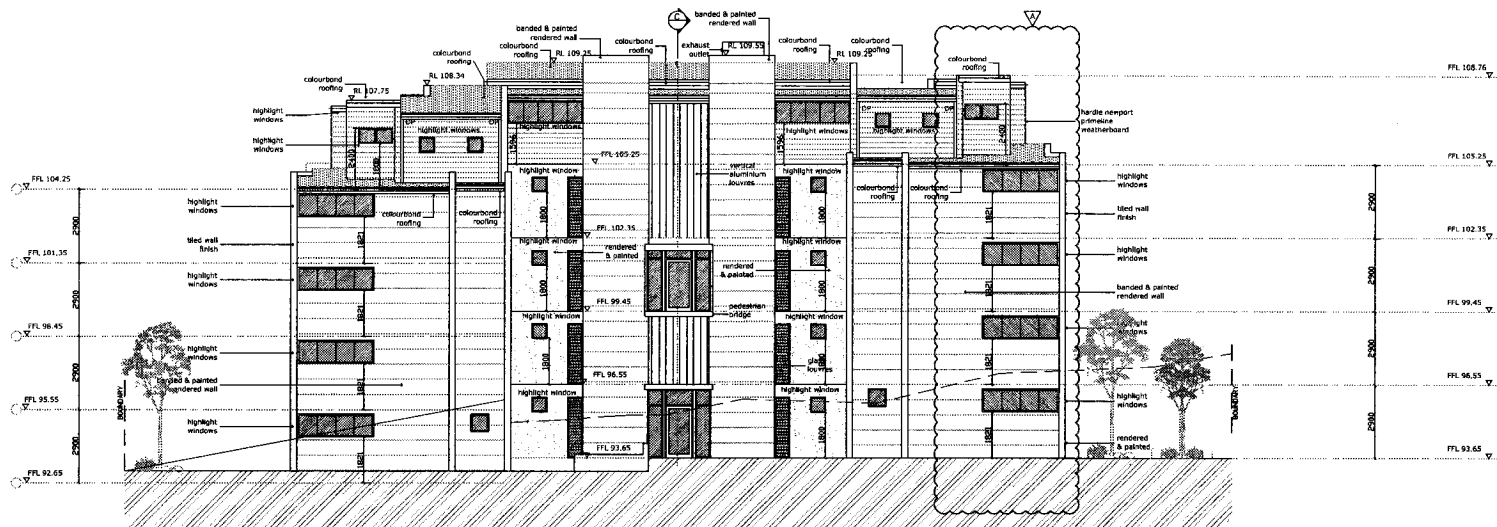
Job:
**PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON**
Drawing title:
**CAR PARK/ BASEMENT
LEVEL 2**



Scale: 1:100
Date: 12.05.2005
Drawn: Checked:

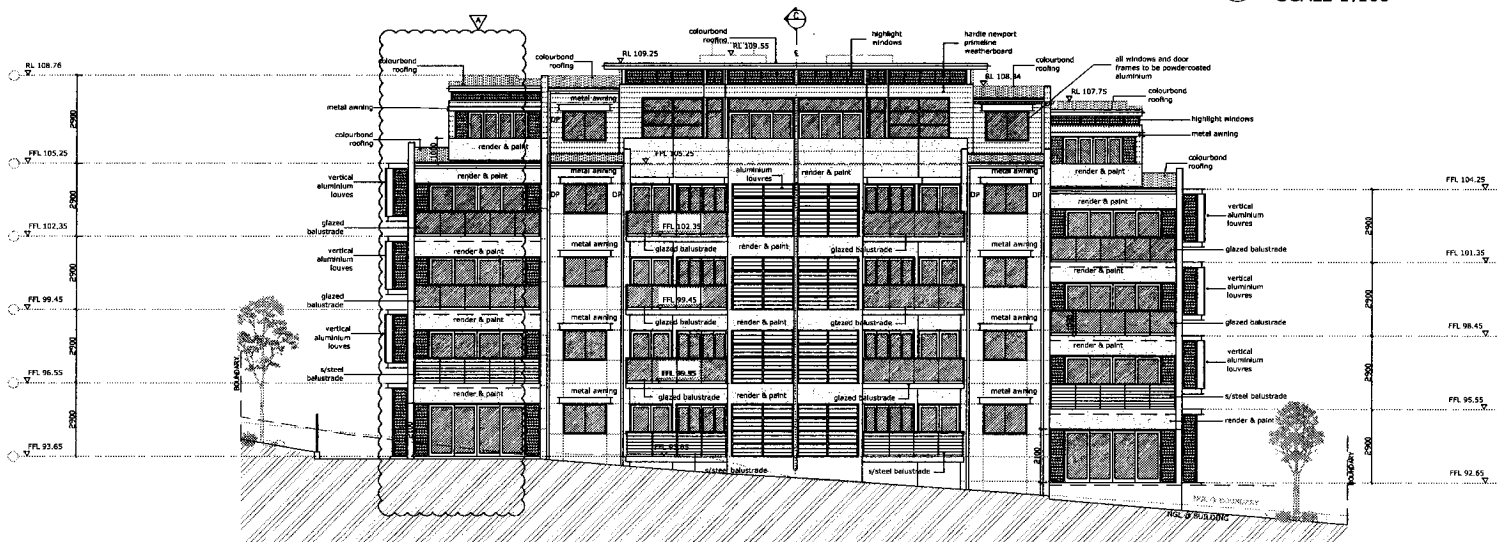
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SK05c

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SOUTHERN ELEVATION REAR APARTMENT

SCALE 1:100



NORTHERN ELEVATION REAR APARTMENT

SCALE 1:100

REV	AMENDMENT	DATE
A	Amendments made to the levels of the units in the eastern end of the new block	11.11.05

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Email: dugalcm@ccsmail.com.au

Job:
**PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON**

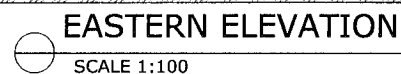
Drawing title:
**NORTHERN & SOUTHERN
ELEVATIONS REAR
APARTMENT**

North point:

Scale: 1:100 Date: 12.05.2005
Drawn: Checked:

Drawing no.: **SK15**
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REV	AMENDMENT	DATE
C	Amendment made to the finish floor levels of units 7, 11 & 15; Amendment made to the car park entry; Amendment made to the driveway grades;	10.04.06

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Job:
**PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON**
Drawing title:
**WESTERN & EASTERN
ELEVATIONS**

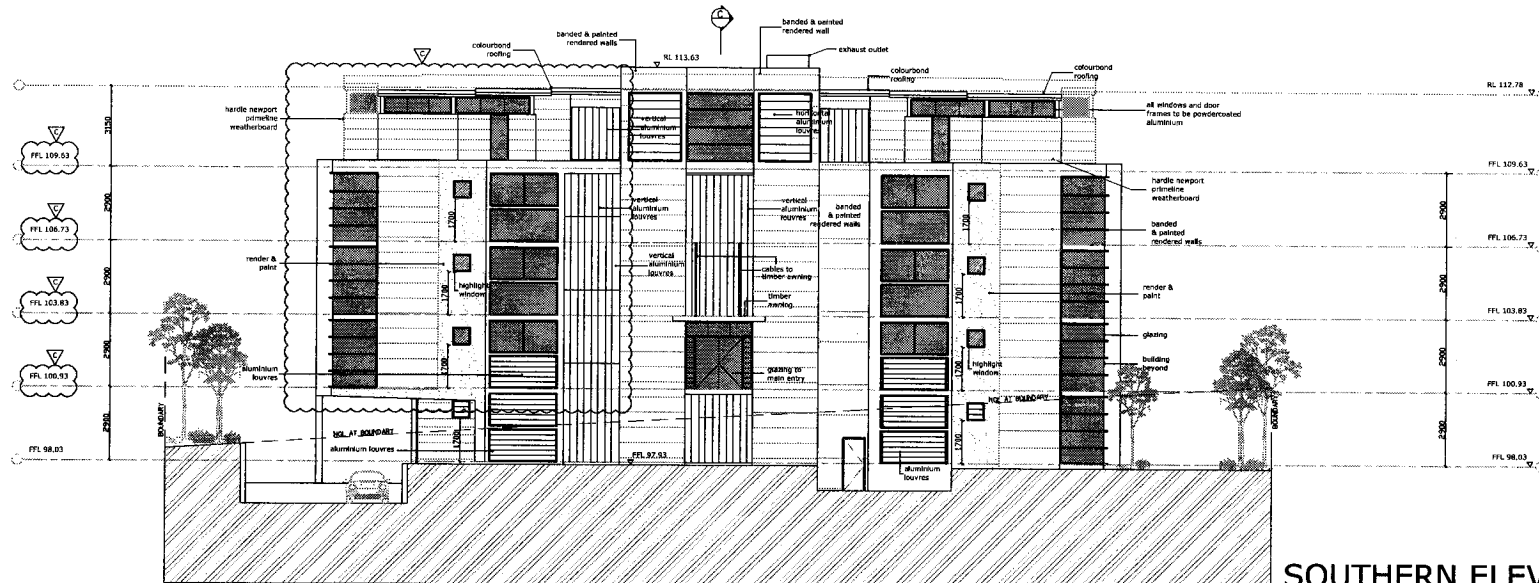
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1:100	12.05.2005
Drawn:	Checked:

Drawing no. **SK14c**

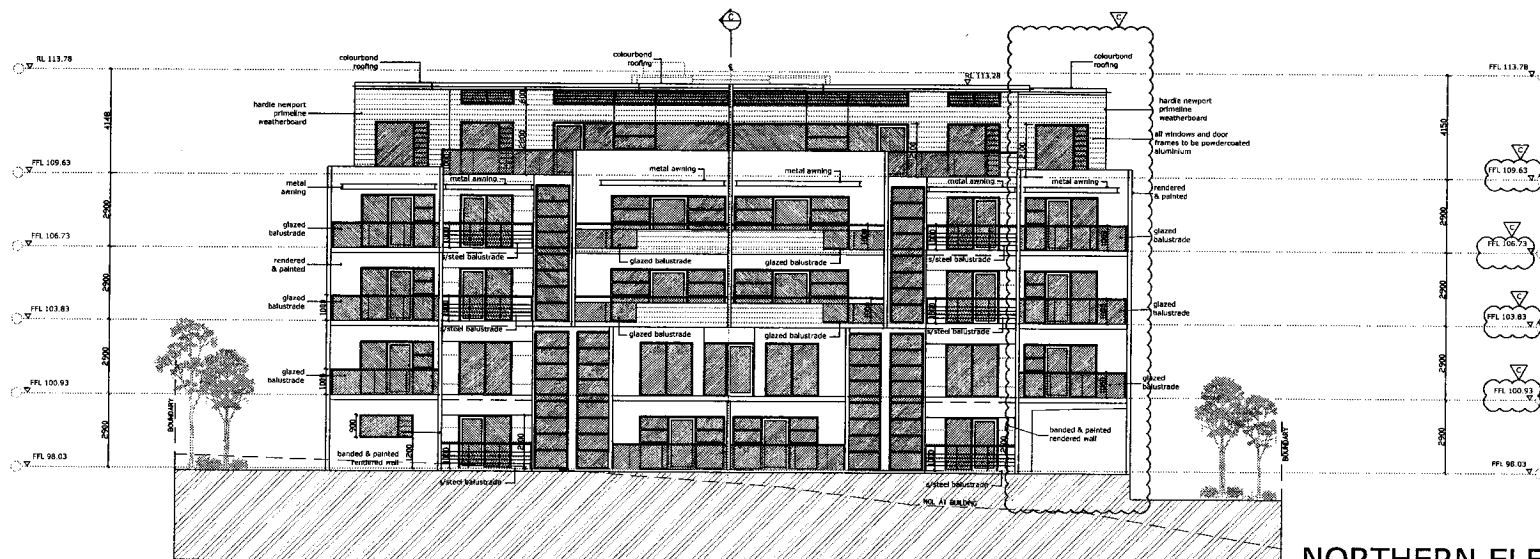
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SOUTHERN ELEVATION STREET APARTMENT

SCALE 1:100



NORTHERN ELEVATION STREET APARTMENT

SCALE 1:100

REV	AMENDMENT	DATE
C	Amendments made to the 10.04.06 Draft floor level of units 7, 11 & 15;	

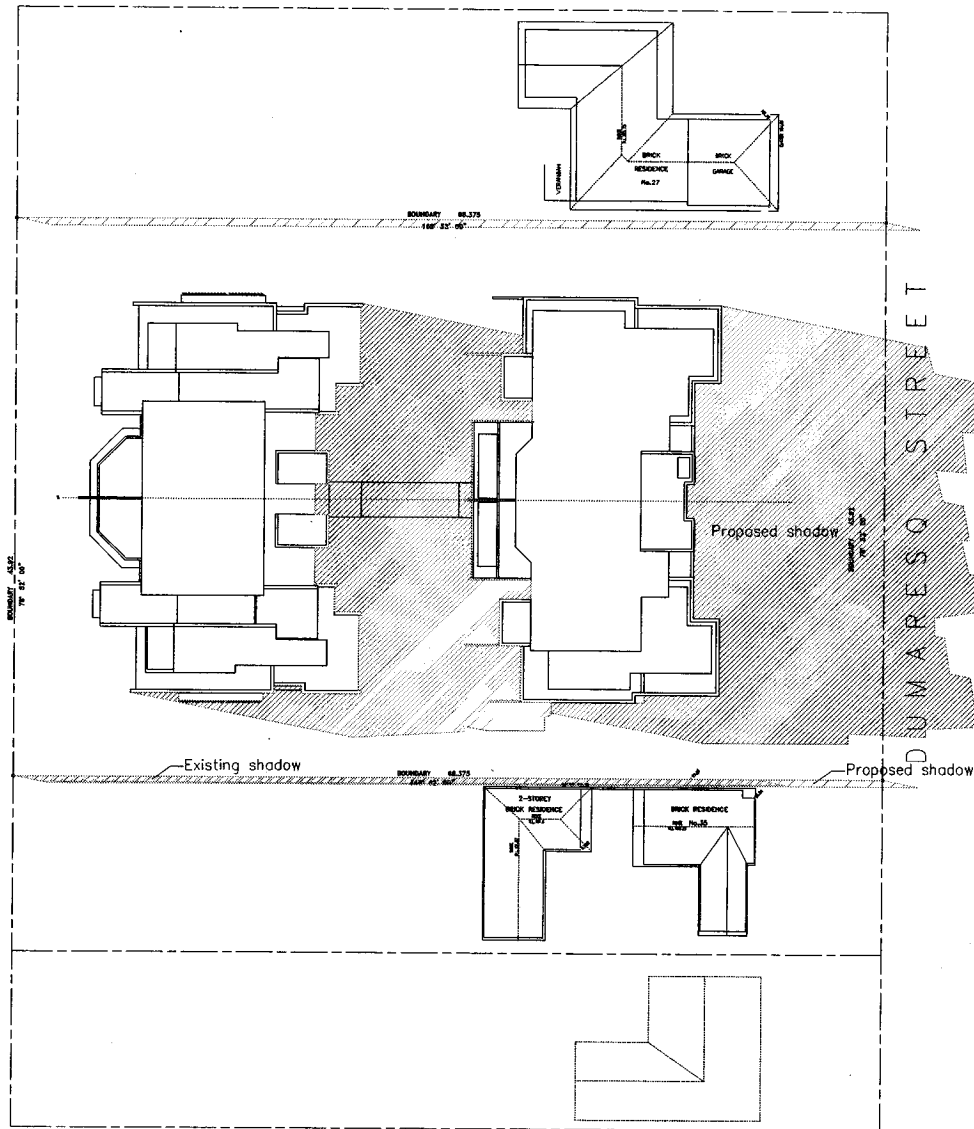
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Job:
**PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON**
Drawing title:
**NORTHERN & SOUTHERN
ELEVATIONS STREET
APARTMENT**
North point:

Scale:
1:100
Date:
12.05.2005
Drawn:
Checked:

Drawing no.
SK13c
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JUNE 22ND AT NOON

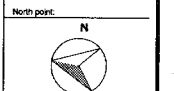
SCALE 1:200

REV	AMENDMENT	DATE
A	Rear block has been moved 6m from the rear boundary. Street block has been setback 13.15m from the street boundary. Amendments have been made to the units on the ends of the street block.	13.10.06

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Job:
**PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON**

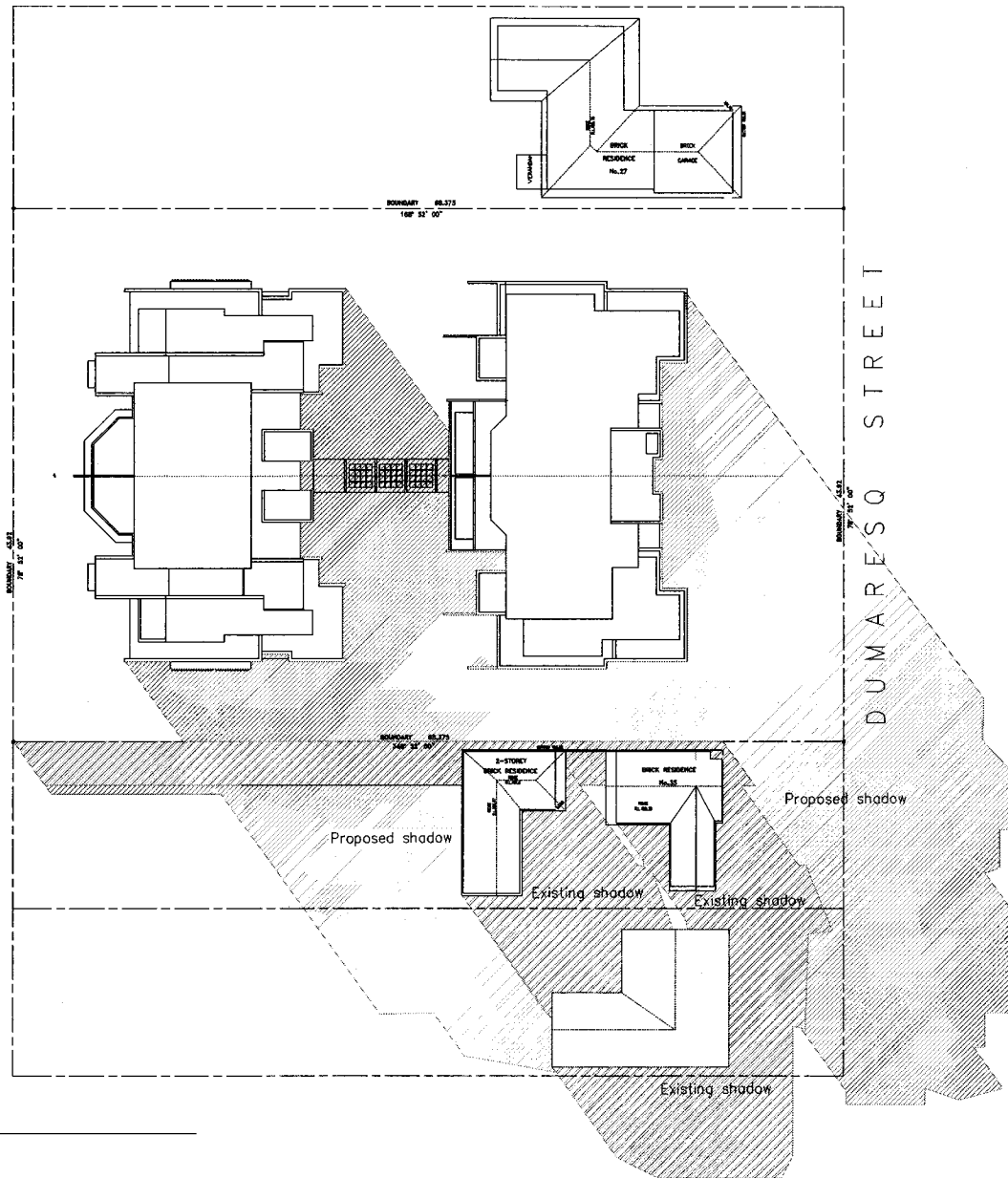
Drawing title:
**SHADOWS DIAGRAM
JUNE 22ND AT NOON**



Scale: 1:200
Date: 12.05.2005
Drawn: [Signature]
Checked: [Signature]

Drawing no.:
SD02A

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JUNE 22ND AT 9AM

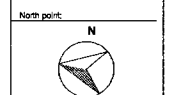
SCALE 1:200

REV	AMENDMENT	DATE
A	Rear block has been moved 6m from the rear boundary. Street block has been setback 13.15m from the street boundary. Amendments have been made to the units on the ends of the street block.	13.10.05

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Job:
**PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON**

Drawing title:
**SHADOWS DIAGRAM
JUNE 22ND AT 9 AM**



Scale:
1:200

Date:
12.05.2005

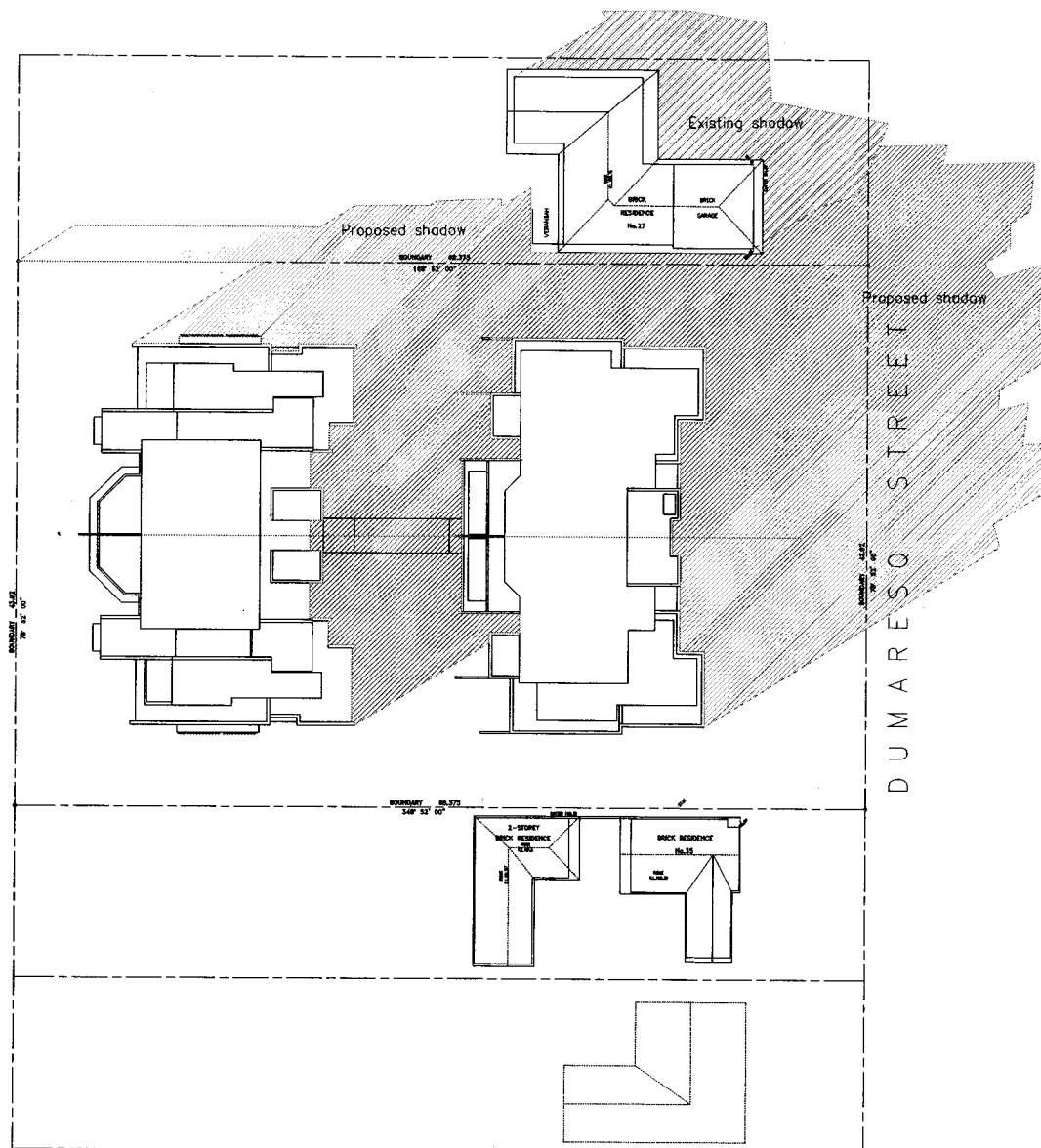
Drawn: _____

Checked: _____

Drawing no. _____

SD01A

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JUNE 22ND AT 3PM

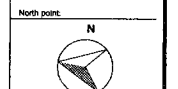
SCALE 1:200

REV	AMENDMENT	DATE
A	Rear block has been moved 8m from the rear boundary. Street block has been setback 13.15m from the street boundary. Amendments have been made to the units on the ends of the street block.	13.10.05

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Job:
PROPOSED DEVELOPMENT
35 UNITS
29-33 DUMARESQ STREET
GORDON
Drawing title:

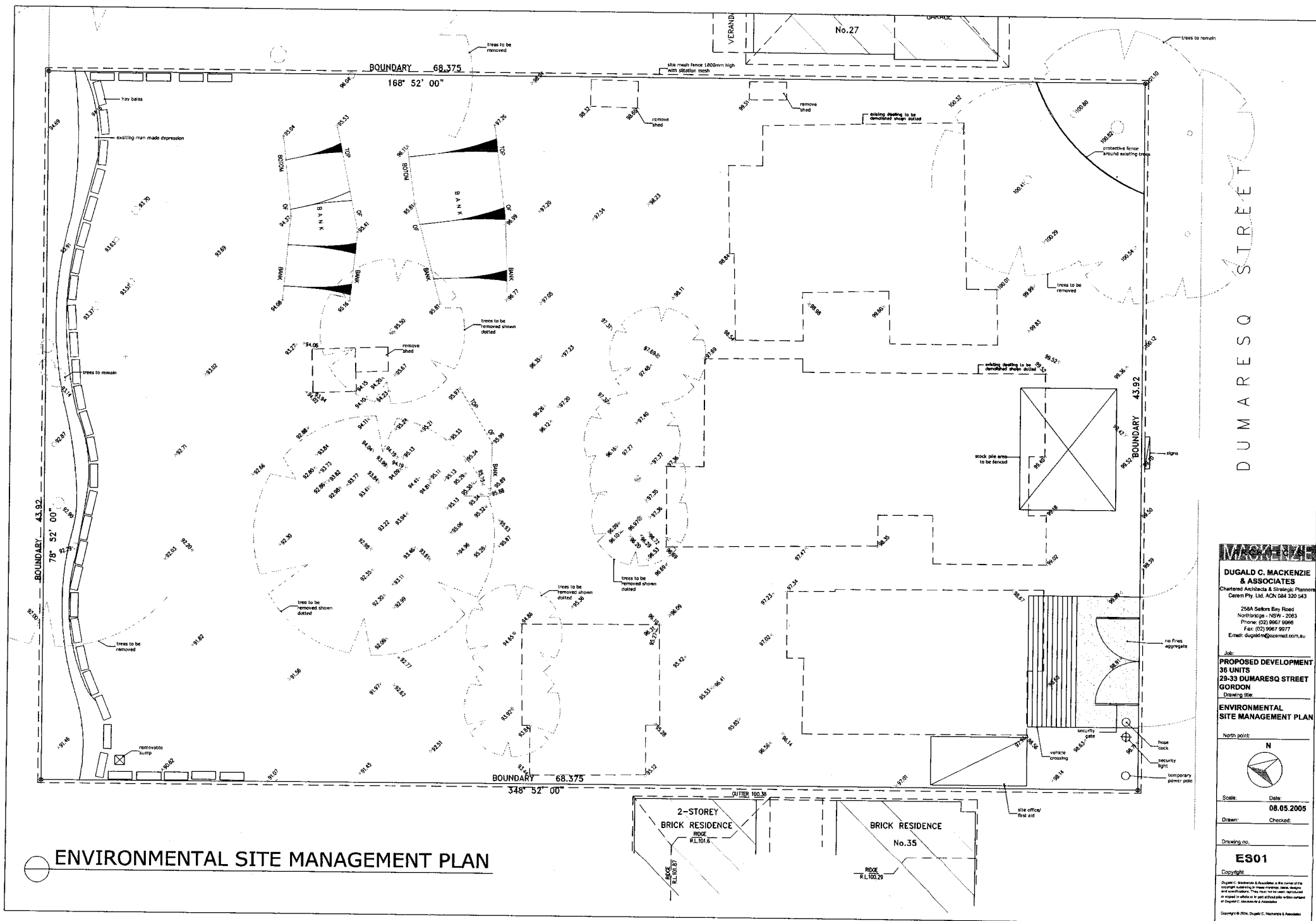
SHADOWS DIAGRAM
JUNE 22ND AT 3 PM



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Date: 12.05.2005
Drawn: Checked:

Drawing no. **SD03A**

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BUILT UPON AREA CALCULATIONS		
	EXISTING	PROPOSED
SITE AREA +	3083.4	3083.4
ROOF AREA (EXCLUDING EAVES) +	650.1	1229.8
DRIVEWAY +	36.0	179.9
PAVED +	0	106.4
PATIOS & DECKING +	0	0
LANDSCAPED AREAS +	0	0
POOL, COPING/SURROUNDS +	0	0
OTHER AREAS +	0	0
TOTAL +	746.1	1596.1
PERCENTAGE OF SITE AREA +	24.2%	51.8%

GENERAL NOTES

These drawings shall be read in conjunction with other consultants' drawings and specifications and with other written instructions as may be issued during the course of the contract. Any discrepancy shall be referred to the Engineer before proceeding with the work.

All dimensions are in millimetres and all levels are in metres, UNLESS NOTED OTHERWISE.

No dimension shall be obtained by scaling the drawings.

All levels and setting out dimensions shown on the drawings shall be checked on site prior to the commencement of the work.

During excavation work the structure shall be maintained in a stable and no part shall be over-stressed.

Detail survey data was obtained from Ian Sutherland & Associates survey drawings dated 14 February 2005.

All work is to be undertaken in accordance with the details shown on the drawings, the specifications and the superintendant.

Existing services where shown have been plotted from supplied data and such their accuracy can not be guaranteed. It is the responsibility of the contractor to establish the level of all existing services prior to the commencement of work.

All service trenches under vehicular pavements shall be back-filled in accordance with the requirements of the Kur-ring-gai Council.

All trench back-fill material shall be compacted to the same density as the adjacent material.

On completion of stormwater installation, all disturbed areas must be restored to original condition, including kerbs, footpaths, concrete areas, gravel and grassed areas and road pavements, unless directed otherwise.

Contractor to obtain all authority approvals unless directed otherwise.

STORMWATER DRAINAGE

The stormwater drainage design has been carried out in accordance with AS/NZS 1546.3 - 1998 "Stormwater Drainage" & AS/NZS 3500.32-1998 "Stormwater Drainage - Acceptable Solutions".

Any variations to the nominated levels shall be referred to engineer immediately.

Any variations to specified products or details shall be referred to the engineer for approval.

Dove pipes shall be a minimum of 125x100 COLORBOND steel, UNO.

Box Colorbond or Zincalume steel gutters shall be a minimum of 300 wide x 150 deep.

Eaves gutters shall be a minimum of 125 wide x 100 deep for equivalent area (Colorbond or Zincalume steel).

Subsoil drainage shall be provided to all retaining walls & embankments, with the lines feeding into the stormwater drainage system.

The on-site detention requirements have been calculated in accordance with Kur-ring-gai Council's Water Management Development Control Plan - DCP 4.7 dated March 2004.

SEDIMENT AND EROSION CONTROL NOTES

Sediment and erosion control shall be effectively maintained at all times during the course of construction and shall not be removed until the site has been stabilized or landscaped to the principal's satisfaction.

A single all-weather access way will be provided at the front of the property consisting of 50-75mm aggregate or similar material at a minimum thickness of 150mm laid over needle-punched geotextile fabric and constructed prior to commencement of works.

The contractor shall ensure that no spoil or fill encroaches upon adjacent areas for the duration of works.

The contractor shall ensure that herbicides and drains receiving stormwater shall be protected at all times during development. Herbicide sediment traps shall be installed along the immediate vicinity along Dumaresq St.

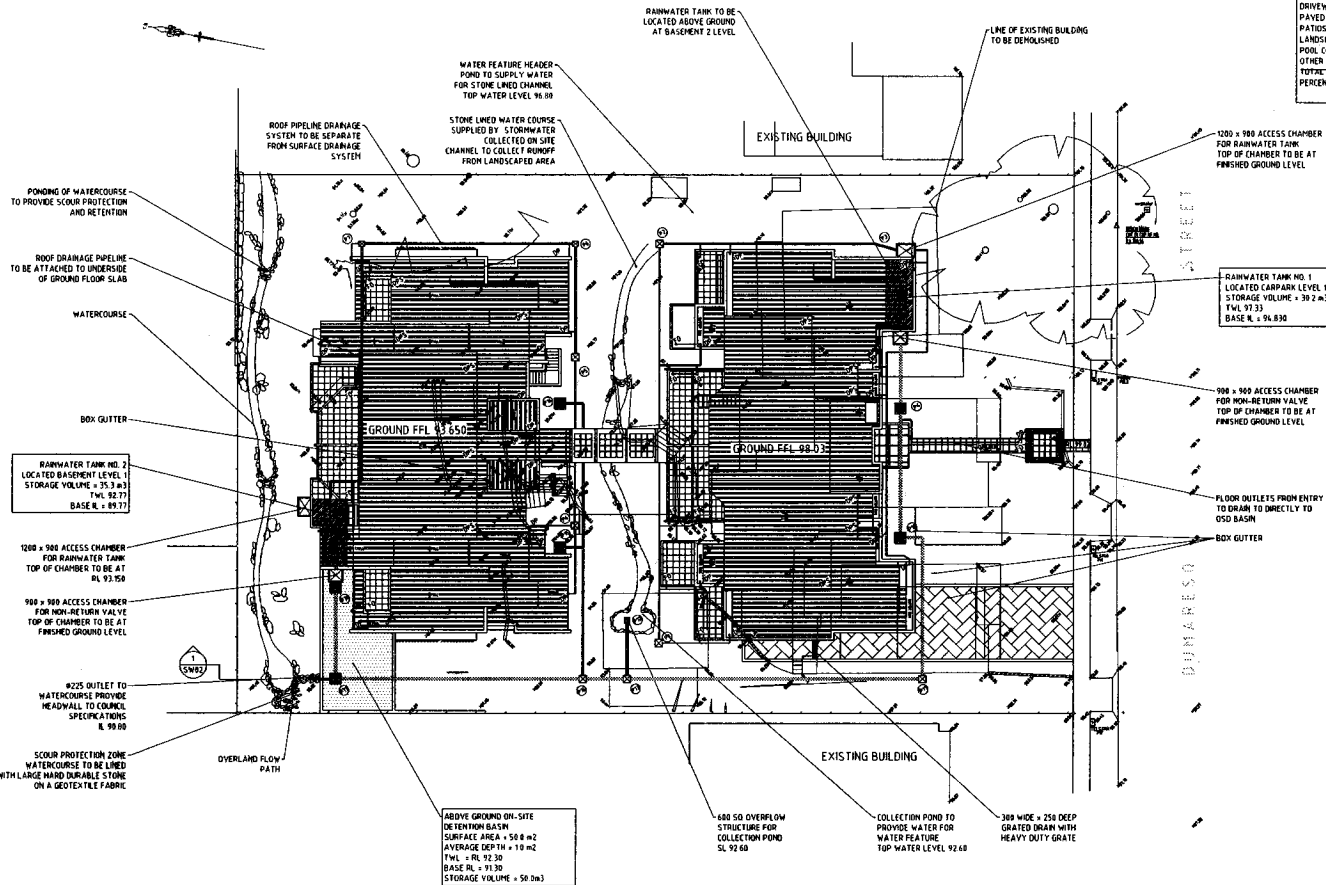
Sediment fencing shall be secured by post before metal star pickets are used. Plastic safety caps shall be used at 2 metre intervals with geotextile fabric embedded at 200mm into soil.

All topsoil stripped from the site and stockpiled so it does not interfere with drainage lines and stormwater inlets and will be suitably covered with an impermeous membrane material and screened by sediment fencing.

Subsoil drainage shall be provided to all retaining walls & embankments, with the lines feeding into the stormwater drainage system.

DRAWING KEY

100 DIA. UPVC STORMWATER DRAINAGE LINE
150 DIA. UPVC STORMWATER DRAINAGE LINE
300 DIA. UPVC STORMWATER DRAINAGE LINE



DRAINAGE CALCULATIONS

ABBREVIATED RUNOFF CALCULATIONS

USING RATIONAL METHOD

$Q = 0.00028 C A$

$Q = \text{RUNOFF (L/s)}$

$A = \text{CATCHMENT AREA (m}^2\text{)}$

$C = 0.23$

$AH = 150 \text{ YEAR}$

$T_c = 5 \text{ MINUTES}$

$C = 1.00$

$Q = 0.00028 C A$

$Q = 0.00028 C A$

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$Q = 0.00028 C A$

$Q = 0.00028 C A$

$Q = 0.00028 C A$

STORMWATER DRAINAGE LAYOUT PLAN

1200

ALL DRAINAGE LINES SHALL BE UPVC CLASS 5001 SEWER GRADE DRAINAGE PIPE, UNO.

ALL PIPES SHALL BE SOLVENT WELD JOINTED.

ALL DRAINAGE LINES SHALL BE LAD @ 1% MIN FALL, UNO.

ALL LEVELS ARE AUSTRALIAN HEIGHT DATUM (AHD).

MAX CATCHMENT AREA PER DOWNPIPE = 55 m²

MIN GUTTER CROSS SECTIONAL AREA = 1200 mm²

THE FOLLOWING SYMBOLS & ABBREVIATIONS HAVE BEEN USED:

RL 79.90 DENOTES FINISHED GROUND LEVEL

DP DENOTES DN50 UPVC ROUND OR 100 x 100 DOWNPIPES

DPS DENOTES LOCATION OF DOWNPIPE WITH SPLITTER

DIS DENOTES VERTICAL PIPE DROPPING TO LOWER LEVEL

DIS DENOTES 600 SO INLET OR ANCHOR PIT

DIS DENOTES EXTENT OF RAINWATER TANK

DIS DENOTES EXTENT OF OSD TANK

ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS DRAWING HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION PURPOSES TO DEMONSTRATE FEASIBILITY. ALL MEASURES WILL BE SUBJECT TO DETAIL DESIGN AT THE CONSTRUCTION CERTIFICATE STAGE AND MAY BE SUBJECT TO VARIATION PROVIDED THAT THE DESIGN INTENT IS MAINTAINED.

NOT FOR CONSTRUCTION

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REVISION	DATE	AMENDMENT DESCRIPTION	BY	REVISION	DATE	AMENDMENT DESCRIPTION	BY
				B	16.11.05	REVISE OSD AND RAINWATER TANK LAYOUT	SRF
				A	17.05.05	GENERAL REVISIONS	SRF
				A	14.05.05	ORIGINAL ISSUE	SRF

STEPHEN R FRYER CIVIL ENGINEERING

36 Koombalah Ave
SOUTH TURRAMURRA NSW 2074
Phone : 02 9402 9973 Fax: 02 9402 9974
Email: stephenfrayer@oplnet.com.au

Approved:

Stephen R Fryer
BE MIE(Aust)

PROPOSED RESIDENTIAL DEVELOPMENT

29 - 33 DUMARESQ ST, GORDON
Perrin Chris Young

CONCEPT STORMWATER DRAINAGE PLAN

DESIGN	DATE	DESIGN	DATE
SRF	4 APR 05	SRF	
SCALE	1:200		
JOB	L29		
UNO NO	25010		

AT ORIGINAL SIZE



NIDI

18 NOV 2005

CAPITAL HILL CENTRE

Street Elevation



18 NOV 2005

Western Elevation



18 NOV 2005

Northern Elevation



15th March 2006

Ku-ring-gai Municipal Council
818 Pacific Highway,
Gordon NSW. 2072

Attention: Ursula Lang

Dear Ursula,

**Re: DA 581/05, 29-33 Dumaresq Road, Gordon
Proposed new 5 story Residential Flat Building**

Site Location and details

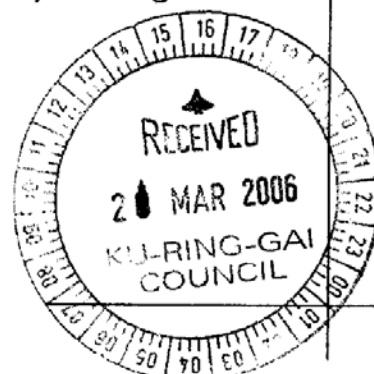
The subject site's comprise Lot 1 DP 973595 No. 29, Lot 1 DP 577709 No. 31 and Lot DP 956367 No. 33 Dumaresq Street, Gordon. The sites are occupied by single storey brick and tiled cottages, however development applications for multi storey residential flat buildings similar to this proposal, have recently been determined as approved within the street and immediate area.

Land Zoning

The site is zoned Residential 2(d3) under the Ku-ring-gai Planning Scheme Ordinance 1971 (KPSO) as amended. The proposal is permissible with consent of council under that zone.

Site context

The area is predominately single dwellings on large blocks with tree lined thoroughfares and exotic gardens. Styles and eras of buildings in the area range from modest and substantial development through to modern styles, as lands have been subdivided from previous existing estates and infill development occurs, as well as some older buildings replaced with contemporary dwellings.



The context of the site is featured by Dumaresq Street as a collector road to the Gordon shopping area and railway station providing overflow commuter parking. In addition Dumaresq Street links to other collector streets such as Vale Street.

Cost Analysis - Feasibility

In regards to the feasibility of the project, please find attached a simplified cost analysis of the proposal outlining the property purchase, holding costs, construction costs and potential sale prices of each individual unit.

Master Plan

With regards to number 27 Dumaresq Street, we have enclosed a possible future master plan for the site and as our correspondence indicates, we were unsuccessful in purchasing the property from Mrs P. Shepherd.

We believe the site can still be developed and the interface between that site and ours will not be detrimental.

Should you require further assistance please do not hesitate to contact us.

Yours Faithfully



**Barry Cotten
Chalmers Paige P/L**

14/3/06

Ku-ring-gai Municipal Council
818 Pacific Highway,
Gordon N.S.W. 2072

Attention: Ursula Lang

Dear Ursula,

Re: DA 581/05, 29-33 Dumaresq Road, Gordon- Proposed new 5 Story Residential Flat Building-

Please note the following with regard to the above-mention application:

The properties known as 29, 31 and 33 Dumaresq road is currently single residence with rear yards facing north. The total site dimensions are 43.97 x 68.37, with the area being slightly over 3000m².

The site was purchased for \$6.5 million dollars on the assumption the developer could yield at least 35 units. That means each unit is worth to purchase \$185k.

Onto the initial costs are the holding costs and DA application costs over 18 months, that being \$500k and on the assumption the application is approved in April 2006, the total outlay for the site with the approved DA is \$7 million, that being \$200k per unit/site.

It is estimated that the average selling price of the units at the time of sale will be \$750k and the average cost per unit, including all site services will be \$375k. That means the net raw profit per unit will be \$175k, but then agents fees and GST must be deducted as well as advertising and presales. It is estimated that these costs, as well as further holding charges, the raw profit per unit will be \$85k, that being \$3 million total for the development.

My client believes that this is the worst-case scenario and is hoping for the market to turn and the design to attract potential purchasers.

The benefit to council is the section 94 contributions for the 32 dwellings added to the total and for the local shopping center, the increase in density and flow on effect

With regard to number 27 Dumaresq, we have enclosed a possible future master plan for the site and as our correspondence indicates, we were unsuccessful in purchasing the property from Mrs P. Shepherd. We believe the site can still be developed and the interface between that site and ours will not be detrimental.

Your Sincerely

Dugald Mackenzie
Chartered Architect No. 6033

dugald c mackenzie & associates

Chartered Architects and Strategic Planners
258A Sailors Bay Road, Northbridge NSW 2063
Po Box 695 North Sydney NSW 2059 Tel: (02) 9967 9966
Fax: (02) 9967 9977 Mobile: 0412 598448
Web site: www.dugald-architecture.com.au
Email: dugaldm@ozemail.com.au

31/3/05

Mrs Patricia Shepherd
27 Dumaresq Road
Gordon NSW 2072
Ph: 9498 6670

Dear Mrs Shepherd,

Re: 27 Dumaresq sale

Further to our meetings on site with yourself and your son regarding the proposed development adjacent to your site, that being numbers 29-33 Dumaresq Street, we note that you do not want to sell your property at this time and that our offers have been considered, but not taken up.

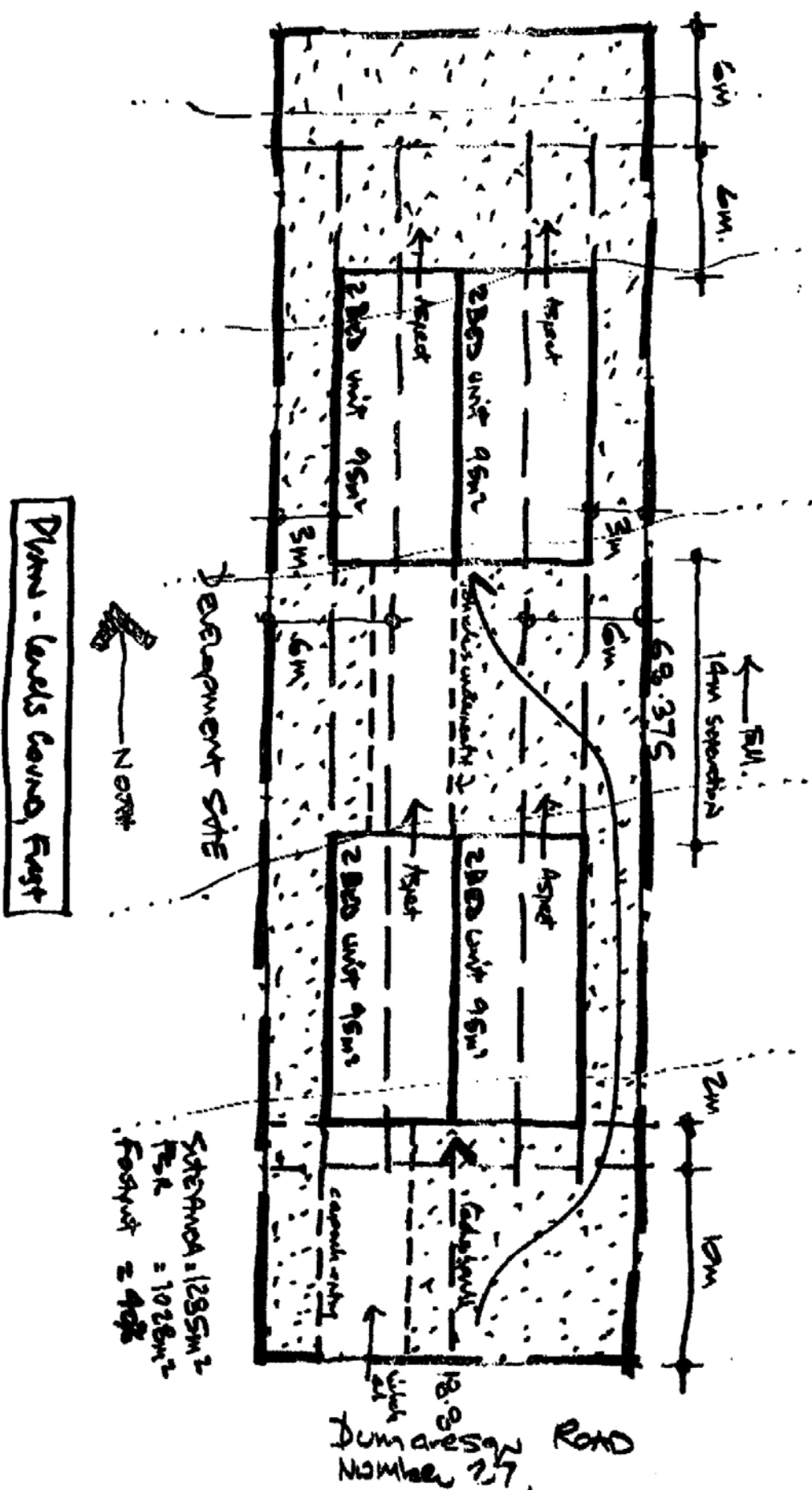
As you have lived in the same house for many years you feel that even our offer of relocating you during the construction, then re accommodating you in the new development would be to much of an up heal for someone of your age, and we respect your decision.

We wish you well in the future and please do not hesitate to talk to us during the construction phase of our development. We are only too happy to make life as easy as possible for you at that time.

Yours sincerely

Chris Evanian
Tetbury Pty Ltd

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D. macromyza - Architects

3601
Marshall Pkwy
27 Dunwoody Rd
Cannonville, UT 84703



1380 - 1388 Pacific Highway

Tutthorpe Pty. Ltd. ACN: 002 294 517
PROPERTY DEVELOPMENT ENTERPRISE
FRANKLINS + 18 SPECIALITY SHOPS
Mailing Address
2 Gillian Parade
West Pymble N. S. W. 2073
Telephone : (02) 9499 2539
Facsimile : (02) 9418 2812

Mrs. Patricia Shepherd
27 Dumaresq Rd
Gordon NSW 2072
Ph: 9498 6670

31/3/05

Dear Mrs. Shepherd

Re: 27 Dumaresq Sale

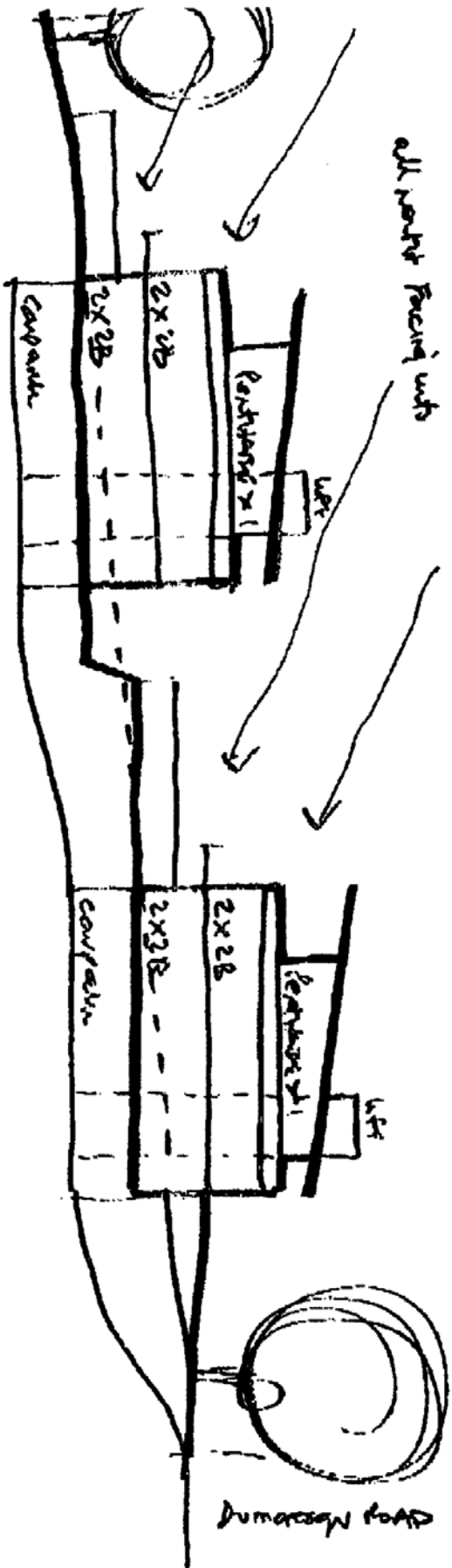
Further to our meetings on site with yourself and your son regarding the proposed development adjacent to your site, that being numbers 29-33 Dumaresq St, we note that you do not want to sell your property at this time and that our offers have been considered, but not taken up.

As you have lived in the same house for many years you feel that even our offer of relocating you during the construction, then reaccommodating you in the new development would be too much of an upheaval for someone of your age, and we respect your decision.

We wish you well in the future and please do not hesitate to talk to us during the construction phase of our development. We are only too happy to make life as easy as possible for you at that time.

Yours Sincerely,

Chris Evaniun
Tutthorpe Pty Ltd



Cross Section

D. MacGregor - Architect.

SK03
MacGregor
27 Dumaresq Rd
Gordon NSW

Item 2

DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	42 TO 48 CULWORTH AVENUE, KILLARA - DEMOLITION OF EXISTING DWELLINGS AND CONSTRUCTION OF TWO RESIDENTIAL FLAT BUILDINGS (51 UNITS), LANDSCAPING AND BASEMENT PARKING
WARD:	Gordon
DEVELOPMENT APPLICATION N^o:	109/06
SUBJECT LAND:	42 to 48 Culworth Avenue, Killara
APPLICANT:	Dugald Mackenzie & Associates
OWNER:	T G Hartman, B A Killen, P M York, R M & K Wechsler
DESIGNER:	Dugald Mackenzie & Associates
PRESENT USE:	Dwelling house
ZONING:	2(d3)
HERITAGE:	No. 42 Culworth Avenue - Contributory Item 42 Culworth
PERMISSIBLE UNDER:	KPSO, LEP 194
COUNCIL'S POLICIES APPLICABLE:	DCP 55 – Railway/Pacific Highway Corridor, DCP 31 – Access, DCP 40 – Waste Management, DCP 43 – Car Parking, DCP 47 – Water Management.
COMPLIANCE WITH CODES/POLICIES:	No
GOVERNMENT POLICIES APPLICABLE:	SEPP 55, SEPP 65, BASIX
COMPLIANCE WITH GOVERNMENT POLICIES:	Yes
DATE LODGED:	14 March 2006
40 DAY PERIOD EXPIRED:	23 April 2006
PROPOSAL:	Demolition of existing dwellings and construction of two residential flat buildings (51 units), landscaping and basement parking
RECOMMENDATION:	Approval

Item 2

DEVELOPMENT APPLICATION N^o 109/06
PREMISES: 42 - 48 CULWORTH AVENUE, KILLARA
PROPOSAL: DEMOLITION OF EXISTING DWELLINGS
AND CONSTRUCTION OF TWO
RESIDENTIAL FLAT BUILDINGS (51
UNITS), LANDSCAPING AND BASEMENT
PARKING
APPLICANT: DUGALD MACKENZIE & ASSOCIATES
OWNER: T G HARTMAN, B A KILLEN, P M YORK, R
M & K WECHSLER
DESIGNER DUGALD MACKENZIE & ASSOCIATES

PURPOSE FOR REPORT

To determine development application No.109/06, which seeks consent for demolition of existing structures and construction of 2 residential flat buildings (51 units), basement car parking and landscaping.

EXECUTIVE SUMMARY

Issues	Overshadowing, privacy, landscaping, bulk and scale
Submissions	Eight (8) submissions to original plans, Four (4) submissions to amended plans
Pre DA consultation	Yes
Land & Environment Court Appeal	No
Recommendation	Approval

HISTORY

Site history:

The site is used for residential purposes and there is no site history that is relevant to the subject development application.

Item 2

Development application history:

11 November, 2005

A pre-DA meeting was held with the applicant, their consultants and Council officers. The following matters were discussed at the meeting:

- built form
- bulk and scale
- setbacks
- deep soil zones, landscaping, tree retention
- overshadowing
- privacy

14 February 2006

Application lodged.

27 February 2006

Letter sent to the applicant requesting:

- more detailed architectural plans
- elevational shadow diagrams
- top floor FSR calculations/diagrams

3 March 2006

Revised plans notified to owners of surrounding properties.

13 April 2006

Council officers met with the applicant to discuss the following issues and non-compliances:

- deep soil zone
- non-compliant FSR for the fifth level, setbacks, size of balconies, bedrooms, corridors and single aspect units
- confirmation of Nathers ratings
- more detailed shadow diagrams
- amendments to the landscape plan to address tree retention and screening for the property to the north of the development site

28 April, 2006

Amended plans were lodged to address the above issues.

10 May 2006

Revised plans were notified to owners of adjoining properties

Item 2

THE SITE

Zoning:	2(d3)
Visual Character Study Category:	Between 1920 - 1945
Lot & DP Number:	Lot A, DP 402381; Lots 4 & 5 DP 28367; Lot F DP 410784.
Integrated Development:	No
Bush Fire Prone Land:	No
Endangered Ecological:	Blue Gum High Forest
Urban Bushland:	No
Contaminated Land:	No

SITE DESCRIPTION

Currently located on the properties comprising the subject site are single dwellings. The land that slopes moderately from the north-western corner (RL120.74) to the south-eastern corner (RL112.86). The land is zoned 2(d3) under LEP 194 (see attached **zoning extract**) with adjoining properties having a similar zoning to the north, south and west. Directly opposite the subject site, is the railway corridor, with Killara Railway Station located approximately 300 metres to the south.

No. 42 Culworth Avenue has a deep front setback with existing vegetation in the south-eastern corner and a two storey dwelling and a swimming pool. No. 44 Culworth Avenue is a battle axe block with a driveway off Culworth Avenue to a part one and two storey dwelling and a swimming pool. There are also part one and two storey dwelling houses on Nos. 46 and 48 Culworth Avenue, with a significant *Liquidambar* in the rear garden of No. 48 Culworth Avenue.

THE PROPOSAL

The applicant is seeking development consent for the demolition of existing structures and the construction of two (2) residential flat buildings containing 51 units, basement parking including 79 car spaces and landscaping. The proposal is comprised of the following components:-

BUILDING A (adjacent to the southern boundary)

- 31 units (7 x 3 bedrooms, 24 x 2 bedrooms)
- two lifts and staircases to all unit levels and basement car park
- balconies and/or private courtyards off living areas
- two levels of basement car parking including visitor parking, storage, car wash and garbage room

BUILDING B (adjacent to the northern boundary)

- 20 units (4 x 3 bedrooms units, 16 x 2 bedrooms)
- lift and stairs to all unit levels and basement car park
- balconies and private courtyards off living area

Item 2

- three levels of basement car parking, including visitor and disabled parking with storage areas and car wash.

External works include a swimming pool with BBQ and toilet facilities, extensive landscaping and a driveway off Culworth Avenue to the basement car park. The schedule of materials include rendered and painted walls in earthy tones, split face block work on the front elevation, timber pergolas, and louvres.

CONSULTATION - COMMUNITY

In accordance with Council's Notification DCP, owners of adjoining properties were given notice of the application on 3 March 2006. In response, submissions from the following were received:-

1. *Barry O'Farrell, State Member for Ku-ring-gai, 27 Redleaf Ave, Wahroonga (attaching the letter from Dr. K Grose)*
2. *Dr Kelvin Grose, 2B Broughton Ave, Castle Hill*
3. *Dr J C Walsh, 21 Powell Street Killara (two letters dated 3/3/06 & 2/4/06)*
4. *Brian War, 50 Culworth Avenue, Killara (Known by Council as 21A Powell Street)*
5. *Mr & Mrs J Walsh, 21 Powell Street, Killara*
6. *J K Posen (on behalf of FOKE) P.O. Box 403, Killara*
7. *D & W Dreyfus, 14 Powell Street, Killara*
8. *RailCorp Property GPO Box 47, Sydney*

The submissions contained the following comments on the original plans:

Negative impact upon the density and character of the area

It is proposed to provide two (2) residential flat buildings that are permissible under LEP 194 that comply with the density controls within the KPSO and Development Control Plan 55. The built form complies with the relevant standards and is, therefore, likely to provide buildings that are characteristic of a 2(d3) zone.

Inappropriate bulk and scale for a narrow street

The proposal provides a compliant front setback (13m – 15m) with substantial soft landscaping within the front setback that is likely to soften the built edges of the development when viewed from the public domain. The development also complies with the relevant density controls within the KPSO and DCP 55.

The contemporary design is incompatible with neighbouring heritage dwellings

Providing a contemporary design for infill development is a valid approach to urban design because it allows any new building to be read as a new element within the streetscape rather than mimicking design features of a past era. Council's Urban Design Consultant and Heritage Advisor are also in support of the application.

Item 2

Privacy loss

The proposal complies with the prescribed setbacks wherein it is proposed to provide adequate planting to minimise overlooking into adjoining properties. Residents of No. 21 Powell Street have requested further planting within the northern setback, in particular, Blueberry Ash to complement the existing Blueberry Ash within their property. (See **Condition No. 48**) More detailed consideration of privacy impacts is provided in the assessment of the proposal against the requirements of DCP 55 below.

Increased overshadowing for adjoining properties

There would be no increased overshadowing of No. 21A Powell Street to the north of the subject site. However, at 9am there would be some increased overshadowing in the rear gardens of Nos 4-6 and No. 7 Wallaroo Close to the west. There would also be shadowing of the driveway of No. 40A Powell Street. By midday, shadows from the development would fall over part of the tennis court of No. 40A Culworth Avenue and part of the rear garden of No. 40 Culworth Avenue.

At 3pm, there would be considerable overshadowing of Nos. 40 and 40A Culworth Avenue but these and other affected properties would still enjoy solar access in different parts of their gardens to satisfy the intent of DCP 55. The level of overshadowing is not considered to be unreasonable for a five (5) storey building located in a 2(d3) zone.

Greater noise nuisance

The level of noise generated by future residents of the development would be normal domestic levels associated with medium density environments.

Loss of amenity as a result of noise, vibration, stray currents and electrolysis from rail operations

RailCorp has recommended two conditions of consent to ensure the amenity of future residents. (**Condition Nos 99 and 100**)

Additional traffic flows and increased demand for on street parking in Culworth Avenue

Council's Development Engineer has advised that the traffic flows to and from the development are acceptable (10 and 21 vehicle trips per peak hour) in a street that experiences between 150 – 200 vehicles per hour. Parking restrictions also apply to the western side of Culworth Avenue to facilitate traffic movement along that street. Moreover, the development would provide more parking than required by LEP 194 and DCP 55.

The target market for the proposal is relatively small and if satisfied the proposed units would remain unsold.

This is not a matter for consideration under S.79C of the EPA Act.

The site analysis contained incorrect information about an approval for No. 21 Powell Street

Item 2

The site analysis plan contained an error identifying No. 21 Powell Street as being approved for future development which is not the case. This error is unlikely to prejudice any submissions made by the owners of adjoining properties. This error has also been taken into account in the assessment of the subject application.

The developer should be requested to transform the waste land directly opposite into a park dedicated to the original owner

If the subject application were to be approved, the applicant would be required to contribute funds towards the acquisition of further parklands under Section 94 of the EPA Act (see **Condition No. 103**). The establishment of parkland directly opposite the development site, however, is not a requirement to facilitate the subject development.

Council has a responsibility to document its longer term plans for multi unit units for the land bound by Powell Street, Culworth Avenue, Lorne Avenue and Pacific Highway

Prior to the rezoning of the land in question Council notified owners of properties, as required by the EPA Act 1979 and the Regulations, informing them of the changes to the zoning of the land in that locality and the likely densities resulting from those changes.

Amended plans dated 4 May 2006

In response to issues raised by Council Officers, amended plans were submitted to Council on 4 May 2006. The amended plans were notified to all previously notified residents. The amendments comprised:

- increased deep soil landscaping
- an addition level of parking under Building B
- increased front, side and rear setbacks
- an increase in the size of balconies, bedrooms and common corridors
- inclusion of a public thoroughfare along the northern boundary
- an increase setback to the significant Liquid Amber on the western boundary

Submissions from owners of the following properties were received.

1. Mr B War, 50 Culworth Avenue, Killara
2. Mr & Mrs J Walsh, 21 Powell Street, Killara
3. J K Posen (on behalf of FOKE) P.O. Box 403, Killara
4. RailCorp Property, GPO Box 47, Sydney

The submissions reiterated previous comments about the development with one additional comment.

The proposal will cause an increase in crime in the locality

The development meets the requirements of security under SEPP 65. The development may lead to a reduction in potential crime as there will be a greater degree of casual surveillance of public space both within the development and in Culworth Avenue.

Item 2

CONSULTATION - WITHIN COUNCIL

Urban Design Consultant

Council's Urban Design Consultant, Russell Olsson, commented on the proposal 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 precincts undergoing a transition, the desired future character as stated in planning and design policies.

Comment:

The proposed site is located within the Railway and Pacific Highway Corridor, Killara train station is located approximately 150 metres to the south of the site.

The site consists of four parcels of land known as 42, 44, 46 and 48 Culworth Ave Killara lots are zoned 2(d3). The site is approximately 64m wide and has an average depth of 71m. Number 44 Culworth Ave is a battle-axe block.

Some of the vegetation to the street frontage and the rear boundary of the site will be retained to provide visual separation from adjoining sites and scenic value.

The built form context is comprised of on the site, predominately two storey and single storey residential dwellings on adjacent sites, predominately single dwellings on large blocks

Sites to the south, east and west are zoned 2(d3) and to the north 2(c2)

The Residential 2(d3) adjoining sites establishes the future scale of development on these sites as being 5 storeys maximum.

The relationship to the future planned 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 height of the buildings comply with the height controls in LEP 194.

Item 2

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 DCP 55 states that "where a site has a depth of more than 45 metres and a width of more than 35 metres, a front setback zone of 13 to 15 metres from the boundary shall apply". This development complies.

All other setbacks within the development are acceptable.

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 approximately 34.8% and the 5th level occupies approximately 59.6% of the floor area of the 4th level, this in compliance of LEP 194. There are 11 x 3 bedroom and 40 x 2 bedroom units.

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.

All of the apartments will receive greater than 2 hours sunlight between 9am and 3pm in mid-winter, which is above that recommended in the Residential Flat Design Code of 70%. There are no south facing apartments.

41% of the kitchens are located on external walls, which is above that recommended in the Residential Flat Design Code of 25%.

All of the apartments are naturally ventilated which is above that recommended in the Residential Flat Design Code of 60%.

The development has a deep soil landscaping area of approximately 50%.

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.

Item 2

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.

There are no visual or acoustic issues and the apartments are, overall, efficiently designed.

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.

Comment:

The mix of apartments 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.

The proposed development uses a range of materials and elements to add interest to the façade. There are three distinct finishes used on the walls; render and paint, split-faced blockwork and FC sheeting. The smooth glass balustrades will contrast well with the

Item 2

relatively rugged appearance of the split faced blockwork. Aluminium louvres create a strong vertical element on the south elevation of Block A, emphasising the entries. The use of steel awnings and vertical windows throughout the development provide vertical emphasis on the façades.

The north elevation has a mix of recessed balconies and protruding windows and the use of louvres on some of the windows adds further articulation.

The aesthetics of the proposed development is acceptable.

2.0 Conclusion and recommendations

The proposal is acceptable in terms of SEPP 65 design principles, and should be approved in terms of this SEPP 65 assessment.

Landscaping

Council's Landscape Development Officer, Geoff Bird, made the following comments:

The site

It is proposed to demolish the existing dwellings and associated structures and construct two five storey residential flat buildings with basement car parking on the amalgamated site area of 4494.75sqm with vehicular access from Culworth Ave. The site is characterised by an established landscape setting with mature trees and shrubs within formal garden beds and grassed areas. The rear of the site is dominated by mature trees, including a large Liquidambar styraciflua (Sweet Gum) located adjacent to the north-western site corner. Other significant trees are located adjacent to the site boundaries in the adjoining properties. The site frontage is dominated by numerous smaller tree plantings and two mature Corymbia citriodora (Lemon Scented Gum).

Impacts to trees/tree replenishment

The proposed development will result in the clearing of the site of existing trees and vegetation, with the exception of the mature Liquidambar located adjacent to the north-western site corner. While it is preferred that existing trees within the site frontage be retained, particularly the Corymbia citriodora (Lemon Scented Gum), they spatially conflict with the proposed building and driveway. Subject to adequate and appropriate tree replenishment being undertaken, Landscape Services raises no objections to the nominated tree removal on site.

It appears that the proposal complies with the required minimum 50% deep soil landscaped area.

Drainage

Item 2

*Overall, Landscape Services raises no objections to the proposed drainage works, but it is preferred that drainage lines, wherever and as much as possible, be located beneath proposed paving or adjacent to structures to maximise the available deep soil area for the establishment and growth of tall trees and screen planting. Of particular concern, is the surface detention basin adjacent to the southern site boundary which impacts on the viability of the area to satisfy the aims and objectives of the LEP for the establishment of tall trees within side setbacks. (see **Condition No. 95**)*

Landscape plan

There are a few concerns regarding the proposed landscape works for the site, these include; The practicality of the design, proposing grassed/turfed courtyard areas with no external access for maintenance equipment. Given the small size of the turfed areas of approximately 8sqm, it is more practical and most likely that these areas will be hard paved by future residents, which will increase the BUA of the site.

*The trees proposed adjacent to the southern and eastern site boundaries consist of two species, one of which is exotic, and neither endemic. This does not promote biodiversity and limits the amenity of the site. Neither species is considered a 'tall' tree and as a result the proposal does not comply with the aims and objectives of LEP194, specifically 25D 2(b), (e), (f) and 25I 1(e). It is required that endemic tree species consistent with the Sydney Bluegum High Forest plant community be used for 50% of tree species on site. (See **Condition No. 48**).*

*No tall trees have been proposed between the two buildings on site. This is not considered appropriate given the landscape setting of the site and immediate area. It is required that tall trees be planted between the two buildings to ensure that the development is sited within a landscaped setting that is in scale with the development and to filter views between buildings A and B. (See **Condition No. 48**).*

*The landscape plan proposes courtyard areas that compromise the ongoing viability of the landscape to mature as per the aims and objectives of LEP194, primarily by maximising private courtyard areas within the northern side setback, that results in upper canopy screening being in the control of single residents rather than the body corporate. It can and will be conditioned for the private courtyards to be reduced in size within the northern side setback to maximise communal open space/planting. This will be done to ensure compliance with SEPP65 minimum area requirements for private open space (See **Condition No. 49**).*

Required changes, as detailed, will be conditioned as part of an amended landscape plan.

*Subject to conditions, Landscape Services can support the application. (See **Conditions Nos 46 – 57; 88 – 89; 108 – 113; 122 & 123**)*

Engineering

Council's Team Leader Development Engineers, Kathy Hawken, made the following comments:-

Item 2

The following documentation was used for the assessment:

*StrataSurv survey plan 1952-01, dated 30-09-2005;
D. Katauskas Geotechnical Assessment, dated 14th December 2005;
Varga Traffic Planning Traffic and Parking assessment report, dated 25 January 2006;
Stephen Fryer Concept Stormwater Drainage Plan SW01, dated 27 Jan 06;
Dugald C. Mackenzie & Associates architectural plans, SK00 to SK07, revision a except SK02 revision b;
Chalmers Paige Statement of Environmental Effects, dated February 2006;
BASIX Certificate 45392M.*

Water management

The BASIX Certificate gives the water management commitments as water saving fixtures, plus collection of roof runoff from both buildings for irrigation and car washing. A total of 10 000 litres of rainwater storage is required. This is quite modest, compared to the DCP 47 retention volume, which would be 51m³. However, Council is unable to require additional retention over and above the BASIX commitments. Nevertheless on site detention is shown on the stormwater concept plan in an above ground storage facility adjacent to the southern boundary.

To achieve gravity drainage to the street drainage system, the applicant proposes to construct a 375mm diameter line in Culworth Avenue, connected to the existing downstream system outside No. 38. Plans for this work will need to be submitted to Council and approved under the Roads Act prior to the issue of the Construction Certificate.

Parking and vehicular manouevring

The site is within 400 metres of Killara Station, so 51 resident and 13 visitor parking spaces are required. The development includes 74 resident and 13 visitor spaces and therefore complies.

Separate vehicular entry/ exit driveways are proposed for the two buildings. Each is 6 metres wide and has a maximum grade of 5% for the first 6 metres from the boundary, which is satisfactory and complies with AS2890.1:2004.

Traffic generation

The figure used in the report to estimate traffic generation for this development is 0.29 vehicle trips per peak hour. This is the figure for high density flat buildings. The figure for medium density residential flat buildings is between 0.4 and 0.65 vehicle trips per peak hour depending on the number of bedrooms. This development has more two bedroom units than three so it is considered that a figure of 0.5 should be used. The traffic generation of the existing four dwellings, 4 vehicle trips per peak hour, may be subtracted to obtain the net traffic generation of the development.

Item 2

The development is therefore expected to generate between 10 and 21 vehicle trips per peak hour. Traffic counts in Culworth Avenue, carried out during the school term, indicate existing flows of 150-200 vehicles per hour. The additional traffic is not expected to adversely affect flows in the surrounding streets.

Waste collection

*Internal waste collection is required. A garbage room is shown on the ground floor of each block. Security doors are also shown and these will have to be deleted to allow access for the waste collection vehicle (See **Condition No. 70**).*

*The driveway ramps have been shown at 25% when they should have a maximum grade of 20% to allow the laden collection vehicle to leave the site. It appears from the plans that the grades can be amended while still achieving the minimum headroom of 2.44 metres, so the recommended conditions require these amendments to be made on the Construction Certificate plans (See **Condition No. 92**).*

Construction management

The applicant has not submitted any construction management information. The traffic report does not cover this either. Key aspects of the subject development are:

Construction vehicle access is available to and from the Pacific Highway for traffic travelling in all directions via Lorne Avenue, so this will be the heavy vehicle route.

Unrestricted parking is available on the eastern side of Culworth Avenue between Powell Street and Lorne Avenue. Construction workers will be competing with commuters for these spaces.

Unrestricted parking is available on both sides of Powell Street between Culworth Avenue and the Highway. This does not seem to be subject to commuter parking.

There would also be the potential for construction workers to park in the Culworth Avenue carpark.

The Traffic Management Plan to be submitted prior to the commencement of works will need to include the following:

*Plans showing truck turning circles to demonstrate that trucks can manoeuvre in and out of the site without the need to amend parking on the opposite side of Culworth Avenue.
Plans to demonstrate how concrete pumping will be achieved without the need for the pump or delivery vehicles to encroach into Culworth Avenue and how pedestrians will be managed during these times.*

Item 2

Separate Traffic Control Plans for each stage of the works will have to be submitted as well. They need to be prepared and signed by the suitably qualified (as defined by the RTA Guide Traffic Control at Work Sites) person who will be present on the site during construction. Traffic controllers (as many as required) are to assist pedestrians across the frontage of the site and stop traffic in Culworth Avenue as necessary during truck movements in and out of the site.

*All of the above requirements are specifically incorporated into the recommended conditions (See **Condition No. 116**).*

Geotechnical assessment

*The geotechnical report submitted for this development is a letter report based on a walkover survey and recommends a detailed investigation prior to commencement of works to determine the subsurface conditions. The report mentions excavation conditions and support but not the need for vibration monitoring or dilapidation surveys. The recommended conditions require the detailed investigation to be carried out as recommended and matters such as vibrations, excavation conditions and effects on neighbouring structures to be addressed. Adjoining properties are also zoned 2d(3) so the conditions allow for follow-up reports not to be required in the event that a structure has been demolished. (See **Condition Nos. 114, 115**)*

*The application is supported subject to conditions. (Refer to **Conditions Nos 60 – 71; 90 - 98; 107; 114 – 119; 124 – 136**)*

Heritage Advisor

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

Existing site

The existing site contains several brick houses that have not been identified as having any heritage significance. The following is a brief description/assessment:

42 Culworth Avenue

This is a partially elevated 2 – 3 storey house with a stone base and red bricks above. The house appears to have design elements dating to the 1960s, and other elements indicating it may be earlier, possibly the 1940s. There is a pool in the back yard. In conclusion, I do not consider it to have heritage significance and do not object to demolition. I recommend that archival recording be undertaken to the appropriate level before demolition.

44 Culworth Avenue

This is a brick 1960s Colonial style house, partially elevated responding to the fall on the site and located on a battle axe lot. There is a pool at the northern end of the rear garden. I do

Item 2

not consider it to have heritage significance and do not object to demolition. I recommend that archival recording be undertaken to the appropriate level before demolition.

46 Culworth Avenue

This is a c1960s, partially elevated, house responding to the slope of the site with a terrace area at the front of the house. I do not consider it to have heritage significance and do not object to demolition. I recommend that archival recording be undertaken to the appropriate level before demolition.

48 Culworth Avenue

House is a c1960s partially elevated house responding to the slope of the site with a terrace area at the front of the house. I do not consider it to have heritage significance and do not object to demolition. I recommend that archival recording be undertaken to the appropriate level before demolition.

Heritage status

Despite being in an established area of Ku-ring-gai, this site is not included in a UCA and there are no nearby heritage items. As such, it is considered a good site for residential development consistent with the zoning of the land.

A history of the site or heritage assessment was not prepared as part of this application. As the existing houses on the site are relatively late in comparison to other nearby housing and this is an area of Ku-ring-gai that was developed shortly after opening of the railway, it is highly likely that this site was part of an earlier property and was subdivided after demolition of an early house. There is no above ground evidence of former buildings but it is possible that subsurface evidence of previous buildings or site elements may exist in the site. All evidence of earlier buildings or structures on the site would be subject to the relics provisions of the Heritage Act and, as a precaution, I recommend a condition should be attached to any approval to the effect that if any relics are uncovered during the excavation works, that the NSW Heritage Council is contacted and advice sought on whether the relics are likely to be significant and whether an excavation permit is necessary.

Conclusions and recommendations

This application would not have any adverse impacts on nearby heritage items, the site is not in a UCA and the proposal is considered satisfactory.

*To be consistent with other developments approved for sites rezoned under LEP 194 and so that a useful record of housing in Ku-ring-gai is made, I recommend archival recording of all buildings on the site be made before works on the site begin. (See **Condition No. 84**)*

Item 2

There is a possibility that sub surface deposits from earlier development on the site may be uncovered during excavation works and I recommend a precautionary archaeological condition should be included in any determination by Council. (Condition No. 83)

STATUTORY PROVISIONS

BASIX

The applicant has provided a satisfactory BASIX certificate indicating their commitment to sustainable development.

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 such that further investigation is not warranted in this case

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

A design verification statement has been submitted with application verifying that Dugald Mackenzie from Dugald C. MacKenzie & Associates is a qualified designer and member of the NSW Architects Registration Board. It also provides confirmation that the design has been prepared in accordance with the design quality principles set out in Part 2 of SEPP 65.

In accordance with SEPP 65, the application has been assessed in terms of the Design Quality Principles set out below.

Context:

In accordance with the desired future character of Ku-ring-gai as identified in part 3.2 of DCP 55, the applicant has provided residential development, albeit in a different form to what is currently evident in Culworth Avenue. However, this street has been zoned to accommodate residential flat buildings that will, over time, have a similar built form to what is proposed in the subject application. A garden setting is proposed with large indigenous and exotic trees within the substantial setbacks to the front, side and rear boundaries as is characteristic of the surrounding development.

Scale:

The scale of the development is consistent with what is permissible on the land. When the surrounding properties on the western side of Culworth Avenue that are zoned 2(d3) are developed, the buildings on similarly zoned sites would be consistent with the subject site in terms of their built form and height. Furthermore, the visual mass of the building would be minimised with appropriate plantings, varying setbacks and changes in materials, colours and texture.

Item 2

Built form:

The development has been broken into two apartment blocks with a narrow frontage to Culworth Avenue to minimise bulk and scale to the streetscape. There would be adequate landscaping within the deep setbacks to soften the built edges of the new development and adequate fenestration on the front facades to provide architectural interest, with varying materials, colours textures. The top floors are set back from the edge of the floors below to provide a lighter element at the top of the proposed building, with a skillion roof in contrast to the horizontal presentation of the lower floors.

Density:

The development complies with the specified FSR of 1.3:1 and comprises units of varying layouts to cater for different household types.

Resource, energy and water efficiency

Building orientation and internal layouts within individual units have been arranged to maximise solar access. A BASIX certificate has been submitted indicating that the development would be energy efficient with a high level of thermal comfort, natural light and ventilation and solar access. A rainwater tank has also been proposed under the driveway for the reuse of grey water for toilets, car washing and garden irrigation.

Landscape:

The applicant has provided sufficient soft landscaping within the deep soil zones, with a mixture of native species and exotics within the front, side and rear setbacks

Amenity:

The development provides units with varied layouts and relatively generous living areas that are likely to provide good solar access, natural light and ventilation. A pool area with BBQ facilities has been provided with good solar access to provide additional amenity for residents. Sizeable private courtyards and balconies for private outdoor recreation are also provided. Study areas have also been provided in many units with additional storage in the basement carpark.

Safety and security:

Most units would overlook public areas to promote natural surveillance. Safety by Design principles have been achieved with a development that is unlikely to provide potentially dark, entrapment areas to enhance site security. Basement parking for residents has also been provided with security roller doors at the front entry. A condition of consent is recommended requiring a card operated security system to further promote site security. **(Condition No. 121)**

Social dimensions:

There is a mix of unit sizes (2 & 3 bedrooms) with different unit layouts to suit a variety of household types. The site is not far from Killara Railway Station and has good access to the Gordon Town Centre. The development also provides manageable housing, disabled access with

Item 2

lifts to upper floor, a car wash in each basement carpark and car spaces for disabled residents and/or visitors.

Aesthetics:

The schedule of materials features an interesting palette of colours, textures and finishes, including a feature wall of split faced blockwork on the front façade of Building B to add architectural interest. The earthy, recessive tones of the external walls would allow the development to blend into the landscape setting provided by the existing and proposed trees. The skillion roof and increased setback for the fifth floor provides a lighter element to minimise bulk and scale to the public domain.

Residential Flat Design Code

The considerations in the Residential Flat Code are as follows:-

Relating to the local context:

The proposal, sited over four separate allotments which will need to be consolidated. This amalgamation will result in a site of 4494 square metres which is capable of accommodating the proposed density of five storeys. (Refer **Condition No. 90**)

The development complies with the prescribed building envelope controls within LEP 194 and DCP 55. In particular, maximum building height, number of storeys, top floor percentage, site coverage, FSR and setbacks to Culworth Avenue and is therefore of a scale and density anticipated for the area within these planning instruments and policy documents.

Surrounding lands have also been zoned for multi-unit development and the development is satisfactory having regard to the anticipated future character of the locality.

Site analysis

A satisfactory site analysis was submitted, indicating how the proposal performs in terms of building edges, landscape response, access parking and overall building performance in respect of overall energy sustainability. These requirements have also been supported by specialist reports addressing impacts of the proposed development on the subject site and surrounding locality.

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

The orientation of the development ensures adequate solar access to habitable areas and private open space, both internally and to adjoining residential development. The proposal also provides an appropriate frontage to Culworth Avenue.

Building design:

The proposal is satisfactory in terms of its internal configuration and achieves the objectives of the Residential Flat Code by providing functional and organized spaces, with a high level of residential

Item 2

amenity. The proposal provides good habitable spaces, with a majority of the units having a northerly and/or easterly aspect to optimise solar access, natural light and ventilation.

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

Ku-ring-gai Planning Scheme Ordinance (KPSO)

Development standard	Proposed	Complies
Site area (min): 1200m ²	4494m ²	YES
Deep landscaping (min): 50%/2247m ²	50%/2247m ²	YES
Street frontage (min): 30m	64m	YES
Number of storeys (max): 5	5	YES
Site coverage (max): 35%	35%	YES
Top floor area (max): 60% of level below	60%	YES
Storeys and ceiling height (max): 5 storeys and 13.4m	5 storeys & 12.6m	YES YES
Car parking spaces (min): <ul style="list-style-type: none"> • 13 (visitors) • 51 (residents) • 75 (total) 	13 (including 2 disabled space) 66 (includes 7 disabled spaces) 79	YES YES YES
Manegeable housing (min): 5	5	YES
Lift access: required if greater than three storeys	1 lift in Block A 2 lifts in Block B 1 Disabled lift in common open space	YES

Residential zone objectives (cl.25D)

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

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

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 4.1 Landscape design:		
Deep soil landscaping (min) <ul style="list-style-type: none"> • 150m² per 1000m² of site area = 675m² 	2246m ²	YES

Item 2

COMPLIANCE TABLE		
Development control	Proposed	Complies
No. of tall trees required (min): 15 trees	54 trees	YES
Part 4.2 Density:		
Building footprint (max): • 35% of total site area	35%	YES
Floor space ratio (max): • 1.3 :1	1.3:1	YES
Part 4.3 Setbacks:		
Street boundary setback (min): Culworth Avenue • 13 - 15 metres Building A	13m- 15m	YES
Building B	12.2m-14m (basement car park)	NO
• <40% building footprint within front setback) Building A	26% (above ground)	YES
Building B	38 % (above ground)	YES
• Private terraces - 11m	57%/ (basement car park)	NO
• 15% of setback with private courtyards	Courtyard for Unit 5 (8m – 10m) 13%	NO YES
Rear boundary- western setback (min): 6m	6m	YES
Side boundary – northern & southern setback (min): 6m	6m	YES
Part 4.4 Built form and articulation:		
Façade articulation: • Wall plane depth >600mm • Wall plane area <81m ²	500mm 54m ²	YES YES
Built form: • Building width < 36m Building A Building B	16.6m 21m	YES YES
• Balcony projection < 1.2m	Block A - 1.6m (northern side)	NO

Item 2

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 4.5 Residential amenity		
Solar access:		
<ul style="list-style-type: none"> >70% of units receive 3+ hours direct sunlight in winter solstice 	70%	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% (min) of common open space receives 3 hours of solar access	YES
<ul style="list-style-type: none"> <15% of the total units are single aspect with a western orientation 	NIL	YES
Visual privacy:		
Separation b/w windows and balconies of a building and any neighbouring building on site or adjoining site:		
Storeys 1 to 4		
<ul style="list-style-type: none"> 12m b/w habitable rooms 	12 m to No. 21A Powell Street	YES
	14m – 15m to No. 21 Powell Street	YES
	18m to No. 19 Powell Street	YES
	10m to 4-6 Wallaroo Close	NO
	>12m to No. 40A Culworth Avenue	YES
	14m to No. 40 Culworth Avenue	YES
	Within the subject development 11.7m	NO
5th Storey		
<ul style="list-style-type: none"> 18m b/w habitable rooms 	15 m to No. 21A Powell Street	NO
	14m to No. 21 Powell Street	NO
	22m to No. 19 Powell Street	YES
	15m to 4-6 Wallaroo Close	NO
	18m to No. 40A Culworth Avenue	YES
	15m to No. 40 Culworth Avenue	NO
	Within the subject development 12.7m – 14.8m	NO
Internal amenity:		
<ul style="list-style-type: none"> Habitable rooms have a minimum floor to ceiling height of 2.7m 	2.7m	YES
<ul style="list-style-type: none"> Non-habitable rooms have a minimum floor to ceiling height of 2.4m 	2.7m	YES
<ul style="list-style-type: none"> 1-2 bedroom units have a minimum plan dimension of 3m in all bedroom 	3m x 3m	YES

Item 2

COMPLIANCE TABLE		
Development control	Proposed	Complies
<ul style="list-style-type: none"> 3+ bedroom units have a minimum plan dimension of 3m in at least two bedrooms 	As above	YES
<ul style="list-style-type: none"> Single corridors: <ul style="list-style-type: none"> - serve a maximum of 8 units - >1.8m wide at lift lobbies 	< 8 units	YES
	1.8m	YES
Corridors >1.5m	1.5m	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"> - 12m² – 2 bedroom unit - 15m² – 3 bedroom unit 	Outdoor terrace for unit 9 less than 25m ² (all others comply)	NO
NB. At least one space >10m ²		
Common open space		
<ul style="list-style-type: none"> Min. 30% primary outdoor space has a minimum dimension of 2.4m 	12m ² 15m ² >10m ² >30% 2.4m min.	YES YES YES YES 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 	Mixture of 2 & 3 bedroom units & layouts	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% Units 2,3,4, 8, 13, 17 in Building B have a depth greater than 10 metres 49%	YES NO YES

Item 2

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 5 Parking and vehicular access:		
Car parking (min):		
• 13 (visitors)	13 (including 2 disabled space)	YES
• 51 (residents)	66 (includes 7 disabled spaces)	YES
• 64 (total)	79	YES

Part 4.3 Setbacks:Basement car park

There is a minor breach of the front setback controls for Building B. At its closest point, the basement for building B has a setback of 12.2m to Culworth Avenue. The extent of the non-compliance is 6m in depth and is 2.4 m². In addition, over forty percent of the basement carpark (levels 1 & 2) for building B encroaches into the front setback.

The non-compliant front setback (below ground level) is considered to be a very minor and will have no impact on the building's presentation to the streetscape or on the capability of the front setback to sustain substantial landscaping.

The above ground encroachment into the front setback (26% /38%) is also considered to be reasonable because the front façade is well articulated with varying materials and there is sufficient landscaping within the front setback to further reduce bulk and scale. In addition, there would be no unreasonable impacts on adjoining properties as a result of the non-compliance.

Front courtyard

The courtyard of Unit 5 is setback 8-10m from the front boundary in lieu of the required minimum of 11 metres. However, this is considered to be acceptable under the site circumstances because it is the only courtyard within the front setback and there would be ample soft landscaping within the front setback to soften the built edges of the development. There would also be adequate separation between adjoining sites to allow for privacy, solar access, acoustic control and natural ventilation.

Part 4.4 Built form and articulationBalcony projection

Some of the balconies on the northern side of building A protrude beyond the outermost part of the building by 1.6 metres. This non-compliance is acceptable as this elevation does not present directly to the streetscape, the protrusion of the balconies do not affect the architectural integrity of the building and there would be no unreasonable privacy loss as planter boxes have been recommended on the protruding balconies to maintain privacy to adjoining properties. **(Condition No. 14)**

Item 2

Part 4.5 Residential amenity:

Visual privacy

The distance between the window on the eastern elevation of a small cottage located at No. 4-6 Wallaroo Close and the windows on Building A (at the south – west corner) does not comply with DCP 55. This non-compliance is unlikely to cause an unreasonable loss of privacy because the windows within the development site are located in bedrooms, where there is a compliant setback to the western and southern boundaries with substantial landscaping within the development site and within the eastern setback of No. 4 – 6 Wallaroo Close to minimise overlooking.

There are some windows and/or balconies on the southern side of Building B and the northern elevation of Building A that do not comply with DCP 55 (less than 12 metres separation). This non-compliance is unlikely to cause a material loss of privacy because most of the windows on the southern side of Building B are fitted with opaque glazing and the living areas for Building B are located on the northern side of Building B. Nevertheless, conditions of consent have been recommended requiring the applicant to provide additional trees (to reach 13 metres at maturity) between Buildings A and B and planter boxes on the northern terraces of building A (see **Conditions Nos 14 and 48**)

The distance between the fifth floor windows and/or balconies for Building A and the windows on the northern elevation of No. 40 Culworth Avenue does not comply with DCP 55. This non-compliance, however, is unlikely to cause an unreasonable loss of privacy for the residents of No. 40 Culworth Avenue because there is adequate landscaping within the northern setback of No. 40 Culworth Avenue and the adjoining right of way to No. 40A Culworth Avenue to provide adequate screening. (see **Appendix A & B**)

The non-compliant distance between the fifth floor windows/balconies on the northern side of Building B and the windows on the southern side of No. 21A Powell Street (above the double garage) are unlikely to cause a significant loss of privacy because the windows on the southern elevation of No. 21A Powell Street are relatively small and there is ample landscaping within the southern setback of No. 21A Powell Street (see **Appendix C & D**) to minimise privacy loss for the residents of No. 21A Powell Street. Furthermore, the private outdoor area with a swimming pool for 21A Powell Street is located within their northern setback well away from the proposed development.

There is a non-compliance with the required distance between the fifth floor windows/balconies and the windows on the southern elevation of No. 21 Powell Street. However, there are a number of trees within the rear garden of No. 21 Powell Street (see **Appendix E**) and, together with a condition of consent requiring further trees within the northern side setback (**Condition No. 48**) and planter boxes on the terraces of the units on the northern side of the development (**Condition No. 15**) there would be no adverse privacy impact.

Private open space

Item 2

Pursuant to section 4.5.5 of DCP 55, ground floor units require a terrace or private courtyard with a minimum area of 25 square metres. The terrace for Unit No. 9, however, fails to comply with this requirement given that it has an area of 12 square metres. This non-compliance is acceptable in the site context given that it would satisfy the objectives of this control by providing a functional open space off living areas with good solar access with its north-easterly orientation and also given its substantial setback to Culworth Avenue with landscaping to allow for private outdoor recreation.

Depth of single aspect units

There is a non-compliance with the permissible length of single aspect units (Units 2, 3, 4, 8, 13, 17 in Building B) being partly 13 metres in length. This non-compliance is considered to be reasonable given that the areas involved are ensuites, separate bathrooms and laundries where it is acceptable to have borrowed light and mechanical ventilation under the BCA. Furthermore, future residents of those units would still enjoy adequate light and ventilation from their north facing balconies and windows, consistent with the intent of the control.

Part 4.7 Social dimensions:

Whilst there are no one (1) bedroom units proposed, there is a mixture of two and three bedrooms units on each level, with different layouts and sizes to satisfy the intent of part 4.7 in DCP 55.

Part 6 Isolated sites:

The development would not result in any isolated sites given that Nos. 21 & 21A Powell Street could be amalgamated in the future to achieve the minimum requirements of 1200 square metres in site area and frontages greater than 23 metres in width.

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 and the proposal is satisfactory.

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 and the proposal is satisfactory.

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 complies.

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, subject to conditions.

Item 2

Section 94 Plan

The development attracts a section 94 contribution of \$902,800.10, which is required to be paid by **Condition No. 105**.

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.

Submissions

All submissions received have been considered in the assessment of this application.

Public interest

The approval of the application is considered to be 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 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 109/06 for the construction of two (2) residential flat buildings (51 units), basement parking and landscaping on land at Nos. 42 – 48 Culworth Avenue, Killara for a period of two (2) year from the date of the Notice of Determination, subject to the following conditions:

GENERAL CONDITIONS

1. The development to be in accordance with Development Application No 109/06 and Development Application plans prepared by Dugald C Mackenzie & Associates as follows:

Item 2

SK00a Basement 3 floor plan dated 24/04/06 received at Council on 28/4/06
SK01a Basement 1 & 2 floor plans dated 24/4/06 received at Council on 28/4/06
SK02b Ground & first floor plans dated 3/5/06 received at Council on 4/5/06
SK03a Second & third floor plans dated 24/4/06 received at Council on 28/4/06
SK04a Penthouse & roof plans dated 24/4/06 received at Council on 28/4/06
SK05a South & east elevations & section BB (block A) dated 24/4/06 received at Council on 28/4/06
SK06a North & west elevations section AA (block A) dated 24/4/06 received at Council on 28/4/06
SK07a elevations & section Block B dated 24/4/06 received at Council on 28/4/06
Landscape planting plans LPP/01/E & LPP/02/E dated 3/5/06 prepared by JCA Landscape architects received at Council on 4/5/06

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 a Occupation Certificate has been issued.
4. 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.
5. 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.
6. 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.
7. **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.

8. 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

Item 2

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.

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. All excavations shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.
11. 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.
12. 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.
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 (Nos. 21, 21A Powell Street, 40 & 40A Culworth Street) 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. Planter boxes (min width 500mm x 500mm depth) must be provided on the outer edge of the northern terraces of Buildings A & B and the outer edge of the southern terraces on Building A. Low maintenance plantings capable of achieving a mature height of 1.6m above the finished floor level of the terraces must be provided in each planter box to minimise overlooking of adjoining properties.

Item 2

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.

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:
 - 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.

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. 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 Occupation Certificate.
20. 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.

Item 2

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.

21. For the purpose of maintaining visual amenity, no permanent electricity supply poles are to be erected forward of the building setback without the prior Consent of Council. It is the onus of the applicant to consult with the authorised statutory electricity provider prior to construction commencing to ensure that direct connection to the building is possible. Details of any proposed permanent pole must be submitted to and approved by Council prior to installation.
22. 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.
23. The fence and footings shall be constructed entirely within the boundaries of the property.
24. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
25. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
26. 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.
27. 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.
28. 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.

29. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.

Item 2

30. 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.
31. 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.
32. 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.
33. 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.
34. All combustible material shall be removed from the site on a daily basis. Material shall not be burnt on the site.
35. 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.
36. Trees and vegetation on a site shall not be disturbed except with the approval of the Council.
37. Fire hoses are to be maintained on site during the course of demolition.
38. Adequate precautions shall be taken to ensure the protection of adjoining premises and persons therein from damage and injury during the process of demolition.

Item 2

39. 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.
40. 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.
41. 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.
42. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.
43. 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.
44. To maintain the character of the established streetscape, the overall height of the front fence is not to exceed 900mm in height above the finished footpath level.
45. 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.
46. Removal, or pruning of the following trees, is not approved as part of this Development Application:

Tree/ Location

#16 *Cypress spp* (Pine)
Straddling western (rear) site boundary

#17 *Liquidambar styraciflua* (Sweet Gum)

Item 2

Straddling western rear site boundary

Jacaranda minosifolia (Jacaranda) 4.0m
Culworth Avenue nature strip

Liquidambar styraciflua (Sweet Gum) 10.0m
Adjacent to Culworth Avenue nature strip in adjoining property

47. Approval is given under this development consent for the following tree works to be undertaken to trees within the subject property:

Tree/Location	Tree Works
#1 <i>Chamaecyparis obtusa</i> 'Cripsii' (False Hinoki Cypress) Adjacent to north-east site corner	Removal
#2 <i>Cypress spp.</i> Adjacent to north-east site corner	Removal
#3 <i>Thuja orientalis</i> (Book leaf cypress) Adjacent to north-east site corner	Removal
#4 <i>Thuja orientalis</i> (Book leaf cypress) Adjacent to eastern site corner	Removal
#5 <i>Chamaecyparis obtusa</i> 'Cripsii' (False Hinoki Cypress) Within front setback	Removal
#6 <i>Cypress spp.</i> Within front setback	Removal
#11 <i>Nicotiana glauca</i> (Tree tobacco) Adjacent to northern site boundary	Removal
#12 <i>Prunus serrulata</i> (Cherry) Adjacent to northern site boundary	Removal
#13 <i>Chamaecyparis obtusa</i> 'Cripsii' (False Hinoki Cypress) Adjacent to north-west site corner	Removal
#19 <i>Chamaecyparis obtusa</i> (Hinoki Cypress) Adjacent to eastern site boundary	Removal
#20 <i>Syragus spp.</i> (Cocco's Palm) Adjacent to eastern site boundary	Removal
#22 <i>Cupressus</i> 'Swanes Golden' (Pencil Pine) Within front setback	Removal
#23 <i>Cupressus</i> 'Swanes Golden' (Pencil Pine) Within front setback	Removal
#24 <i>Tibouchina spp.</i> (Tibouchina) Adjacent to eastern site boundary	Removal

Item 2

#32 <i>Pittosporum eugenoides</i> (Variegated Pittosporum) Within proposed building footprint	Removal
#36 <i>Michellia figo</i> (Port wine magnolia) Within proposed building footprint	Removal
#40 <i>Celtis sinensis</i> (Hackberry) Adjacent to south-east site boundary	Removal
#41 <i>Franklinia axillaris</i> (Gordonia) Adjacent to south-east site corner	Removal
#43 <i>Grevillea robusta</i> (Silky Oak) Adjacent to southern site boundary	Removal
#44 <i>Cupressus macrocarpa</i> (Cypress) Adjacent to southern site boundary	Removal
#47 <i>Corymbia citriodora</i> (Lemon scented gum) Adjacent to eastern site boundary	Removal
#48 <i>Callistemon salignus</i> (Bottlebrush) Adjacent to eastern site boundary	Removal
#49 <i>Callistemon salignus</i> (Bottlebrush) Adjacent to eastern site boundary	Removal
#50 <i>Cupressus macrocarpa</i> 'Brunniana' (Cypress) Within front setback	Removal
#51 <i>Cupressus leylandii</i> (Leyland Cypress) Within front setback	Removal
#52 <i>Corymbia citriodora</i> (Lemon scented gum) Within front setback	Removal
#53 <i>Unidentified tree</i> Adjacent to southern side setback	Removal
#55 <i>Franklinia axillaris</i> (Gordonia) Within proposed building footprint	Removal
#56 <i>Callistemon viminalis</i> (Bottlebrush) Within proposed building footprint	Removal

48. Landscape works shall be carried out in accordance with Landscape Drawing No LPP/01/E & LPP/02/E prepared by JCA and dated 03/05/2006 submitted with the Development Application, except as amended by the following:

- 50% of proposed tree species planted on site are to be from the Sydney Bluegum High Forest plant community.
- Trees planted adjacent to the eastern/front site boundary are to be native endemic species consistent with the Sydney Bluegum High Forest plant community, capable of attaining a minimum height of 13.0m. At least four of the proposed trees to be planted

Item 2

within the front setback are to be either *Eucalyptus saligna* (Bluegum) or *Eucalyptus pilularis* (Blackbutt).

- The private courtyards on the northern side of Units 1-8 of Building A are to have external access to the central pathway for maintenance. The access path is not to exceed 1.0m wide.
 - Proposed tree planting adjacent to the southern site boundary is to consist of a minimum of three differing tree species capable of attaining a minimum height of 13.0m to promote bio diversity and to visually screen and soften the development.
 - Tree #'s 16 and 17 are to be shown to be retained. (The trees have joint ownership with the adjoining property and require joint owners and council's consent for removal).
 - Proposed screen planting adjacent to the northern side site boundary is to be altered to a shrub species that is capable of attaining a minimum height of 4.0m to maintain and enhance neighbour amenity.
 - The proposed courtyards and planting on the northern side of Building B are to be altered as specified.
 - Four (4) Blueberry Ash trees to be provided within the common open space within the northern setback of the development site between tree # 10 and tree # 13.
 - Six (6) locally occurring canopy trees capable of reaching 13m at maturity must be provided between buildings A & B.
49. To maximise landscape amenity and viable deep soil planting for tree planting within the northern side setback of Building B, the private courtyards and fences are to have a minimum setback of 4.0m from the northern side boundary. The four metres zone is to be planted with screening shrubs able to attain a minimum height of 4.0m and include a minimum of four native endemic tree species consistent with the Sydney Bluegum High Forest plant community (which are to be planted with a minimum setback of 2.0m from the site boundary) in addition to smaller feature exotic (deciduous) tree species. All screen and tree planting is to be within the communal ownership of the body corporate rather than under individual ownership of each courtyard. An access pathway for maintenance to the area and private courtyards is to be incorporated and not to exceed 1.0m in width.
50. Canopy and/or 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 | Tree Works |
|--|------------------------------|
| <i>Liquidambar styraciflua</i> (Sweet Gum)
Adjacent to north-west site corner | Pruning on eastern side only |
51. 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

Item 2

52. 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
#8 <i>Acer palmatum</i> (Japanese Maple) Adjacent to northern site boundary in neighbouring property	3.0m
#9 <i>Elaeocarpus reticulatus</i> (Blueberry Ash) Adjacent to northern site boundary in neighbouring property	3.0m
#10 <i>Elaeocarpus reticulatus</i> (Blueberry Ash) Adjacent to northern site boundary in neighbouring property	3.0m
#14 <i>Ilex aquifolium</i> (Holly) Adjacent to north-west site corner in neighbouring property	4.0m
#18 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to north-west site corner	6.0m
#21 <i>Prunus spp</i> (Prunus) Adjacent to eastern site boundary	2.0m
#29 <i>Brachychiton acerifolius</i> (Illawarra Flame Tree) Adjacent to western site boundary in neighbouring property	7.0m
#30 <i>Lophostemon confertus</i> (Q'ld Brushbox) Adjacent to western site boundary in neighbouring property	6.0m
Jacaranda minosifolia (Jacaranda) Culworth Avenue nature strip	4.0m
Liquidambar styraciflua (Sweet Gum) Adjacent to Culworth Avenue nature strip in adjoining property	10.0m

53. No mechanical excavation for the approved residential flat building 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
<i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to north-west site corner	10.0m

54. 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
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Item 2

#8 *Acer palmatum* (Japanese Maple) 3.0m

Adjacent to northern site boundary in neighbouring property

#9 *Elaeocarpus reticulatus* (Blueberry Ash) 3.0m

Adjacent to northern site boundary in neighbouring property

#10 *Elaeocarpus reticulatus* (Blueberry Ash) 3.0m

Adjacent to northern site boundary in neighbouring property

#14 *Ilex aquifolium* (Holly) 4.0m

Adjacent to north-west site corner in neighbouring property

#18 *Liquidambar styraciflua* (Sweet Gum) 6.0m

Adjacent to northwest site corner

#21 *Prunus spp* (Prunus) 2.0m

Adjacent to eastern site boundary

#29 *Brachychiton acerifolius* (Illawarra Flame Tree) 7.0m

Adjacent to western site boundary in neighbouring property

#30 *Lophostemon confertus* (Q'ld Brushbox) 6.0m

Adjacent to western site boundary in neighbouring property

Jacaranda minosifolia (Jacaranda) 4.0m

Culworth Avenue nature strip

Liquidambar styraciflua (Sweet Gum) 10.0m

Adjacent to Culworth Avenue nature strip in adjoining property

55. 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.

56. The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along Culworth Avenue as evenly spaced formal avenue planting. The tree/s used shall be a minimum 25 litres container size specimen/s trees:

Tree Species	Quantity
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<i>Jacaranda mimosifolia</i> (Jacaranda)	8
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57. 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/From	To
#33 <i>Livistona chinensis</i> (Chinese Fan Palm)	As shown
As shown	
#34 <i>Livistona chinensis</i> (Chinese Fan Palm)	As shown

Item 2

As shown

#45 *Livistona australis* (Cabbage Tree Palm)

As shown

As shown

#46 *Livistona chinensis* (Chinese Fan Palm) As shown

As shown

As shown

58. 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.
59. The canopy replenishment 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.
60. 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 Council's Water Management Development Control Plan 47, available in hard copy at Council and on the Council website.
61. 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 all relevant BASIX commitments and the requirements specified in chapter 6 of Ku-ring-gai Council Water Management Development Control Plan 47 (DCP47).
62. 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.
63. 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.
64. 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

Item 2

commence once the Applicant receives a written indication from Council stating that the works involving public infrastructure have been completed satisfactorily.

65. 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.
66. 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.**
67. 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.
68. Driveways and vehicular access ramps must be designed not to scrape the underside of cars and trucks. 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".
69. The Applicant must obtain a **Section 73 Compliance Certificates** under the *Sydney Water Act 1994*, which relates to the proposed RFB and the Torrens 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.

Item 2

70. 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, 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.
71. 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 detailed geotechnical report to be submitted prior to commencement of works 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.

72. Development must be in accordance with BASIX Certificate No. 45392M.
73. 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.
74. 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.

Item 2

75. 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.
76. For safety purposes, depth markers shall be provided at both ends of the pool.
77. 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.
78. 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.
79. For the purpose of residential amenity, the exposed external surfaces below concourse level shall be treated and finished off to a smooth surface.
80. 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.
81. 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.
82. To ensure compliance with the Swimming Pools Act, 1992, the existing boundary fence, forming part of the safety fencing to enclose the pool shall be upgraded or otherwise so altered or reconstructed so as to comply with the provisions of Australian Standard 1926-1986 "Fences and Gates for Private Swimming Pools". The overall height of the dividing fence is not to exceed 1.8 metres in height above the natural ground level. Attention is directed to any obligations or responsibilities under the Dividing Fences Act in respect of adjoining property owners which may arise in respect of this matter and enquiries in this regard may be made at the nearest Local Court.
83. Due to the possibility of relics being contained within the site, during excavation works the applicant must ensure that should any 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 the discovery or location of these relics. Archaeological assessment and approval, or

Item 2

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 A CONSTRUCTION CERTIFICATE

84. A report is to be submitted to and approved by Council's Heritage Advisor 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 recognised consultants or other suitably qualified persons 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 to be mounted, labelled and cross-referenced to the relevant site plan and floor plans and showing position of camera. Photographs of the following:

- 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 showing all structures and site elements
- Sketch of the floor plan showing the location of the camera for each photograph.
- Black & White archival quality photographs, contact prints 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.

85. 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.

86. 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,

Item 2

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).

87. 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.
88. 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.
89. A CASH BOND/BANK GUARANTEE of \$2 000.00 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 Occupation Certificate, provided the trees are undamaged.

Item 2

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
<i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to north-western site corner	\$2,000.00

90. 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.
91. 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.

92. 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:

Item 2

- a. That vehicular access can be obtained using grades of 20% (1 in 5) maximum (to allow for the laden waste collection vehicle to negotiate the exit),
- b. That the 2.44 metres headroom required by the waste collection vehicle is achieved; and
- c. 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.

The longitudinal sections must incorporate the driveway crossing levels as issued by Council upon prior application.

93. 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:

- 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 2.44 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.

The vehicle access and accommodation layout is to be constructed in accordance with the certified plans.

94. 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.

95. 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

Item 2

plumbing - all designed to carry for the 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. 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 drainage line adjacent to the southern site boundary is to be relocated so that it has a minimum setback of 3.0m from the southern site boundary to be located immediately adjacent to the northern wall of the proposed above ground on site detention basin.
- The drainage line adjacent to the western site boundary is to be relocated so that it is located outside of the canopy drip line of existing trees to be retained.

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 Stephen Fryer, submitted for Development Application approval, which are to be revised/advanced as necessary for construction issue purposes.

96. If it is proposed to carry out the following infrastructure works in the Public Road:

- a. construct a 375mm diameter pipeline from the site to the nearest existing Council drainage structure,

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.

Item 2

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.

97. 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.
98. 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.
99. An acoustic assessment is to be submitted to Council prior to the issue of a construction certificate demonstrating how the proposed development will comply with RailCorp interim Guidelines for applicants in the consideration of rail noise and vibration from the adjacent rail corridor.
100. The applicant is to obtain a report on the electrolysis risk to the development from stray currents, and the measures that will be taken to control the risk. The applicant is advised to consult an electrolysis expert. The expert's report must be submitted to RailCorp for review

Item 2

by the Senior Electrolysis Engineer or nominated Electrolysis Section personnel prior to the release of the construction certificate.

101. A boundary fence (1.8m high) must be provided from the front building line of Building B along the northern, western and southern boundary to the front building line of Building A to minimise overlooking into adjoining properties at the applicant's expense. The architectural plans must be amended accordingly prior to the release of the construction certificate.
102. Five (5) of the proposed apartments are to be designed with accessible features for disabled persons, and are 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).
103. 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 47 ADDITIONAL DWELLINGS IS CURRENTLY \$902,800.10. 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 75sqm)	1.27 persons
Medium dwelling (75 - under 110sqm)	1.78 persons
Large dwelling (110 – under 150sqm)	2.56 persons
Very Large dwelling (150sqm or more)	3.48 persons

Item 2

New Lot	3.48 persons
SEPP (Seniors Living) Dwelling	1.3 persons

104. To ensure structural stability, engineer's details (in duplicate) of retaining walls, prepared by a qualified practising structural engineer, shall be submitted to the Principal Certifying Authority for consideration prior to the issue of the Construction Certificate.

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

105. 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.
 - 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.
 - 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.
106. 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.
107. A construction management plan must be submitted for the approval of Council's Development Engineer before the commencement of demolition, excavation or construction works. The Plan must:
- Describe the anticipated impact of the construction works on:**
 - local traffic routes
 - pedestrian circulation adjacent to the building site;
 - and on-street parking in the local area; and;
 - Describe the means proposed to:**
 - manage construction works to minimise such impacts;
 - provide for the standing of vehicles during construction;
 - provide for the movement of trucks to and from the site, and deliveries to the site; and
 - Show the locations of:**
 - any site sheds and any anticipated use of cranes and concrete pumps;
 - any areas of Council property on which it is proposed to install a construction zone, or to erect structures such as hoardings, scaffolding or shoring, or to excavate.

Item 2

The Plan must make provision for all materials, plants, etc. to be stored within the development site at all times during construction. Structures or works on Council property such as hoardings, scaffolding shoring or excavation need separate consent from Council. Standing of cranes and concrete pumps on Council property will need consent on each occasion.

Note: A minimum of eight weeks will be required for assessment. Work must not commence until the Construction Management Plan is approved. Failure to comply with this condition may result in fines and proceedings to stop work.

108. 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
#8 <i>Acer palmatum</i> (Japanese Maple) Adjacent to northern site boundary in neighbouring property	3.0m
#9 <i>Elaeocarpus reticulatus</i> (Blueberry Ash) Adjacent to northern site boundary in neighbouring property	3.0m
#10 <i>Elaeocarpus reticulatus</i> (Blueberry Ash) Adjacent to northern site boundary in neighbouring property	3.0m
#14 <i>Ilex aquifolium</i> (Holly) Adjacent to north-west site corner in neighbouring property	4.0m
#18 <i>Liquidambar styraciflua</i> (Sweet Gum) Adjacent to north-west site corner	5.0m
#21 <i>Prunus spp</i> (Prunus) Adjacent to eastern site boundary	2.0m
#29 <i>Brachychiton acerifolius</i> (Illawarra Flame Tree) Adjacent to western site boundary in neighbouring property	6.0m
#30 <i>Lophostemon confertus</i> (Q'ld Brushbox) Adjacent to western site boundary in neighbouring property	5.0m

109. The tree protection fence shall be constructed of galvanised pipe at 2.4 metres spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
110. 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:

Item 2

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.
111. 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.
112. To preserve the following tree/s, no work shall commence until temporary measures to avoid soil compaction (eg rumble boards) beneath the canopy of the following tree/s is/are installed if repeated pedestrian access or any vehicular/machinery is required:
- | Tree/Location | Radius in Metres |
|--|------------------|
| #8 <i>Acer palmatum</i> (Japanese Maple)
Adjacent to northern site boundary in neighbouring property | 3.0m |
| #9 <i>Elaeocarpus reticulatus</i> (Blueberry Ash)
Adjacent to northern site boundary in neighbouring property | 3.0m |
| #10 <i>Elaeocarpus reticulatus</i> (Blueberry Ash)
Adjacent to northern site boundary in neighbouring property | 3.0m |
| #14 <i>Ilex aquifolium</i> (Holly)
Adjacent to north-west site corner in neighbouring property | 4.0m |
| #18 <i>Liquidambar styraciflua</i> (Sweet Gum)
Adjacent to north-west site corner | 6.0m |
| #21 <i>Prunus spp</i> (Prunus)
Adjacent to eastern site boundary | 2.0m |
| #29 <i>Brachychiton acerifolius</i> (Illawarra Flame Tree)
Adjacent to western site boundary in neighbouring property | 7.0m |
| #30 <i>Lophostemon confertus</i> (Q'ld Brushbox)
Adjacent to western site boundary in neighbouring property | 6.0m |
113. 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.
114. Prior to the commencement of bulk excavation works on site, the applicant is to submit the results of the detailed geotechnical investigation comprising cored boreholes. The report is to address such matters as:

Item 2

- Appropriate excavation methods and techniques,
- Vibration management and monitoring,
- Support and retention of excavated faces,
- Hydrogeological considerations,

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 prior to the commencement of bulk excavation works.

115. 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 21 and 21a Powell Street 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.
116. 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 and footpaths;
- Truck turning circles to demonstrate that trucks can manoeuvre in and out of the site without the need to amend parking on the opposite side of Culworth Avenue.
- Plans to demonstrate how concrete pumping will be achieved without the need for the pump or delivery vehicles to encroach into Culworth Avenue and how pedestrians will be managed during these times.
- Turning areas within the site for construction and spoil removal vehicles, allowing a forward egress for all construction vehicles on the site;
- 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;

Item 2

- The provision of an on-site parking area for employees, tradesperson and construction vehicles as far as possible, and a timeframe for the basement to be made available for construction employee parking.

Traffic Control Plan(s) for the site

Separate Traffic Control Plans are to be submitted for each stage of the works. They need to be prepared and signed by the suitably qualified (as defined by the RTA Guide Traffic Control at Work Sites) person who will be present on the site during construction.

Traffic controllers (as many as required) are to be available to assist pedestrians across the frontage of the site and stop traffic in Culworth Avenue as necessary during truck movements in and out of 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.

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

Construction vehicle access is available to and from the Pacific Highway for traffic travelling in all directions via Lorne Avenue, so this will be the heavy vehicle route. A copy of this route is to be made available to all contractors, and shall be clearly depicted at a location within the site.

Light traffic roads and those subject to a load or height limit must be avoided at all times.

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.

Item 2

117. 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:

- Culworth 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.

118. 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.
- 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.

Item 2

119. 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 OCCUPATION

120. 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 Regulations.
121. The entry doors and basement car parking areas for Buildings A & B must be fitted a card operated security system (not key operated) to achieve safety by design principles. The entries to the basement car parking areas for Buildings A & B must also be fitted with an intercom system linked to the units to facilitate the use of the visitor car parking spaces. Security lights must also be provided in communal garden areas to further enhance site security without causing a loss of amenity for adjoining properties as a result of unreasonable light spillage
122. 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.
123. 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.
124. 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 crossings 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.

Item 2

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.

125. 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.

126. 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:

- That the as-constructed car park 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".
- 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 car park, 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 car park.

127. 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 2

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:

- 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, have been achieved in full.
- That retained water is connected and available for uses listed on the BASIX certificate.
- 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 pits 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.

128. Prior to issue of an Occupation Certificate, the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.
129. 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.

Item 2

- As built locations of all access pits and grates in the detention on 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.

130. 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.
131. 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:
 - According the relevant Australian Standards and guidelines, and
 - According to the recommendations of the Geotechnical report and subsequent geotechnical inspections undertaken for the development, and
 - In a manner that ensures that the structural amenity of adjoining structures and property is fully maintained.
132. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring as specified in the geotechnical report submitted prior to commencement of works, 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.
133. 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 should include:
 - Culworth Avenue road reserve;
 - 21 and 21A Powell Street.

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.

Item 2

134. 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 on-site stormwater detention facilities on the property. 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. 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 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.

135. 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.

136. Prior to issue of the Occupation Certificate, an easement for waste collection is to be created under Section 88B or 88E 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.

BUILDING CONDITIONS

137. 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

Item 2

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.

138. 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.

139. 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.

140. 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.
- Wet area waterproofing details complying with the Building Code of Australia.
 - Mechanical ventilation details complying with Australian Standard 1684 Mechanical Ventilation & Air-conditioning.
 - Glazing details complying with AS 1288-1989 Glass in Buildings and Installation Code.
 - Storm-water disposal details complying with Council's Storm-water Management Manual and/or other conditions of this consent.
 - 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.

Item 2

- 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.
- h. A Registered Surveyor's Report confirming approved levels of the ground floor.
- i. A Registered Surveyor's Report confirming approved levels of the first floor.
- j. A Registered Surveyor's Reports confirming approved floor levels for all floors.
- k. A registered surveyors report confirming the deep soil landscaped area is no less than 50% of the site area (as defined in the Ku-ring-gai Planning Scheme Ordinance).

Robyn Pearson
**Executive Assessment
Officer**

R Kinninmont
**A/g Manager
Development Assessment
Services**

M Miocic
**Director
Development &
Regulation**

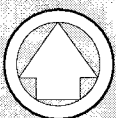
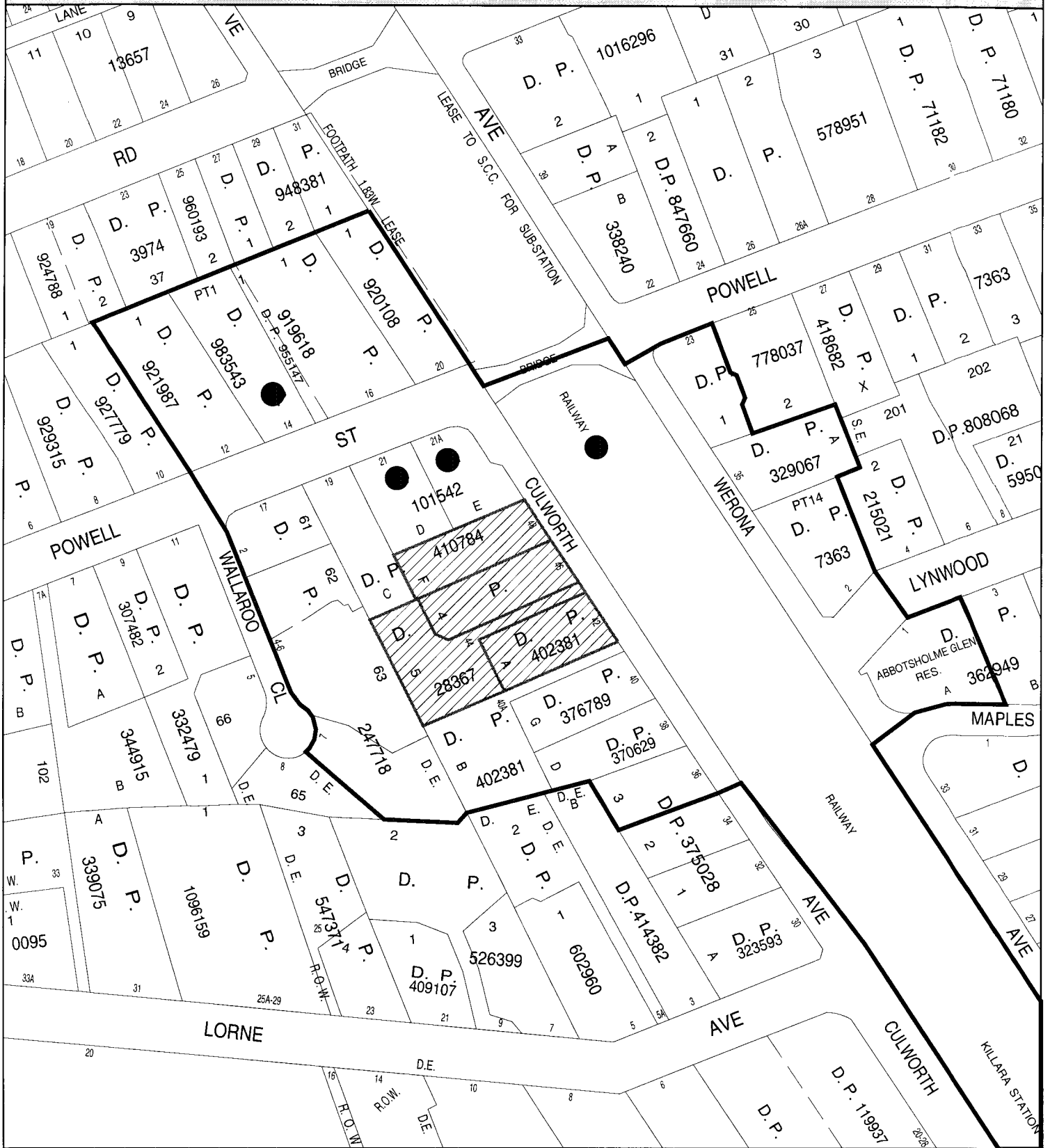
Attachments:

- Location sketch - 629039**
- Zoning extract - 629040**
- Shadow diagrams - 629042**
- Appendix A Vegetation on boundary of No 40 Culworth - 629045**
- Appendix B Right of Way to No 40A Culworth - 629047**
- Appendix C Window on southern side of No 21A Powell - 629049**
- Appendix D Vegetation on southern boundary of No 21A Powell - 629050**
- Appendix E Window on southern elevation of No 20 Powell - 629052**
- Confidential Attachments (Plans of elevations, floor & landscape plans)**

LOCATION SKETCH

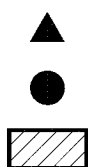
42-48 CULWORTH AVE KILLARA

DEVELOPMENT APPLICATION No 109/06



Scale : 1:2000

29-05-2006



AGREEMENT

OBJECTION

SUBJECT LAND

PETITION

SUBMISSION

CIRCULATED AREA



Zoning Extract

DA 109/06 , 42-48 CULWORTH AVE KILLARA



ZONES

2. RESIDENTIAL

- (a) RESIDENTIAL A
- (b) RESIDENTIAL B
- (c) RESIDENTIAL C
- (c1) RESIDENTIAL C1
- (c2) RESIDENTIAL C2
- (d) RESIDENTIAL D
- (d3) RESIDENTIAL D3
- (e) RESIDENTIAL E
- (f) RESIDENTIAL F
- (g) RESIDENTIAL G
- (h) RESIDENTIAL H

3. BUSINESS

- (a) RETAIL SERVICES
- FLOOR SPACE RATIOS
- A1 2.0:1
- A2 1.0:1
- A3 0.75:1
- (b) COMMERCIAL SERVICES
- FLOOR SPACE RATIOS
- B1 1.0:1
- B2 1.0:1

5. SPECIAL USES

- (a) SPECIAL USES A (Schools etc)
- (a1) SPECIAL USES A1
- (b) SPECIAL USES (Railway)

6. OPEN SPACE

- (a) RECREATION EXISTING
- (b) RECREATION PRIVATE
- (c) RECREATION PROPOSED

RESERVATIONS

OPEN SPACE

- (a) OPEN SPACE (Public Parks & Recreation)
- (b) COUNTY OPEN SPACE

SPECIAL USES

- SPECIAL USES (Parking etc)

ROADS

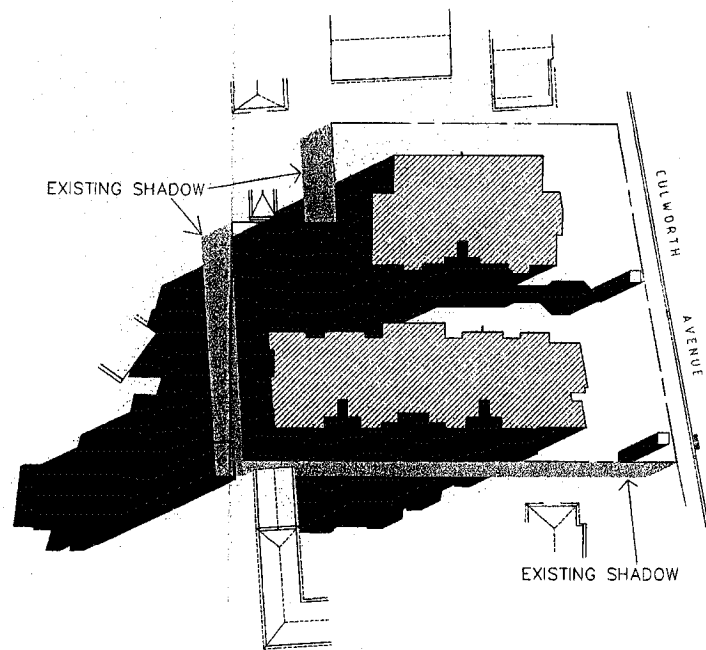
- (a) COUNTY ROAD PROPOSED
- (b) COUNTY ROAD WIDENING
- (c) LOCAL ROAD PROPOSED
- (d) LOCAL ROAD WIDENING

GENERAL

- EXISTING COUNTY ROAD
- OTHER PLANNING INSTRUMENTS

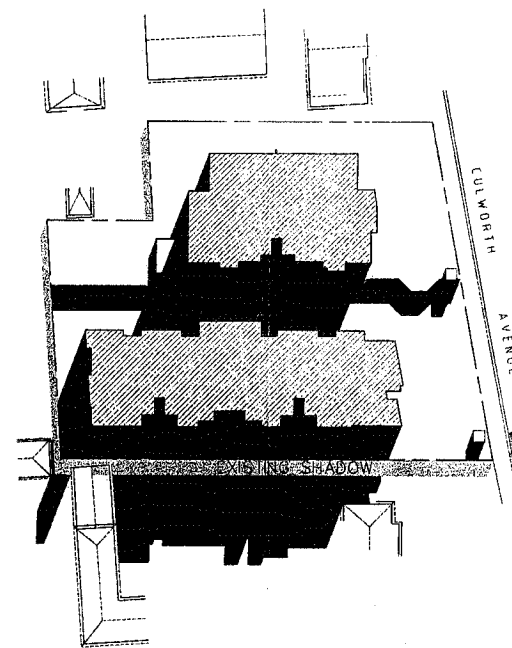


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Date:29-05-2006



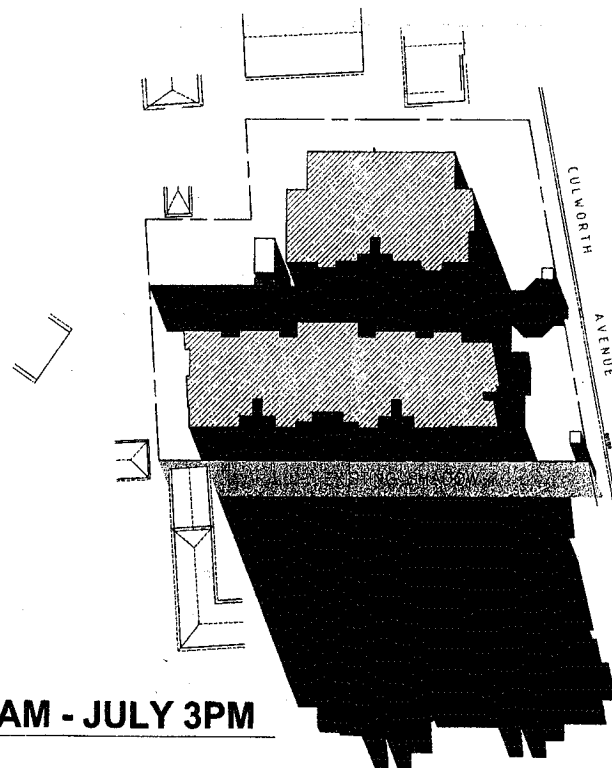
SHADOW DIAGRAM - JULY 9AM

SCALE: 1:500



SHADOW DIAGRAM - JULY 12 NOON

SCALE: 1:500



SHADOW DIAGRAM - JULY 3PM

SCALE: 1:500

DUGALD C. MACKENZIE & ASSOCIATES
Chartered Architects & Strategic Planners
Carven Pty. Ltd. ACN 084 320 543
Chartered Architect No. 8033

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PROPOSED DEVELOPMENT
RESIDENTIAL BUILDING
42-48 CULWORTH STREET
KILLARA

Drawing title:
SHADOW DIAGRAMS

North point:



Scale: 1:500 Date: 15.02.2006

Drawn: CM Checked: DM

Drawing no. SD01

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28 APR 2006











2006/05/26

DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	281 MONA VALE ROAD, ST IVES - DEMOLITION OF EXISTING STRUCTURES AND CONSTRUCTION OF A SENIORS LIVING SEPP DEVELOPMENT FOR 5 UNITS AND BASEMENT PARKING FOR 11 VEHICLES
WARD:	St Ives
DEVELOPMENT APPLICATION N^o:	1444/05
SUBJECT LAND:	281 Mona Vale Road, St Ives
APPLICANT:	Mr Francis Azar
OWNER:	Mr Gary Haddad
DESIGNER:	Idraft Plans Pty Ltd
PRESENT USE:	Residential
ZONING:	Residential 2C
HERITAGE:	No
PERMISSIBLE UNDER:	Ku-ring-gai Planning Scheme Ordinance
COUNCIL'S POLICIES APPLICABLE:	KPSO, DCP 31 – Access, DCP 40 – Waste Management, DCP 47 – Water Management
COMPLIANCE WITH CODES/POLICIES:	Yes
GOVERNMENT POLICIES APPLICABLE:	SEPP 55, SEPP (Seniors Living)
COMPLIANCE WITH GOVERNMENT POLICIES:	Yes
DATE LODGED:	22 December 2005
40 DAY PERIOD EXPIRED:	31 January 2006
PROPOSAL:	Demolition of existing structures and construction of a Seniors Living SEPP development for 5 units and basement parking for 11 vehicles
RECOMMENDATION:	Approval

Item 3

DEVELOPMENT APPLICATION N^o 1444/05
PREMISES: 281 MONA VALE ROAD, ST IVES
PROPOSAL: DEMOLITION OF EXISTING STRUCTURES
AND CONSTRUCTION OF A SENIORS
LIVING SEPP DEVELOPMENT FOR 5
UNITS AND BASEMENT PARKING FOR 11
VEHICLES
APPLICANT: MR FRANCIS AZAR
OWNER: MR GARY HADDAD
DESIGNER IDRAFT PLANS PTY LTD

PURPOSE FOR REPORT

To determine development application No. 1444/05 which seeks consent for the demolition of existing structures and the construction of a Seniors Living development comprising a total of 5 units and basement parking for 11 vehicles.

EXECUTIVE SUMMARY

Issues: Overshadowing and privacy.

Submissions: Five (5) submissions received on the original plans and one (1) submission received on the amended plans.

Land & Environment Court Appeal: No.

Recommendation: Approval.

HISTORY

Property history

The site is used for residential purposes.

Development application history

22 December 2005 Application lodged.

24 February 2006 Letter to applicant from Council officers seeking amendments to reduce the impact on significant trees, and address overshadowing and access (lift).

6 April 2006 Amended plans submitted to include four (4) two storey units and one (1) single story unit in place of 5 two storey units, passenger lift from basement to ground level and providing additional information in response to Council's letter of 24 February 2006.

Item 3

THE SITE & SURROUNDING DEVELOPMENT

Zoning:	Residential 2C
Visual Character Study Category:	1945-1968
Lot Number:	3
DP Number:	19088
Area:	1610m ²
Side of Street:	Eastern
Cross Fall:	4% to Mona Vale Road
Stormwater Drainage:	To Mona Vale Road
Heritage Affected:	No
Required Setback:	12 metres
Integrated Development:	No
Bush Fire Prone Land:	No
Endangered Species:	No
Urban Bushland:	No
Contaminated Land:	No

The site

The site is identified as Lot 3 DP 19088, being No. 281 Mona Vale Road, St Ives. It is generally regular in shape, but has a skewed frontage to Mona Vale Road. The site is located on the eastern side of Mona Vale Road, has a 26.25 metres frontage and a total site area of 1610 m². Falling from the eastern boundary of the site to the west and the street, the site has an average gradient of 4%.

The site currently contains a dwelling house and in-ground swimming pool. Access to the site is via an existing driveway from Mona Vale Road. A number of native and exotic species are present on the site. The majority of trees are to be retained.

Surrounding development

All land directly adjoining the site is within the Residential 2(c) zoning (Refer to the **Zoning Extract**). Existing development along Mona Vale Road in the immediate vicinity of the site is characterised by a mix of detached dwelling houses and medium density dwellings in the form of seniors living housing.

Development adjoining the site to the north and east (at 283 Mona Vale Road) includes a recently completed SEPP 5 (now Seniors Living) one/part two storey seniors housing development comprising 6 x 3 bedroom villas/units (DA 221/2000).

Adjoining the site to the south, are two separate allotments; one allotment fronting Mona Vale Road with a battleaxe allotment to the rear. The allotment that adjoins the street, identified as No. 279 Mona Vale Road, contains a single storey detached dwelling house. The battleaxe allotment, identified as Nos. 277-277A Mona Vale Road, contains a SEPP Seniors Living development comprising 5 x 3 bedroom houses and 10 x 3 bedroom units (DA 1543/1999).

Item 3

Council has also recently approved a SEPP 5 (now Seniors Living) development at No 275 Mona Vale Road, comprising 8 x 3 bedroom units (DA 49/2003).

The existing seniors living developments in the immediate vicinity are generally one to two storeys in height, with parking at or below natural ground level and residential units above. Traditional architectural design elements are utilised including face brick walls and render, aluminium framed windows, concrete roof tiles and hipped and gabled roof forms. Access is provided to each development via Mona Vale Road.

THE PROPOSAL

The proposal is for the demolition of the existing buildings on the site and the construction of a Seniors Living SEPP development comprising 5 self contained dwellings, with basement parking for 11 vehicles and communal open space.

The proposal will comprise a single building that runs along the length of the site, allowing all dwellings to be dual aspect. Pedestrian access is provided along the southern side of the development, resulting in all private open space being orientated to the north. The pathway provides suitable access from the street to all units and to the communal open space area of the site. Suitable gradients ensure that the pedestrian access is available via a continuous path of travel, allowing suitable access for all users with differing degrees of mobility.

Amended plans, which are detailed below, were required to be lodged to address a number of outstanding issues which Council staff identified such as access, the retention of trees and to address privacy and overshadowing issues.

Vehicular access to the site will be via a dual carriage driveway off Mona Vale Road, leading into the basement parking area. The proposed basement will accommodate 10 resident parking spaces and a single visitor space. Ancillary storage areas for each unit and utility services are also proposed within the basement. Pedestrian access from the basement to the ground floor will be via a lift.

The first four dwellings eastwards from Mona Vale Road are two storeys in height, each with a front entry foyer, kitchen, dining and living area, laundry, bathroom and two bedrooms at ground level. The upper level will accommodate two additional bedrooms (one with ensuite) and a bathroom. The rear dwelling is single storey with kitchen, living and dining areas, three bedrooms and two bathrooms.

A number of mature trees will be retained, particularly along the northern, western and eastern boundaries. Retention of trees along the side and rear boundaries will allow existing privacy screening to be maintained. Planter boxes have been provided along the common pedestrian pathway to screen the bedrooms, bathrooms and kitchens which adjoin the pathway and communal open space area. The planter boxes not only provide privacy screening but also increase opportunity for landscaping and assist in articulating and softening the building.

All dwellings have generous dimensions, are cross ventilated, and all living areas and private open spaces are orientated to the north. Private open space is primarily provided in the form of a ground

Item 3

floor courtyard, with direct access from the living area of each dwelling. Each courtyard has a minimum area of 50 m².

A consolidated communal open space area is provided at the rear of the site, with access via the common pathway. The open space will have an area of over 250m².

The proposal is a contemporary architectural design, utilising a mixture of colours, materials and textures, including colourbond rolled roofs, a mix of masonry and rendered finishes, timber cladding, awning overhangs, timber louver screens, aluminium framed windows, screen doors and balustrades. The building is highly articulated, both horizontally and vertically, though the use of varying materials and relief in the elevations.

CONSULTATION - COMMUNITY

In accordance with Council's Notification DCP, owners of surrounding properties were given notice of the application. The following comments have been received:

The following comments have been received:

In response, five (5) submissions were received, all from the SEPP Seniors Living development 'Gleneagles' located at 177-177A Mona Vale Road which adjoins to the south of the subject site. Submissions were received from:

1. Mr R and Mrs S Gleason, Unit 6 'Gleneagles' 277-277A Mona Vale Road
2. Mrs Adrienne Friedgut, Unit 9 'Gleneagles' 277-277A Mona Vale Road
3. Mr J and Mrs M Ryan, Unit 11 'Gleneagles' 277-277A Mona Vale Road
4. Mr N Stutchbury, Unit 13 'Gleneagles' 277-277A Mona Vale Road
5. Ryan Planning c/- Owners Corporation of 'Gleneagles' 277-277A Mona Vale Road

The submissions raised the following issues:

The potential for the proposed drainage system to further exacerbate our existing water problem, caused by a high water table and interference to the natural subterranean water course.

Council's Engineering Assessment Team Leader, Kathy Hawken, raised no concerns in relation to the stormwater drainage system proposed to Mona Vale Road. However, in response to the submissions, the Team Leader has required a geotechnical report to be submitted prior to the commencement of bulk excavations which will address the following issues:

- *Excavation conditions and support;*
- *Vibrations, vibration monitoring and control;*
- *Dilapidation survey of adjoining structures; and*
- *Likely groundwater inflow to permanent subsoil drainage system given that some objectors have raised a "high water table" as a potential issue.*

Refer to **Condition No. 45.**

Item 3

The architecture of the building is out of character with surrounding properties.

The surrounding properties are characterised by existing one and two storey dwelling houses and a number of new two storey SEPP (Seniors Living) developments which have a range of architectural styles.

The subject SEPP (Seniors Living) development is not as 'traditional' as the existing development in terms of materials and design, but the use of curved roofs and alternative building materials, and a more contemporary design, is not a reason to refuse the development application.

Overshadowing of the 'Gleneagles' development.

A number of the SEPP Seniors Living units within the 'Gleneagles' development will be overshadowed as it is situated to the south of the subject development. Amended plans were required reducing the rear unit from two to single storey to improve this situation. All the 'Gleneagles' units will now receive more than 3 hours of sunlight during midwinter.

Loss of trees

The proposed driveway and access ramp is located very close to a number of significant trees on the subject property which may have an impact on their long term health.

Council's Landscape Development Officer, Steve Fenn, requested the applicant to redesign the driveway and the pedestrian ramps to avoid these structures being in close proximity to the significant trees.

Amended plans

Amended plans were lodged on 11 April 2006, which addressed a number of Council's issues raised by Council officers (overshadowing, access and significant trees). The amendments include:

Basement level

- removal of chairlifts and reconfiguration of stairwells
- addition of passenger lift from basement to ground floor
- relocation of driveway and pedestrian access
- addition of service area adjacent to driveway entry

Ground/first floor

- relocation of driveway and reconfiguration of entry paths to reduce impact on the significant trees on the site
- addition of passenger lift from basement to ground floor to improve accessibility
- reduction to mass awnings over Pedestrian Entries 2-5 to increase solar access to the southern development
- deletion of upper levels of Unit 5, reduction of bedrooms from 4 to 3, reduction in floor area from 158m² to 116m² to increase solar access to the southern development

Item 3

- addition of privacy screens to windows of Bedrooms 2 and 4 in Unit 5 to improve privacy

In accordance with Council's Notification DCP, owners of surrounding properties were given notice of the amended plans. In response, one (1) submission was received from:

Ryan Planning c/- Owners Corporation of 'Gleneagles' 277-277A Mona Vale Road

Clause 25 Access to facilities/support services

The site is located further than 400 metres from shops, banks, retail and commercial services, community services and recreation facilities and a general medical practitioner and therefore requires a reasonable public transport system to be available to residents. While it is acknowledged the site is located within 400 metres of a public transport system for south-bound journeys only, the site is not located within 400 metres of a public transport service for north-bound journeys.

The above issues have been reviewed by the applicant's access consultant, ILC Access (31 May 2006) who stated:

- *the St Ives Village Shops contain all services that residents may reasonably require pursuant to the provisions of Clause 25 of SEPP (Seniors Living) 2004*
- *Forest Bus service provide frequent bus service to and from St Ives Village shops*
- *Route 196 provides services from a bus stop located within 157 metres of the site, on the same side of Mona Vale Road, to the shop*
- *Route 194 would collect residents from the shops and return them to the same bus stop, by a slightly more circuitous route*
- *the path of travel has gradients not steeper than approximately 1:10, compliant with the requirements of the SEPP*

The subject site is within close proximity to a number of similar SEPP (Seniors Living) developments which have been approved during the last number of years by both Council and the Land and Environment Court. The Court has raised the fact that, while public transport is important, the socio-economic demographics of the area should be taken into account and that the majority of occupants will have access to a private vehicle and/or will also be able to afford a taxi service in the event that they cannot use the available public transport service.

It is unlikely that the Land and Environment Court would refuse this application on the grounds of inadequate access due to the number of similar Council and Court approved SEPP Seniors Living developments surrounding the subject site. Public Transport to and from St Ives Village is available from the same bus stop which is on the same side of Mona Vale Road as the subject development.

Stormwater

Since the completion of 'Gleneagles' the garage areas of the complex have been severely inundated with water. The residents have been advised that properties on the eastern side of Mona Vale Road are subject to an extremely high water table. In view of the problems

Item 3

experienced at ‘Gleneagles’, it is requested that Council seek an independent assessment of the entire drainage catchment of the locality to which this application applies to ascertain the cumulative effect should the DA be approved.

The stormwater concept plans, prepared by HKMA Consulting Civil and Structural Engineers have satisfactorily addressed all of Council’s requirements. However, due to the submissions, Council’s Engineers have required a geotechnical report prior to the commencement of bulk excavations (Refer to **Condition No. 45**), which is to address the following, and specifically the issue of groundwater inflow:

- *Excavation conditions and support;*
- *Vibrations, vibration monitoring and control;*
- *Dilapidation survey of adjoining structures; and*
- *Likely groundwater inflow to permanent subsoil drainage system given that some objectors have raised a “high water table” as a potential issue.*

Insufficient visitors parking and inadequate vehicle manoeuvring space

Council’s Engineering Assessment Team Leader, Kathy Hawken, has commented as follows:

“With regard to visitor parking, the SEPP requires one visitor space for a development of six or less dwellings not situated on a clearway, but is silent on the number of visitor spaces required for a site which is situated on a clearway. The RTA Guide to Traffic Generating Developments recommends one visitor space per five units for medium density residential flat buildings (2 to 20 dwellings). Council’s DCP 43 requires 1 visitor space per 4 units, but only 1.5 spaces per unit. It is not considered that more than one space need be required here. The space should be signposted with a maximum 4 hour parking restriction, as given in the SEPP. It will then also be suitable for car washing. The dimensions of the visitor space comply easily with AS2890.1: 2004 for parallel parking.”

In view of the above, additional visitor’s parking is not required. **Condition No. 121** has been included limiting the visitors parking to a maximum of four (4) hours to be enforced by the Corporate Body.

In terms of Clause 81(g) of SEPP (Seniors Living) a consent authority may not refuse consent to a development application for the purpose of a development if the application is compliant with this requirement.

Loss of privacy from first floor bedroom windows

The upper level windows within the southern elevation are restricted to a single bedroom windows for Units 1-4. It is widely recognised that bedrooms are considered to be ‘lower’ usage rooms and are generally only used during the evening, night and early morning. Therefore, the potential for overlooking from bedrooms is substantially reduced due to the limited usage of that space throughout daylight hours.

Item 3

In addition, the upper level windows are set back a minimum of 11 metres from the adjoining 'Gleneagles' building to the south. Furthermore, the upper level windows of Units 1 and 2 are substantially offset from the 'Gleneagles' development.

In accordance with AMCORD guidelines prepared by the Commonwealth Department of Housing and Regional Development, a separation of 9 metres between habitable rooms and balconies is considered suitable for providing separation in a low and medium density residential environment. As the proposed separation between units exceeds 9 metres, the development is considered to be suitable with respect to privacy and overlooking. It is also noted that no upper level bedroom windows directly overlook windows in the adjoining property and that each of the units within 'Gleneagles' adjacent to these upper level bedroom windows is single storey only.

The proposal therefore achieves the requirement of Clause 32 of SEPP (Seniors Living) by limiting the upper levels of Units 1 - 4 to bedroom and bathrooms windows only, restricting the size and number of windows at the upper level, by off setting the upper level windows from adjoining dwellings where possible and by providing generous side setbacks which exceed those provided by the 'Gleneagles' development.

Overshadowing

Shadow diagrams submitted with the amended plans demonstrate that the revised proposal ensures that each of the adjacent dwellings at 'Gleneagles' will still enjoy at least 3 hours of solar access to living rooms and to a substantial portion of private open space between 9.00am and 3.00pm in midwinter. The proposal is compliant with Council's setback requirements to the southern boundary and is fully compliant with the height standards within the SEPP.

The effect of the development on the large gum tree (Tree No. 17) in the garden of Unit 11 (Mr and Mrs Ryan) of the adjoining property at No 277-277A Mona Vale Road. For safety reasons, Council should require the applicant to remove the tree at the applicant's expense.

Council's Landscape Development Officer, Steve Fenn, has reviewed this issue and advises:

"Excavation for the basement carpark 2 metres from the site's southern boundary should have minimal impact upon Tree 17 – Eucalyptus saligna (Sydney Blue Gum), of 25 metres height and healthy condition that is located 4 metres inside No 277 Mona Vale Road as approximately half the area has previously been excavated, to 750 mm depth, to the boundary and paved as a driveway and turning bay."

Based on the above, this 25 metres high healthy tree (Tree No. 17) is not required to be removed by the applicant.

There should be sufficient deep soil zone for mature planting particularly along the southern boundary, to ensure the privacy of the adjoining residents.

Council's Landscape Development Officer, Steve Fenn, has reviewed this issue and advises:

Item 3

“The applicant’s Statement of Environmental Effects states that an area of 179 square metres (11.1%) has been provided as deep soil zone at the rear of the site. My calculation of 207.5 square metres (12.9%) for the rear deep soil zone is satisfactory.”

The application dedicates approximately 40% of the site as deep soil planting, with sufficient deep soil area to the southern boundary to provide for screen vegetation.

In addition, **Condition No. 82** requires the landscape plan to include the following;

“screen planting of the northern and southern boundaries shall incorporate species of suitable planting for the site conditions and location on site, of 300 mm pot size capable of attaining a height of 5 metres.”

Five (5) large 4 bedroom units contributes to the scale and bulk of the development.

The access audit prepared by ILC Access (6/12/2005) states that the proposed unit layouts provide suitable internal access as required by Division 4 of the SEPP.

Lack of internal access

The proposal is fully compliant with the built form controls prescribed by the SEPP in relation to minimum lot area, minimum site frontage, floor space, building height, landscaped area, deep soil landscaping, private open space and car parking. The units meet the needs of seniors or people with a disability and is of satisfactory design.

Reflectivity of roof material

Colorbond roof material has been used in the area on similar projects. The proposed roof material will comply with all requirements of the Building Code of Australia and relevant Australian standards with respect to reflectivity. (Refer **Condition No. 86**).

CONSULTATION - WITHIN COUNCIL

Landscaping

Council’s Landscape Officer, Stephen Fenn, commented on the proposal as follows:

Impact upon trees/vegetation

The following 11 trees, identified in the Arboricultural Assessment Report prepared by Urban Tree Management and dated 16 November 2005, will require removal or will be adversely impacted upon to some degree by the proposed development:

- *Excavation for construction of the proposed driveway, pedestrian ramp, drainage pit (P11) and drainage lines within the already restricted root zone of Tree 12 – Eucalyptus saligna (Sydney Blue Gum) will result in its early decline severing support, secondary and feeder roots and reducing the area available for moisture infiltration.*

Item 3

This tree is 20 metres high and in healthy condition. This tree is the larger of 2 prominent Sydney Blue Gum trees that address the Mona Vale Road streetscape.

- *The amended driveway plan substantially reduces the degree of excavation into the root zone of Tree 12 although its southwestern side at the Mona Vale Road boundary should be adjusted to align with the existing brick wall to absolutely minimise its adverse impact upon the tree's root zone. Council's Development Control Engineer, Kathy Hawken, is in agreement with this adjustment as it will not affect future driver sight lines or egress from the property.*
- *The amended layout for the pedestrian ramp has been improved although could be further improved to minimise its adverse impact upon the root zone of Tree 13 - Eucalyptus saligna (Sydney Blue Gum) - the smaller Sydney Blue Gum that address the Mona Vale Road streetscape. To avoid any deep excavation within the root zone of Tree 13, the northern section of the pedestrian ramp should be moved slightly and extended to permit it to access perpendicular to the Mona Vale Road footpath and as far as possible from the tree's trunk. The garbage bay position would require adjusting and its entry should be located at a landing or ease of access by wheel chairs.*
- *Excavation to 700 mm depth for a retaining wall and pedestrian ramp adjacent to the trunk of Tree 14 – Quercus robur (English Oak) will result in the tree's demise despite it being shown on the landscape plan as being retained. The tree is in fair condition due to its foliage having been extensively infested by Leaf Miner insects which is prevalent to the species when growing in adverse conditions.*
- *Excavation for the amended driveway ramp will have negligible impact upon Trees 9 – Quercus robur (English Oak) and 8 - Pinus patula (Mexican Pine), due to its distance from them. The trees are 8 and 15 metres high and in poor condition due to Leaf Miner insects and competition from Tree 11, respectively.*
- *Tree 11 – Eucalyptus microcorys (Tallowood), of 14 metres height and healthy condition, is located close to the site's northwestern corner. Impact on this tree should be minor as the proposed retaining wall approximates the line of the existing retaining wall.*
- *Construction of proposed Units 1 and 2 and cut and fill to create level courtyards to their northern sides will result in extensive branch and root pruning to the southern side of Tree 8 – Quercus robur (English Oak). The tree, 12 metres in height and in fair condition, is located adjacent to the site's northern boundary and towards its north-western corner. This tree will succumb to the extensive adverse impact to be imposed upon it despite it, being shown on the landscape plan to be retained.*
- *Excavation adjacent to the trunks of Trees 1, 2 and 7 for the path and retaining wall along the southern side of the 5 units will result in the removal of the 3 trees. This action is supported due to the poor condition of Tree 2 – Camellia sasanqua (Chinese Camellia) of 5 metres height and Tree 7 – Quercus robur (English Oak) of 8 metres height. The trunk of Tree 1 – Lophostemon confertus (Brushbox), of 14 metres height*

Item 3

and healthy condition, will also conflict with the 1.2 metres high retaining wall and basement garage wall below.

- *Excavation for the basement carpark 2 metres from the site's southern boundary should have minimal adverse impact upon Tree 17 – Eucalyptus saligna (Sydney Blue Gum), of 25 metres height and healthy condition that is located 4 metres inside No 277 Mona Vale Road as approximately half the area has previously been excavated, to 750 mm depth, to the boundary and paved as a driveway and turning bay.*

Landscape plan

The landscape plan complies with Council's biodiversity and canopy replenishment tree requirements in that 25% of trees and shrubs are selected from the Sydney Turpentine/Ironbark Forest species list and the 7 existing replenishment canopy trees should survive the development works pending suggested amendments being implemented. Soft landscape area for the establishment of new trees and general planting within the front setback has been substantially improved due to the reduction of driveway area. While the site is relatively level and suitable for senior living the pedestrian ramp, garbage bay and retaining walls will still influence a considerable portion of the front setback.

Only 3 of the 5 existing canopy trees located across the rear of the site have been identified according to the Arboricultural Report. Tree 5 – Eucalyptus pilularis (Blackbutt) has been incorrectly identified as 1 Liquidambar styraciflua (Liquidambar), Tree 4 - Liquidambar styraciflua (Liquidambar) has been incorrectly identified as a Eucalyptus sideroxylon 'Rosea' (Red Flowering Ironbark) and Tree 3 has been correctly identified as a Liquidambar styraciflua (Liquidambar). Two unnumbered trees: 1 near dead Eucalyptus saligna (Sydney Blue Gum), located between Trees 3 and 4, should be replaced and 1 Eucalyptus saligna (Sydney Blue Gum), of 25 metres height and healthy condition, is located between Trees 4 and 5.

Proposed northern and southern side boundary screen plantings of Indigofera australis (Australian Indigo) and Kunzia ambigua (Tick Bush) are unsatisfactory as the former species is too small and the latter species will not provide adequate density of screening between the subject and adjoining properties. Both proposed species are to be replaced by dense screening species that will attain 5 metres height. Other boundary screening species: Bursaria spinosa (Christmas Bush), Pittosporum revolutum (Yellow Pittosporum) and Rapanea variabilis (Muttonwood) are satisfactory.

*In the absence of information as to the treatment of the change in level between the patio for Unit 01 and the adjoining ground in relation to Tree 9, the patio is to be suspended on piers to preserve the tree's roots beneath (Refer to **Condition No. 57**).*

Deep soil zone

The applicant's Statement of Environmental Effects states that an area of 179 square metres (11.1%) has been provided as deep soil zone at the rear of the site. My calculation is 207.5 square metres (12.9%) for the rear deep soil zone and this is satisfactory.

Item 3

Stormwater drainage

Proposed drainage pit (P11) should be relocated further from Tree 12 and the drainage line across the Mona Vale Road frontage should be located immediately behind the retaining wall to minimise the extent of excavation within the root zone of Trees 12 and 13. Further pits: P2, P3 and P4 appear excessive for their locations and could be replaced by smaller pits along the southern side boundary planting strip, and pit: P2 could be located immediately behind the retaining wall as are pits: P3, P4, P5 and P6. The detention tank could be mostly located beneath the garbage bay and pedestrian ramp to minimise built upon area (refer to Condition No. 79).

General comments

The path along the southern side of the site shows the same RL 161.490 as the ground floor level of the 5 units on the architectural plans although the stormwater drainage plan shows RL 161.640 that provides 150 mm freeboard between the path and the units.

This application is supported subject to conditions.

Appropriate conditions addressing the above landscaping issues have been recommended (Conditions Nos 54-68, 81-85, 93-99 and 117-120).

Engineering

Council's Engineering Assessment Team Leader, Kathy Hawken, commented as follows:

The application is for the demolition of the existing residence and the construction of five Seniors Living units. Strata subdivision is not indicated on the application form, so subdivision conditions have not been included.

The following documentation was used for the assessment:

- *DMPS Statement of Environmental Effects, dated December 2005;*
- *Haddad Khalil Mance Arraj Stormwater concept plan 3778-C1 Issue A;*
- *Idraft plans architectural drawings 2718101-16 to 16-16, all Issue A;*
- *Gary Edwards and Associates survey plan 1534, dated 29-3-2001;*
- *BASIX Certificate 43920M;*
- *ILC Access Audit dated 6 December 2005;*
- *Traffic Solutions Traffic and Parking Statement, dated 25-Jan-06.*

Water management

The BASIX commitments are for water-saving fixtures and a 12 500 litre water tank for irrigation and car washing.

Item 3

The applicant has submitted a concept stormwater plan which shows 25m³ of rainwater storage, and 46m³ of on site detention. This is consistent with the BASIX commitments and with the detention component of DCP 47, and is therefore acceptable. Gravity drainage is available from the detention storage to the street gutter. A pump-out system will be necessary for driveway ramp runoff.

Council's Landscape Development Officer has requested that surface drainage pits be relocated away from significant trees. This can be shown on the Construction Certificate plans, and has been included in the recommended conditions.

Access

Easy access is available to the bus stop on the eastern side of Mona Vale Road. I noted two or three sections of footpath where the slab had lift up and it is recommended that these be repaired. This stop is for the south-bound journey and the closest stop for the north-bound journey is at Link Road, due to the bus routes, for both Shorelink and Forest services. The access report claims that this stop is within 400 metres of the site. The fact that both 277 and 283 Mona Vale Road are SEPP 5 developments would appear to indicate that access has been considered to comply in the past, so there would be no reason for it to become an issue now.

Waste collection

The number of units is less than six, so internal waste collection is not required under DCP 40. The site has sufficient frontage to accommodate the appropriate containers.

Traffic generation and parking

The traffic generation of this development will be minimal. There is adequate sight distance available to drivers entering Mona Vale Road and to pedestrians using the footpath. The report assesses the parking spaces against AS2890.1, when the requirements of the SEPP are more onerous.

Each unit has four bedrooms and therefore requires two car spaces. The garages do comply with the dimensions given in the SEPP.

With regard to visitor parking, the SEPP requires one visitor space for a development of six or less dwellings not situated on a clearway but is silent on the number of visitor spaces required for a site which is situated on a clearway. The RTA Guide to Traffic Generating Developments recommends one visitor space per five units for medium density residential flat buildings (2 to 20 dwellings). Council's DCP 43 requires 1 visitor space per 4 units but only 1.5 spaces per unit. It is not considered that more than one space need be required here. The space should be signposted with a maximum 4 hour parking restriction, as given in the SEPP. It will then also be suitable for car washing. The dimensions of the visitor space comply easily with AS2890.1: 2004 for parallel parking.

Item 3

Construction management

A detailed Construction and Traffic management plan will need to be submitted prior to commencement of works. Truck access will be to and from Mona Vale Road, although routes for south-bound approach and north-bound departure will have to be advised in the plan. A traffic controller will be required to assist pedestrians across the site entry when vehicles are entering or leaving.

Geotechnical/ hydrogeological

Excavation to basement level (RL 158.50) will require some 4.5 metres of excavation up to about 1.5 metres of the site boundaries. A geotechnical report was not submitted with the application, however, one will be required prior to commencement of bulk excavation. The matters to be addressed are:

- *Excavation conditions and support;*
- *Vibrations, vibration monitoring and control;*
- *Dilapidation survey of adjoining structures;*
- *Likely groundwater inflow to permanent subsoil drainage system given that some objectors have raised a "high water table" as a potential issue.*

The application is supported, subject to conditions.

Appropriate conditions addressing the above engineering issues have been recommended (Conditions Nos 35-49, 75-78, 86-92 and 100-116).

PROVISIONS OF RELEVANT LEGISLATION**State Environmental Planning Policy (Seniors Living) 2004**

Clause 18 of SEPP (Seniors Living) 2004 states that development may be carried out only with development consent unless another planning instrument allows the development without consent. The proposed development requires the consent of Council pursuant to the provisions of Ku-ring-gai Planning Scheme Ordinance.

Clause 25 of SEPP (Seniors Living) 2004 requires that Council must not consent to a development application made pursuant to this SEPP unless satisfied by written evidence that certain site related requirements have been met. Compliance or otherwise with these requirements is indicated in the table below.

Clause	Requirement	Compliance
Clause 25(1)(2)	<ul style="list-style-type: none"> • Access to shops, banks, other retail and commercial services, community services and the practice of a general medical practitioner 	YES

Item 3

Clause	Requirement	Compliance
	<ul style="list-style-type: none"> Located at a distance of not more than 400m from the site of the proposed development or is within 400m of public transport which will take the residents to the above mentioned services 	<p>YES</p> <p>(Route 196 Forest bus service provides regular services to St Ives Shopping Centre from a bus stop located within 157 metres of the site on the same side of Mona Vale Road. Route 194 forest bus service collects residents and returns them to the same bus stop (i.e. same side of Mona Vale Road).</p>

Clause 27(1) of SEPP (Seniors Living) 2004 states that Council must not consent to a development application unless satisfied by written evidence that the housing will be connected to a reticulated water system and will have adequate facilities for the removal or disposal of sewerage.

The site is currently connected to the sewer system and reticulated water is also provided.

Clause 28 of SEPP (Seniors Living) 2004 requires a site analysis be carried out and submitted to the consent authority. A site analysis has been submitted. This analysis, together with other documentation of the development application, provides all the necessary information for assessment purposes under Clause 28 of SEPP (Seniors Living).

Clause 30 of SEPP (Seniors Living) requires that consent must not be granted unless Council is satisfied that adequate regard has been given to the following design principles.

Neighbourhood amenity and streetscape

The proposed development has been designed to be in keeping with the established front and side setbacks of the locality. The setbacks to Mona Vale Road are consistent with the existing setbacks along the street frontage. The development provides a high level of articulation to the street frontage. The proposal is a contemporary architectural design, utilising a mixture of colours, materials and textures; including 'colorbond' rolled roofs, a mix of masonry and rendered finishes, timber cladding, awning overhangs, timber louvre screens, aluminium framed windows, screen doors and balustrades. The proposal has been designed to retain the majority of significant trees on the perimeter of the site, whilst additional plantings will also be provided.

The proposal has been designed in response to the site topography by stepping the development at the rear and integrating formal landscaping.

The height of the proposal will be consistent with that of the surrounding dwellings and similar developments along Mona Vale Road. The development is sensitive to existing site constraints, retaining significant vegetation and proposes a building with a mass and scale consistent with the built form evident in the immediate vicinity of the site.

Item 3

A dual carriage driveway will be provided to Mona Vale Road, leading into the basement parking area. All parking (10 resident spaces and 1 visitor space) is located within the basement and will not be visible from the street or adjoining properties.

The development will present to Mona Vale Road as a single dwelling with a double driveway. Pedestrian access and will not be unlike the other SEPP (Seniors Living) developments in the immediate vicinity (eg. 275, 277-277A and 279 Mona Vale Road) of the subject site.

Visual and acoustic privacy

The development has been designed having regard to the visual and acoustic privacy of both the future residents of the development and adjoining property owners. In this regard, the development will provide future and adjoining residents with reasonable levels of visual and acoustic privacy.

Privacy has been achieved through the location and orientation of the units on the site, as well as through additional screening vegetation. Additional screening has also been proposed to ensure adequate privacy to the adjoining properties.

All high use living areas and private open space are orientated towards the north of the site. All upper level windows are restricted to bedrooms. All upper level windows are appropriately screened or restricted in size to minimise potential overlooking.

The upper level balconies include 1800mm high privacy walls, planter boxes and louvres to prevent direct overlooking to adjoining properties.

The proposal has its vehicular entry/exit point located at the western side of the site. The driveway will not adversely impact upon the acoustic privacy of the neighbours or the residents.

Solar access and design for climate

The shadow diagrams demonstrate that all units will achieve a minimum of 3 hours solar access to at least 50% of their terraces during the winter solstice. The design of the development allows its future residents to receive adequate daylight to the principal living and private open space areas at Mid winter.

The proposal will ensure at least 3 hours of daylight to the main living areas and private open space of the adjoining southern property at 177 to 177A Mona Vale Road, as no significant overshadowing from the development will be cast upon the adjoining dwelling from 9:00 am to 1:00pm on 21 June.

All units are dual aspect, allowing for cross ventilation, and all units will receive adequate daylight to main living and private open space areas, during winter.

Stormwater

Stormwater management will comply with DCP 47. All stormwater will be conveyed to Mona Vale Road. Due to objections raised by the residents concerning a high water table in the area, a hydrological report will be required on the water table levels. (Refer to **Condition 45**).

Item 3

Crime prevention

The units have been designed so that approaching persons can be viewed from within each unit. Unit 1 affords observation of the street and all units afford observation of the common pedestrian access way.

Accessibility

An access assessment report has been submitted. The report confirms that the development complies with the access objectives of SEPP (Seniors Living) 2004 and the technical requirements of AS1428 and AS4299 for adaptable housing.

Waste management

A waste management facility has been proposed and will include adequate provision for the recycling of materials.

Part 4 Development Standards

Clause 38(i) provides that a consent authority must not consent to a development application unless the development complies with the standards specified in this clause.

Clause	Standard	Proposal	Compliance
38(2) - Site size	Minimum 1,000m ²	1,610m ²	YES
38(3) - Site Frontage	20 metres	26.25 metres to Mona Vale Road	YES
38(4)(a) - Height in zones where residential flat buildings are not permitted	8 metres or less	7.2 metres max height and 2 storeys	YES
38(4)(b) - Height in zones where residential flat buildings are not permitted	Not more than 2 storeys in height adjacent to a boundary of the site.	7.2 metres max height and 2 storeys	YES
38(4)(c) - Height in zones where residential flat building are not permitted	A building located in the rear 25% area of the site must not exceed 1 storey in height.	1 storey.	YES

Clause 51 provides that a consent authority must not consent to a development application unless the development complies with the following standards:

Item 3

Clause	Standard	Proposal	Compliance
52(1) - Wheelchair access	100% of dwellings to have wheelchair access to public road or internal road if site gradient is less than 1:10.	100%	YES
52(4) - Common areas	Wheelchair access to be available to all common areas and facilities.	Wheelchair access available to all common areas.	YES
54 - Security	Pathway lighting must be designed and located to avoid glare.	Low level security lighting is proposed. (Condition 101)	YES
55 - Letterboxes	Must be lockable and situated on a hard standing area and be wheelchair accessible.	Lockable, accessible letterboxes are proposed adjacent to both pedestrian entry points to the site.	YES
56 - Private car accommodation	Car parking spaces must have: <ul style="list-style-type: none"> • be not less than 6m x 3.2m or being capable of adapted. • internal clearance of 2.5 metres • height at entry 2.3 metres • any garage must have a power-operated roller door, or a power point to allow the above at a later date 	Car parking spaces have: <ul style="list-style-type: none"> • area 6m x 3.2m • internal clearance of 2.7 metres • height at entry 2.7 metres • basement level and each garage has its own power-operated entry roller door 	YES YES YES YES
57 - Accessible entry	Every entry must: <ul style="list-style-type: none"> • not have a slope that exceeds 1:40 • comply with clauses 4.3.1 & 4.3.2 of AS 4299 • have entry hardware which complies with AS 1428 	Proposal will be constructed so as to comply with requirements. (Condition 101)	YES
58 - Exterior doors	All external doors to a dwelling must be keyed alike.	All external doors to each unit will be keyed alike. (Condition 101)	YES

Item 3

Clause	Standard	Proposal	Compliance
59 - Interior general	<ul style="list-style-type: none"> internal doors must have a clearance of 800mm internal corridors must have a width of at least 1000mm the width at internal door approaches must be at least 1200mm 	(Condition 101)	<p>YES</p> <p>YES</p> <p>YES</p>
60 - Living room & dining room	<p>A living room in a self contained dwelling must have:</p> <ul style="list-style-type: none"> a circulation space of at least 2250mm in diameter and as set out in clause 4.7 of AS 4299 a telephone adjacent to a general power outlet a potential illumination level of 300 lux 	Meets the circulation requirements and details regarding the telephone outlets will be satisfied prior to occupation of the development. (Condition 112)	YES
61 - Kitchen	<p>A kitchen in a self contained dwelling must have:</p> <ul style="list-style-type: none"> a width of at least 2.7 metres and a clear space between benches of 1450mm a width at door approaches of 1200mm benches that include one work surface that is at least 800mm in length and the height of which can be adjusted from 750mm to 850mm a tap set that is located within 300mm of the front of the sink and comprises of a lever type mixing tap 	<p>Internal benches and fittings comply.</p> <p>A condition of consent is recommended to ensure specifications meet the minimum standards required (Condition 101)</p>	YES

Item 3

Clause	Standard	Proposal	Compliance
	<ul style="list-style-type: none"> a thermostatic mixing valve for the hot water outlet a cook top with either front or side controls which have a raised cross bar. The stove is also to be provided with an isolating switch a work surface adjacent to the cook top which is at the same height and at least 800mm in length an oven that is located adjacent to a work surface the height of which can be adjusted “D” pull cupboard handles general power outlets at least one is a double outlet within 300mm of the front of a work surface and one which is for a refrigerator which can be readily accessed once installed 		
62 - Main bedroom	<p>At least one bedroom within the dwelling must have:</p> <ul style="list-style-type: none"> an area sufficient to accommodate a wardrobe and a queen sized bed, with an area at least 1200mm wide at the foot of the bed 2 double general power outlets adjacent to the head of the bed 1 general power outlet on the wall opposite 	Main bedrooms will comply. (Condition 101)	YES

Item 3

Clause	Standard	Proposal	Compliance
	<p>the bed</p> <ul style="list-style-type: none"> a telephone outlet and power outlet next to the bed on the side closest to the door a potential illumination of 300 lux 		
63 - Bathroom	<p>A bathroom must have:</p> <ul style="list-style-type: none"> an area that complies with AS 1428 a slip resistant floor a shower recess at least 1160mm x 1100mm or that complies with AS 1428 or clause 4.4.4 and figures 4.6 and 4.7 of AS4299. the recess shall incorporate the following: <ul style="list-style-type: none"> no hob waterproofing floor waste the ability to provide a grab rail suitable taps can accommodate a hand held shower on a slider rail can accommodate a folding seat thermostatic mixing valves to all hot water outlets a washbasin which complies with AS4299 an illuminated wall cabinet a mirror a double power outlet beside the mirror 	<p>The bathrooms in each unit will comply. (Condition 101)</p>	YES

Item 3

Clause	Standard	Proposal	Compliance
64 - Toilet	<p>A dwelling must have a toilet:</p> <ul style="list-style-type: none"> that is a visitable toilet in accordance with AS4299 that is installed in accordance with AS1428 has a slip resistant floor surface the WC pan is located from fixed walls in accordance with AS1428 that can accommodate a grab rail in accordance with AS4299 & AS1428 	The toilets have been included within the bathroom of each dwelling.	YES
65 - Access to kitchen, main bedroom, bathroom & toilet	A kitchen, main bedroom, bathroom and toilet must be provided on the ground floor of a multi level dwelling.	All units are of single level design.	YES
66 - Lifts in multi storey buildings	Lift access provided to all dwellings above the ground level of the building.	Lift access is provided to all levels.	YES
67 - Laundry	<p>A self contained dwelling must have a laundry which:</p> <ul style="list-style-type: none"> has provision for a washing machine has the provision for the installation of a clothes dryer has a clear space in front of appliances of 1300mm has a slip resistant floor surface has an accessible path of travel to any external clothes line. 	All units will have a clearance of 1300mm.	YES
68 - Storage	A self-contained dwelling must be	A complying linen cupboard is provided in	YES

Item 3

Clause	Standard	Proposal	Compliance
	provided with a linen cupboard: <ul style="list-style-type: none"> that is at least 600mm wide has adjustable shelving 	each of the units.	
69 - Doors	Door hardware provided for opening doors must be: <ul style="list-style-type: none"> able to be operated with one hand located between 900mm and 1100mm above floor level 	Each unit meets the requirement of this Clause. A condition of consent is recommended to ensure specifications meet the minimum standards. (Condition 101)	YES
70 - Surface finishes	Balconies and external paved areas must have slip-resistant surfaces.	A condition is recommended to ensure specifications meet the minimum standards required. (Condition 101)	YES
71 - Ancillary items	<ul style="list-style-type: none"> switches must be located between 900mm and 1100mm above floor level general purpose outlets must be located at least 600mm above floor level 	Compliance is required by condition. (Condition 101)	YES
72 - Garbage	An outside garbage storage area must be provided in an accessible location.	A garbage storage facility is provided within the basement garage level.	NO

Part 7 - Development standards that cannot be used as grounds to refuse consent - Division 4 - self-contained dwellings

The following is an assessment of the proposal against the requirements of Clause 81 of the SEPP. The consent authority must not refuse consent to an application on the grounds of the following if compliance is achieved.

Clause (a) – Building height	Height to be less than 8.0 metres	7.2 metres to uppermost ceiling	YES
Clause (b) - Density & scale	0.5:1	0.47:1	YES

Item 3

Clause (c) - Landscaped area	Minimum 30% of the site to be landscape area = 483m ²	Total landscape area = 644m ² (40%)	YES
Clause (d) - Deep soil zones	15% site area (241.5m ²) with 2/3 or 66.7% (161m ²) being located at the rear of the site with a minimum dimension of 3m.	<ul style="list-style-type: none"> Total deep soil landscaped area 563.5m² or 35% Deep soil landscaped area located at the rear of the site and having a minimum dimension of 5.4m = 207m² 	YES YES
Clause (e) - Solar access	Min 70% of dwellings receive minimum 3 hours direct sunlight between 9am-3pm in mid-winter.	All units receive a minimum of 3 hours.	YES
Clause (f) - Private open space for in-fill housing	<ul style="list-style-type: none"> Single level or ground floor dwellings = 15m² (incl. Area 3m x 3m accessible from living area) All other dwellings = balcony min. 10m² (not less than 2m in length and accessible from a living area) 	The private open space to each unit exceeds these requirements.	YES YES
Clause (g) - Visitor parking	1 visitor spaces required for development comprising 6 or less dwellings, with maximum parking period of 4 hours	Proposal is for 5 units having 10 parking spaces and 1 visitor parking spaces. The proposal complies with the requirements of the SEPP. Condition 121 requires the visitor space to have a maximum parking period of 4 hours	YES
Clause (h) - Parking	0.5 spaces per bedroom 19 x 0.5 = 9.5	10 resident spaces provided.	YES

State Environmental Planning Policy No 55 - Remediation of Land

SEPP 55 aims to set an approach for the remediation of contaminated land. Clause 7 of the SEPP requires Council to consider whether the land is likely to be contaminated prior to issuing development consent.

The site is currently occupied by a dwelling house and has had a long history of residential use. There is no evidence that indicates the site is contaminated nor would this be likely given the long

Item 3

established residential use. As such, it is unlikely to contain any contamination and further investigation is not warranted in this instance.

Ku-ring-gai Planning Scheme Ordinance

The site is zoned Residential 2(c) under the provisions of Ku-ring-gai Planning Scheme Ordinance (KPSO) and the erection of a residential flat building is prohibited within the zone. However, the provisions of SEPP (Seniors Living) override the controls of KPSO and the proposed Seniors Living development is permissible pursuant to clause 4 of SEPP (Seniors Living).

SEPP (Seniors Living) 2004 also provides controls in relation to streetscape character, amenity, solar access and tree replacement. These matters are also referred to in SEPP (Seniors Living) and the assessment of the proposed development against such controls has concluded that the proposal meets these aims and objectives.

POLICY PROVISIONS

Development Control Plan 40 - Waste Management

The site makes adequate provision for a waste and recycling storage area and provides for adequate access thereto by Council's garbage collection vehicles.

Development Control Plan 43 - Carparking

The provisions of SEPP 2004 in relation to parking override any other parking requirements where there is a conflict. The parking provision complies with the relevant controls.

Development Control Plan No 47 - Water Management

Matters for assessment under DCP 47 have been taken into account in the assessment of this application and the proposal is satisfactory in this regard.

Housing for Older People and People with a Disability Development Control Code (DCC)

Council's Code for Housing for Older People with a Disability is a companion document to the former State Environmental Planning Policy No.5. This code essentially provides additional information intended to better reflect the needs of elderly and disabled residents within Ku-ring-gai.

SEPP 5 has been repealed. The new relevant state policy is SEPP (Seniors Living). Consequently, while this Code relates to SEPP5, it is considered that the principles within the Code may be considered as part of Council's assessment of this development application, as follows:

Driveway: The proposal addresses the street appropriately and minimises the visual impact of the driveway by providing a landscaped area on either side, retaining the significant trees and landscape strip adjacent to it and by curving it slightly.

Item 3

Facades: The facades to the development are of appropriate bulk and are well articulated.

Entry: The entry to the building is obvious, with a path from the street leading directly to it.

Setback: The front setback has been addressed previously and is considered acceptable.

Garages: Car parking is underground and, as such, is not visually dominant.

Fences and walls: New fencing, proposed along the front boundary of the site, is to be well articulated and integrated with landscaping. The proposed fence design is acceptable.

Front gardens: The front garden is suitable, particularly given the retention of existing trees where possible, together with additional landscaping, giving an appropriate softening of the appearance of the development from the street.

Private open space: Private open space is level and satisfies the minimum dimension criteria and a suitable level of privacy will be afforded.

Common open space: The common open space is appropriately sited to the west of the development adjacent to the rear of the site.

Landscaping: The landscaping has been assessed as satisfactory by Council's Landscape Development Officer.

Car parking: The parking provision is acceptable and appropriate access is provided to the parking area. The driveway design, as conditioned, will minimise width but still allow for satisfactory access. One visitor car space has been provided.

Energy efficiency: The proposal is appropriately designed with regard to energy efficiency.

Privacy: Privacy is dealt with under the assessment of the development's compliance with SEPP (Seniors Living) above and is considered acceptable, subject to a number of conditions.

Access: The proposal provides a suitable level of accessibility.

Lighting: Appropriate lighting is recommended in the Accessibility Report, the recommendations of which are required as required by **Condition 101**.

Utilities: Suitable area is provided for the storage of waste and recycled material.

Adaptable housing: The development complies with the requirements of SEPP (Seniors Living) in terms of adaptable housing.

Internal design: The proposal provides a covered entry area. The dwellings are well designed in terms of privacy, convenience of movement and flexibility.

Support services: Appropriate support services are available in the area.

Item 3

Section 94 Plan

The development attracts a section 94 contribution of \$23,464.00 which is required to be paid by **Condition No. 75.**

This has been calculated as follows:

Proposed 5 units at \$11,157.66 for SEPP (Seniors Living) Housing:	\$55,788.30
Less 1 unit due to the existing dwelling house	<u>\$32,324.00</u>
Total section 94 Contribution	<u>\$23,464.00</u>

This is calculated utilising Ku-ring-gai Section 94 Contributions Plan 2004-2009 Residential Development adopted 30 June 2004.

a. Streetscape

«Streetscape - insert as written»

b. Building Form

«Form - insert as written»

c. Open Space and Landscaping

«Ancillary Facilities»

d. Privacy and Security

«Privacy + Security»

e. Water Management

«Water Management»

f. Ancillary Facilities

«Ancillary Facilities»

g. Streetscape

«Streetscape - insert as written»

h. Building Form

«Form - insert as written»

i. Open Space and Landscaping

Item 3

«Ancillary Facilities»

j. Privacy and Security

«Privacy + Security»

k. Water Management

«Water Management»

l. Ancillary Facilities

«Ancillary Facilities»

LIKELY IMPACTS

The proposal is unlikely to have any significant impact on the environment, landscape or scenic quality of the locality, threatened species, populations or ecological communities or their habitats or any other protected fauna or protected native plants.

The site is not within a wilderness area nor an area of critical habit.

The site can be adequately landscaped and conditions relating to soil erosion are recommended. There is unlikely to be any significant impact on the existing or likely future amenity of the neighbourhood.

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.

PUBLIC INTEREST

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

ANY OTHER RELEVANT MATTERS CONSIDERATIONS NOT ALREADY ADDRESSED

There are no other matters for consideration.

CONCLUSION

The proposed development will perform adequately, especially given the following:

Item 3

- The proposed development will be satisfactory with respect to the provisions of State Environmental Planning Policy (Seniors Living) It will provide housing for people over the age of 55 and people with a disability in an appropriate building form and location. The housing would be generally consistent with the aims and objectives of the SEPP.
- The proposed development will generally satisfy the provisions within Council's applicable environmental planning instruments and development control plans.
- The design of the development will be sympathetic to the streetscape. It will be compatible with the bulk and scale of surrounding dwellings and SEPP (Senior Living) developments and provide a suitable landscaped character.
- The proposal would not adversely impact on the amenity of surrounding residential properties in terms of loss of privacy, overshadowing or loss of views and will support the amenity needs of future residents.

Accordingly, the proposed development is satisfactory with respect to the relevant heads of consideration prescribed under Section 79C of the Environmental Planning and Assessment Act 1979 (as amended). The application is therefore, recommended for approval, subject to conditions.

RECOMMENDATION

Pursuant to Section 80(3) of the Environmental Planning and Assessment Act 1979

That the Council, as the consent authority, grant development consent to DA 1444/05 for the demolition of existing structures and the construction of a SEPP (Seniors Living) development comprising 5 units on land at 281 Mona Vale Road, St Ives, for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

1. The development to be in accordance with Development Application No 1338/05 and Development Application plans:

Dwg No:	Rev.	Description	Author	Dated	Received
01-16	B	Site Plan	Idraft	28-10-05	11-4-06
05-16	B	Basement Floor Plan	Idraft	28-10-05	11-4-06
06-16	B	Ground Floor Plan	Idraft	28-10-05	11-4-06
07-16	B	First Floor Plan	Idraft	28-10-05	11-4-06
08-16	B	North Elevation	Idraft	28-10-05	11-4-06
09-16	B	South Elevation	Idraft	28-10-05	11-4-06
10-16	B	East Elevation	Idraft	28-10-05	11-4-06
11-16	B	West Elevation	Idraft	28-10-05	11-4-06
12-16	B	Sections	Idraft	20-03-06	11-4-06
13-16	B	Pedestrian Ramp Detail	Idraft	28-10-05	11-4-06
14-16	B	Garbage Bay & Arbour-Elevations	Idraft	28-10-05	11-4-06
15-16	B	Garbage Bay & Fence Elevations	Idraft	20-3-06	11-4-06
01-02	B	Lift Details	Idraft	20-3-06	11-4-06
02-02	A	Adaptable Units	Idraft	28-10-05	11-4-06
01-01	B	Sediment Control Plan	Idraft	28-10-05	11-4-06

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

Item 3

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 completed development shall comply in all respects with the BASIX certificate commitments given on certificate No. 43920M, or as amended and re-issued for the same development. Each unit shall be finished in accordance with the BASIX certificate to the satisfaction of the Principle Certifying Authority.
5. The approved building works 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.
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.

Item 3

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. 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. 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.

16. 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.

17. 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.
18. The fence and footings shall be constructed entirely within the boundaries of the property.

Item 3

19. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
20. Access to demolition sites shall be protected as directed by the Principal Certifying Authority by the use of suitable fences or hoardings.
21. 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.
22. 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.
23. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.
24. 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.
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.

Item 3

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 photo record of the buildings to be demolished and vegetation on site is to be submitted to Council for archival purposes.
33. 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.
34. All demolition materials of value for re-use either on-site or elsewhere, shall be separated and made available for re-cycling.
35. 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.

Item 3

36. 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 all relevant BASIX commitments.
37. 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.
38. 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.
39. 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.
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**

Item 3

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. 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 engineering 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 report submitted prior to commencement of works 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.
46. The geotechnical and hydrogeological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the report prepared prior to commencement of works. 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,

Item 3

- Written report(s) including certification(s) of the geotechnical inspection, testing and monitoring programs.
47. Under no circumstances shall building materials, demolition waste, fill, soil or any other material from any source be placed or stored within any public reserve.
 48. 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.
 49. 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.
 50. 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.
 51. 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.
 52. External paved access for vehicles and pedestrians being provided with material which will provide some contrast to the finish of the pavement to the satisfaction of the Principal Certifying Authority.
 53. All areas of common property, including visitor car parking spaces and on-site stormwater detention shall be included on the final plans of subdivision.
 54. Approval is given under this development consent for the following tree works to be undertaken to trees within the subject property:

No/Tree/Location

Tree Works

8/*Quercus robur* (English Oak)
Adjacent to the site's northern boundary and towards its north-western corner.

Remove

Near dead *Eucalyptus saligna* (Sydney Blue Gum)
Close to the centre of the site rear (eastern) boundary between Trees 3 & 4.

Remove

55. To ensure preservation of Tree 12 – *Eucalyptus saligna* (Sydney Blue Gum) no excavation for the driveway shall extend beyond the existing brick wall at its south-western corner. The driveway shall curve from the line of the existing brick wall at the Mona Vale Road boundary to meet the amended driveway and 6 x 5.5 metres passing area as shown on Dwg No 06-16 of Job No 27181 Issue B prepared by **Idraft plans Pty Ltd.**

Item 3

56. To avoid deep excavation within 6 metres of the trunk of Tree 13 – *Eucalyptus saligna* (Sydney Blue Gum) at the site's Mona Vale Road frontage the northern section of the pedestrian ramp shown on Dwg No 13-16 of Job No 27181 Issue B prepared by **Idraft plans Pty Ltd** shall be relocated and extended to permit the ramp to access the Mona Vale Road footpath at 90°. The garbage bay's position shall be adjusting to suite the amended pedestrian ramp and its entry shall be located at a landing for ease of access by wheel chairs.
57. To protect the root system of Tree 9 – *Quercus robur* (English Oak) the patio at the northern side of Unit 01 shall be suspended on piers.
58. Canopy pruning of the following tree 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:

No/Tree/Location

9/*Quercus robur* (English Oak)/Close to the site's northern boundary and near its northwestern corner.

59. All disturbed areas, which are not to be built upon or otherwise developed, shall be rehabilitated to provide permanent protection from soil erosion within fourteen (14) days of final land shaping of such areas.
60. 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:

No/Tree/Location

Radius From Trunk

11/*Eucalyptus microcorys* (Tallowood)
Close to the site's north-western corner.

4 metres

12/*Eucalyptus saligna* (Sydney Blue Gum)
Close to the southern side of the driveway and
Mona Vale Road boundary.

6 metres

13/*Eucalyptus saligna* (Sydney Blue Gum)
Close to the site's Mona Vale Road boundary
and towards its south-western corner.

6 metres

61. No mechanical excavation for the approved DRIVEWAY and RETAINING WALL 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:

No/Tree/Location

Radius From Trunk

11/*Eucalyptus microcorys* (Tallowood)
Close to the site's north-western corner.

4 metres

Item 3

12/*Eucalyptus saligna* (Sydney Blue Gum) 6 metres
Close to the southern side of the driveway
and Mona Vale Road boundary.

13/*Eucalyptus saligna* (Sydney Blue Gum) 6 metres
Close to the site's Mona Vale Road boundary
and towards its south-western corner.

62. All excavation carried out within the specified radius of the trunk/s of the following tree/s shall be hand dug:

No/Tree/Location	Radius From Trunk
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11/ <i>Eucalyptus microcorys</i> (Tallowood) Close to the site's north-western corner.	4 metres
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12/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the southern side of the driveway and Mona Vale Road boundary.	6 metres
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13/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's Mona Vale Road boundary and towards its south-western corner.	6 metres
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63. Excavation for the installation of CONDUITS/SEWER/STORMWATER/GAS within the specified radius of the trunk/s of the following tree/s shall be carried out using the thrust boring method. Thrust boring shall be carried out at least 600mm beneath natural ground level to minimise damage to tree/s root system:

No/Tree/Location	Radius From Trunk
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12/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the southern side of the driveway and Mona Vale Road boundary.	6 metres
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13/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's Mona Vale Road boundary and towards its south-western corner.	6 metres
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64. 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.
65. The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along MONA VALE ROAD. The tree/s used shall be a minimum 25 litres container size specimen/s trees:

Item 3

Tree Species	Quantity
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<i>Tristaniopsis laurina</i> (Water Gum)	2
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66. To enhance native vegetation and promote biodiversity the Landscape Plan is to incorporate at least 25% of the overall number of trees and shrubs as locally occurring native plant species selected from the Sydney Blue Gum High Forest Endangered Ecological Community. Other plantings shall be of non invasive plant species.
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.
68. The canopy replenishment 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

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

69. 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.

70. 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).
71. 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,

Item 3

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.

72. 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.
73. 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.
74. 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 FIVE (5) ADDITIONAL DWELLINGS IS CURRENTLY \$23,464.43. 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 (If Seniors Living \$412.07)	\$1,117.76
2.	Park Acquisition and Embellishment Works - St Ives	\$6,574.28
3.	Sportsgrounds Works	\$1,318.32
4.	Aquatic / Leisure Centres	\$27.82

Item 3

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 75sqm)	1.27 persons
Medium dwelling (75 - under 110sqm)	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	1.3 persons

75. Prior to issue of the Construction Certificate, driveway and associated footpath levels for any fully new, reconstructed or extended sections of driveway crossings 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.

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 25% (1 in 4) maximum, and

Item 3

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”.
 - The dimensions of all parking spaces including lengths and widths comply with the State Environmental Planning Policy for Senior Living relating to height clearances and space dimensions.

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 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 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).
 - **Pits and pipes are to be clear of Tree Protection Zones.**
Proposed drainage pit (P11) to be relocated further from Tree 12 and the drainage line across the Mona Vale Road frontage to be located immediately behind the retaining wall to minimise the extent of excavation within the root zone of Trees 12 and 13. Further pits: P2, P3 and P4 are excessive for their locations and are to be replaced by smaller pits along the southern side boundary planting strip, and pit: P2 should be

Item 3

located immediately behind the retaining wall as are pits: P3, P4, P5 and P6. The detention tank is to be mostly located beneath the garbage bay and pedestrian ramp to minimise built upon area.

- 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).
- Water quality measures to address 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 Stormwater Concept Plan 3778-C1 and C2 by Haddad Khalil Mance Arraj Partners 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 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.
81. The property shall support a minimum number of 8 canopy trees that will attain 13.0 metres in height on the site, to preserve the tree canopy of Ku-ring-gai, the existing tree/s, and 1 additional tree to be planted, shall be shown on the Landscape Plan. 25% of the canopy trees to be planted are to be locally occurring native trees.
82. The submitted landscape plan Dwg No 05193DA1 & 2 Rev. A prepared by Vision Dynamics Landscape Design and dated 7.12.05 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 accordance with the approved landscape plan/s.

The following amendments to the plan shall apply:

- Screen planting of the northern and southern boundaries shall incorporate species of type suitable for the site conditions and location on site, of 300 mm pot size capable of attaining a height of 5 metres and be maintained at a height of 5 metres.

Item 3

83. The Construction Certificate shall not be released until a Site Management Plan is prepared by a suitably qualified professional and approved by the Principal Certifying Authority.

The plan shall indicate the location of services, erosion and drainage management, tree protection measures including tree protection zones, areas nominated for storing materials, site access, construction access requirements and where vehicle parking is proposed during construction.

84. 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.

85. A CASH BOND/BANK GUARANTEE of \$14,000.00 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 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:

No/Tree/Location	Bond Value (\$)
3/ <i>Liquidambar styraciflua</i> (Liquidambar) Close to the centre of the site's rear (eastern) boundary.	1,000.00
4/ <i>Liquidambar styraciflua</i> (Liquidambar) Close to the centre of the site's rear (eastern) boundary.	1,000.00
<i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's rear boundary and towards its northeastern corner.	3,000.00

Item 3

5/ <i>Eucalyptus pilularis</i> (Blackbutt) Close to the site's north-eastern corner.	3,000.00
11/ <i>Eucalyptus microcorys</i> (Tallowood) Close to the site's north-western corner.	1,000.00
12/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the southern side of the driveway and Mona Vale Road boundary.	3,000.00
13/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's Mona Vale Road boundary and towards its south-western corner.	2,000.00

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

86. So as to minimise glare the proposed roof material will comply with the all requirements of the Building Code of Australia and the relevant Australian standards.

In order to ensure the development does not detract from the appearance of adjoining buildings and surrounding areas, a schedule of colours and finishes for all external works shall be submitted to the Principal Certifying Authority and approved in writing prior to the commencement of work. All external materials, finishes and colours shall be sympathetic to the surrounding natural and built environment. All external surfaces shall be finished to the final satisfaction of the Principal Certifying Authority.

87. 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.
88. 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.
89. Prior to the commencement of bulk excavation, the applicant is to carry out a geotechnical investigation which includes at least three boreholes drilled to at least one metre below proposed basement level. A report is to be prepared by a suitably qualified and experienced geotechnical engineer and submitted for the approval of the Principal Certifying Authority (PCA) or Council if no PCA has been appointed. Matters to be addressed in the report include:
- Excavation conditions and support;
 - Vibrations, vibration monitoring and control;
 - Dilapidation survey of adjoining structures;
 - Likely groundwater inflow to permanent subsoil drainage system and whether the site is subject to a high water table.

Item 3

90. 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 neighbouring structures within 277, 277A Mona Vale Road and 283 Mona Vale Road which are closest to the boundary with the subject property. 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.
91. 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
 - **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:

Item 3

- 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.
- 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.

92. 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 full road pavement width, including kerb and gutter, of Mona Vale Road southbound 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.

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.

93. Prior to the commencement of any works on site, the applicant is to liaise with Council's Open Space Section to arrange for the trimming of vegetation in the Mona Vale Road reserve to improve sight distance for vehicles leaving the site. This work is to be at no cost to Council or the RTA.
94. 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.

Item 3

No/Tree/Location	Radius in Metres
3/ <i>Liquidambar styraciflua</i> (Liquidambar) Close to the centre of the site's rear (eastern) boundary.	6 metres
4/ <i>Liquidambar styraciflua</i> (Liquidambar) Close to the centre of the site's rear (eastern) boundary.	6 metres
<i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's rear boundary and towards its northeastern corner.	6 metres
5/ <i>Eucalyptus pilularis</i> (Blackbutt) Close to the site's north-eastern corner.	6 metres
6/ <i>Pittosporum undulatum</i> (Sweet Pittosporum) Adjacent to the site's northern boundary and towards its north-eastern corner.	3 metres

95. 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, and front boundary wall 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:

No/Tree/Location	Radius From Trunk
9/ <i>Quercus robur</i> (English Oak) Close to the site's northern boundary and near its northwestern corner.	4 metres
10/ <i>Pinus patula</i> (Mexican Pine) Close to the site's northern boundary and near its north-western corner.	4 metres
11/ <i>Eucalyptus microcorys</i> (Tallowood) Close to the site's north-western corner.	4 metres
12/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the southern side of the driveway and Mona Vale Road boundary.	6 metres
13/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's Mona Vale Road boundary and towards its south-western corner.	6 metres

Item 3

96. The tree protection fence shall be constructed of galvanised pipe at 2.4 metres spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
97. 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.
98. 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.
99. 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.

CONDITIONS TO BE COMPLIED WITH PRIOR TO OCCUPATION

100. 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.
101. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate (and at the completion of works), the Principle Certifying Authority shall ensure that the development complies with the relevant design standards of clauses 52(1), 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70 & 71 of State Environmental Planning Policy (Seniors Living) 2004. The purpose of this condition is to ensure that the completed development meets the needs of seniors or people with a disability and that the development complies fully with the requirements of SEPP Seniors Living 2004.
102. The landscape works shall be completed prior to release of the Certificate of Occupation and maintained in a satisfactory condition at all times.

Item 3

103. Prior to issue of the Occupation Certificate, the applicant is to repair the trip hazards in the footpath between the subject site and the bus stop(s). New footpath is to be in accordance with Council's standard detail. The applicant should contact Council's Development Engineer for an inspection prior to pouring the new slabs.
104. 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.
 - 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.

- 105 Prior to issue of the Occupation Certificate the applicant must create a Positive Covenant and Restriction on the Use of Land under Section 88 E 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.
- 106 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

Item 3

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.

107 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.

108. Prior to issue of an Occupation Certificate the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority.

109. 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" and also the Seniors Living State Environment Planning Policy 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 the vehicular headroom requirements of:
 - Australian Standard 2890.1 - "Off-street car parking",
 - the Seniors Living SEPP (as last amended) for accessible parking spaces, are met from the public street into and within the applicable areas of the basement car park.

110. 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.

Item 3

- 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 specified in the BASIX commitments.
 - 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.
111. 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.

Item 3

All relevant levels and details indicated must be marked **in red** on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.

112. 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.

113. 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 any approved Geotechnical report undertaken for the development, and
- In a manner that ensures that the structural amenity of adjoining structures and property is fully maintained.

114. Prior to issue of the Occupation Certificate, a complete record of geotechnical inspections, testing and monitoring with certifications as specified in the report submitted prior to commencement of bulk excavation 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.

115. Prior to release of the Occupation Certificate, the creation of a Restriction-on-Use under the Conveyancing Act, restricting the occupation of the premises to:

- a. People aged 55 years or over, or people with a disability as defined by the provisions of the State Environmental Planning Policy for Seniors Living.
- b. People who live with such people as defined in (a) above.
- c. Staff employed to assist in the administration of and provision of services to housing provided in this development.

116. 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:

- 277, 277A and 283 Mona Vale Road;
- Mona Vale Road southbound including kerb and gutter.

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.

117. 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. Inspections by and documentation from the Arborist to the Principal Certifying Authority are required at the following times or phases of work. Documentary

Item 3

evidence of compliance with this condition shall be submitted to the Principal Certifying Authority prior to issue of the Occupation Certificate:

No/Tree/Location	Time of inspection
3/ <i>Liquidambar styraciflua</i> (Liquidambar) Close to the centre of the site's rear (eastern) boundary.	Demolition, excavation, drainage and landscape stages
4/ <i>Liquidambar styraciflua</i> (Liquidambar) Close to the centre of the site's rear (eastern) boundary.	Demolition, excavation, drainage and landscape stages
<i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's rear boundary and towards its north-eastern corner.	Demolition, excavation, drainage and landscape stages
5/ <i>Eucalyptus pilularis</i> (Blackbutt) Close to the site's north-eastern corner.	Demolition, excavation, drainage and landscape stages
6/ <i>Pittosporum undulatum</i> (Sweet Pittosporum) Adjacent to the site's northern boundary and towards its northeastern corner.	Demolition, excavation,
9/ <i>Quercus robur</i> (English Oak) Close to the site's northern boundary and near its north-western corner	Demolition, excavation, drainage and landscape stages
10/ <i>Pinus patula</i> (Mexican Pine) Close to the site's northern boundary and near its north-western corner	Demolition, excavation, drainage and landscape stages
11/ <i>Eucalyptus microcorys</i> (Tallowood) Close to the site's north-western corner.	Demolition, excavation, drainage and landscape stages
12/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the southern side of the driveway and Mona Vale Road boundary.	Demolition, excavation, drainage and landscape stages
13/ <i>Eucalyptus saligna</i> (Sydney Blue Gum) Close to the site's Mona Vale Road boundary and towards its south-western corner	Demolition, excavation, drainage and landscape stages

118. Noxious and/or environmental weed species shall be removed from the property prior to the issue of the Occupation Certificate. Documentary evidence of the compliance with conditions of consent in this regard shall be submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate:

Plant species

Acacia baileyana(Cootamundra Wattle)

Item 3

Asparagus densiflorus (Asparagus Fern)
Cotoneaster sp. (Cotoneaster)
Hedera helix (English Ivy)
Jasminum polyanthum (Jasminum)
Ligustrum lucidum (Large-leaved Privet)
Ligustrum sinense (Small-leaved Privet)
Nephrolepis cordifolia (Fishbone fern)
Ochna serrulata (Ochna)
Senna pendula (Cassia)
Tradescantia albiflora (Wandering Jew)
Wisteria sp. (Wisteria Vine)

119. 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.
120. 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
121. Prior to issue of an Occupation Certificate, a sign is to be erected and maintained at all times by the Body Corporate adjacent to the visitor parking space which indicates a maximum parking period of four (4) hours

BUILDING CONDITIONS

122. 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.
123. 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.
124. 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.

Item 3

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.

S Segall
Acting Team Leader
Development Assessment -
Central

R Kinninmont
Acting Manager
Development Assessment
Services

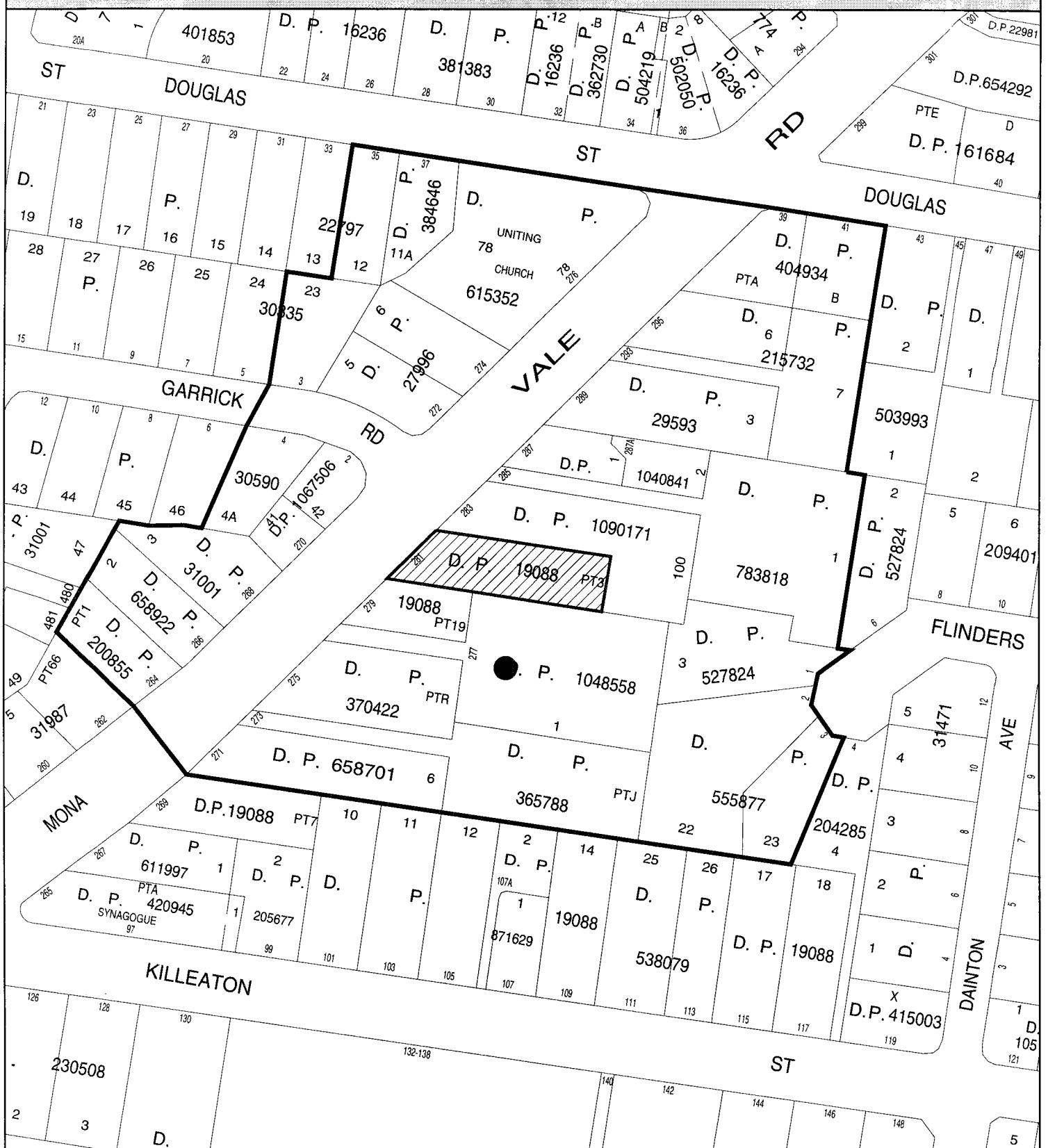
M Miocic
Director
Development &
Regulation

Attachments: **Location Sketch - 629289**
 Zoning Extract - 629293
 Site Plan - 629298
 Site Analysis - 629302
 Sections - 629307
 Elevations - 629328
 Shadow Diagrams - 629316
 Confidential attachments (Floor and Landscape Plans)

LOCATION SKETCH

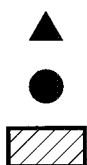
281 Mona Vale Road, ST IVES

DEVELOPMENT APPLICATION No 1444/05



Scale : 1:2000

13-06-2006



AGREEMENT

OBJECTION

SUBJECT LAND



PETITION

SUBMISSION

CIRCULATED AREA

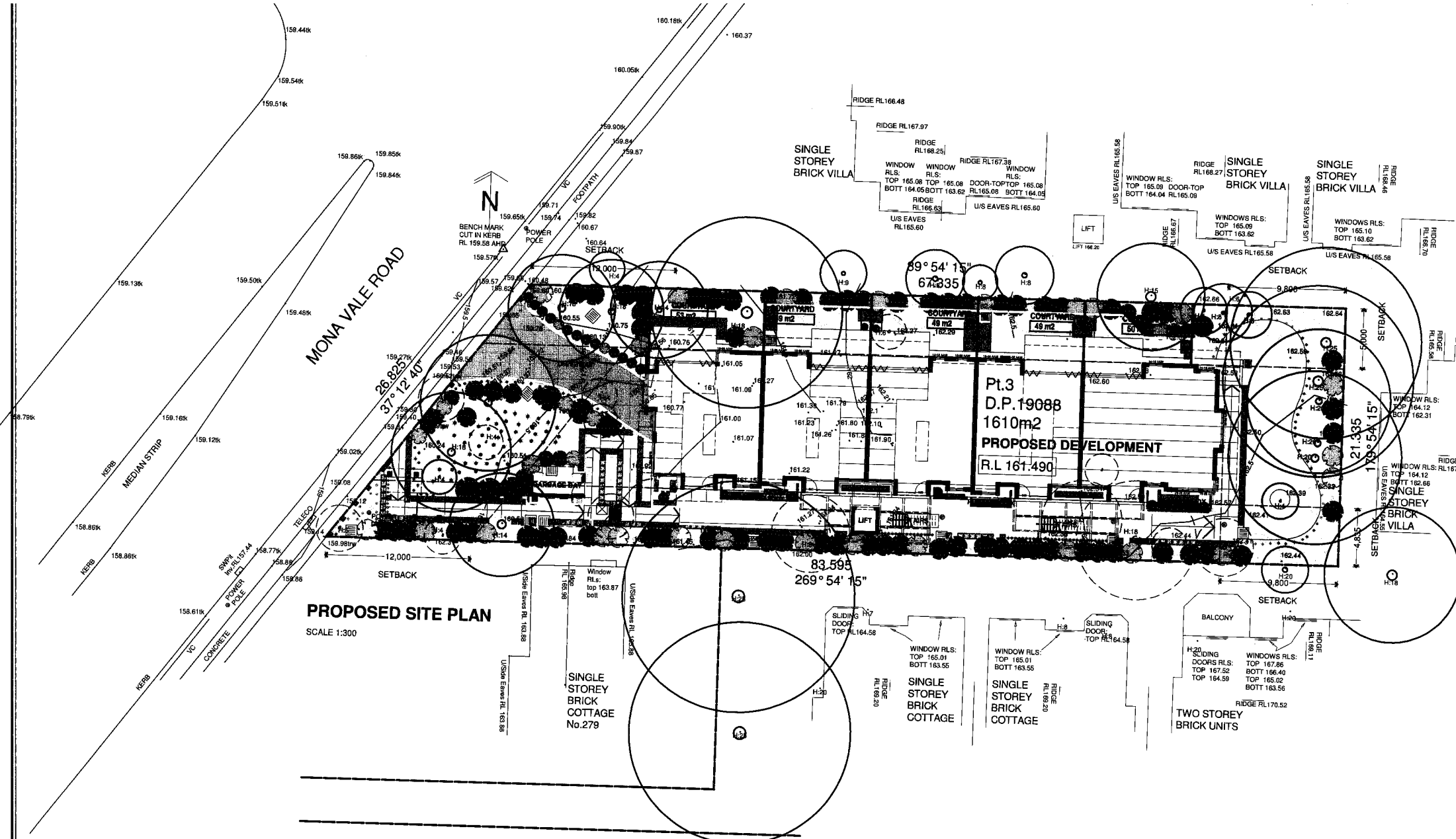


Zoning Extract

281 MONA VALE ROAD ST IVES DA 1444/05



ZONES			RESERVATIONS		GENERAL
2. RESIDENTIAL			OPEN SPACE		EXISTING COUNTY ROAD OTHER PLANNING INSTRUMENTS
(a) RESIDENTIAL A			(a) OPEN SPACE (Public Parks & Recreation)		
(b) RESIDENTIAL B			(b) COUNTY OPEN SPACE		 Scale: 1:2500 Date: 13-06-2006
(c) RESIDENTIAL C			SPECIAL USES		
(c1) RESIDENTIAL C1			SPECIAL USES (Parking etc)		
(c2) RESIDENTIAL C2			ROADS		
(d) RESIDENTIAL D			(a) COUNTY ROAD PROPOSED		
(d3) RESIDENTIAL D3			(b) COUNTY ROAD WIDENING		
(e) RESIDENTIAL E			(c) LOCAL ROAD PROPOSED		
(f) RESIDENTIAL F			(d) LOCAL ROAD WIDENING		
(g) RESIDENTIAL G					
(h) RESIDENTIAL H					
3. BUSINESS			6. OPEN SPACE		
(a) RETAIL SERVICES			(a) RECREATION EXISTING		
FLOOR SPACE RATIOS			(b) RECREATION PRIVATE		
A1 2.0:1			(c) RECREATION PROPOSED		
A2 1.0:1					
A3 0.75:1					
5. SPECIAL USES					
(a) SPECIAL USES A (Schools etc)					
(a1) SPECIAL USES A1					
(b) SPECIAL USES (Railway)					
4. COMMERCIAL SERVICES					
(a) RETAIL SERVICES					
(b) COMMERCIAL SERVICES					
FLOOR SPACE RATIOS					
B1 1.0:1					
B2 1.0:1					



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THESE NOTES MUST BE READ IN CONJUNCTION WITH COLOUR SELECTION FOR ADDITIONAL DETAILS ON APPLIANCES. PC ITEMS & COLOURS SHOWER SIZES SHOWN ON PLAN ARE INSIDE HOB DIMENSIONS. SHOWER SCREENS TO BE FITTED ON INSIDE OF HOB BULKHEADS MAY BE REQUIRED TO ACCOMMODATE DRAINAGE LINES AND STEEL BEAMS POSITIVE TO BE DETERMINED ON SITE. NOTES: USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. FINISHED GROUND LEVELS SHOWN ON PLAN ARE SUBJECT TO SITE CONDITIONS ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE MEASURE. DURING CONSTRUCTION NO ALLOWANCE HAS BEEN MADE FOR SKINWARK OR MILLING POSITION OF ELECTRICAL METER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE METER POSITION FRONT GARDEN TAP ON METER.

ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INCLUDING RAINWATER TANKS, SHOWER HEADS, WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLAINT HOT WATER SYSTEMS WITH MINIMUM CURRENT IN USE. NO. OF 3.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE TO BE ENCOURAGED TO USE AAA RATED DISH WASHING MACHINES AND LOW POWER COOKING MACHINES WHERE POSSIBLE.

B AMENDED PLANS

20-03-2006

ISSUE DESCRIPTION

DATE

AMENDMENTS

PROJECT

PROPOSED RESIDENTIAL
DEVELOPMENT

LOCAL GOVERNMENT AREA

KU-RING-GAI COUNCIL

DRAWING TITLE

SITE PLAN

DRAWN

DATE

DESIGNED

DATE

SCALE

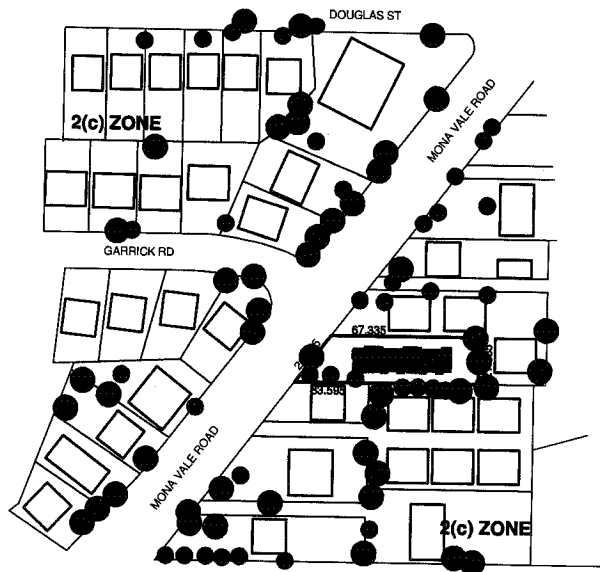
FOR

DRAWING NO.

Mr. HADDAD

A1

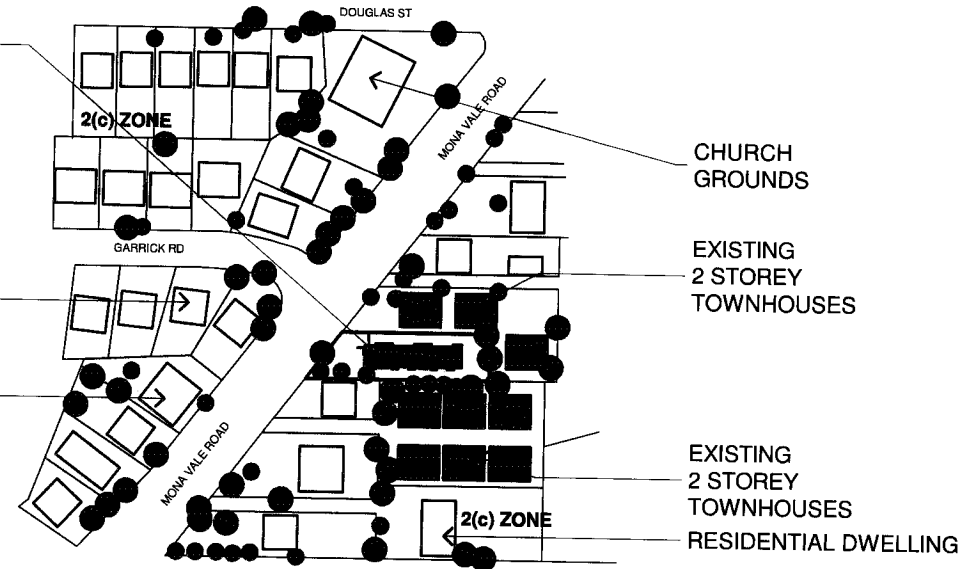
281 MONA VALE Rd.
ST IVES



PROPOSED
DEVELOPMENT

RESIDENTIAL DWELLING

RESIDENTIAL DWELLING



1 LOT DIMENSIONS SCALE 1:2,500

Legend

- Site Boundary
- Lot Boundaries

2 BUILDING USE AND BUILDING HEIGHTS SCALE 1:2,500

Legend

- Site Boundary
- Residential Dwelling 1-2 Storeys
- Commercial/Residential 3 Storeys Apartments 3 Storeys
- Industrial
- Proposed Industrial building

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NOTES: USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. FINISHED GROUND LEVELS SHOWN ON PLAN ARE SUBJECT TO SITE CONDITIONS. ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE MEASURE. DURING CONSTRUCTION NO ALLOWANCE HAS BEEN MADE FOR SHRINKAGE OR MILLING PORTIONS OF ELECTRICAL VETER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE TURRET POSITION FRONT GARDEN TAP DIMETER.

ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INCLUDING RAINWATER TANKS, SHOWER HEADS, WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH LIMITED GREEN HOUSE SCORE OF 3.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE TO BE ENCOURAGED TO USE AAA RATED DISH WASHING MACHINES AND FRONT LOADING WASHING MACHINES TO BE ENCOURAGED.

PROJECT

PROPOSED RESIDENTIAL
DEVELOPMENT

A1

281 MONA VALE Rd.
ST IVES

LOCAL GOVERNMENT AREA

KU-RING-GAI COUNCIL

DRAWING TITLE

SITE ANALYSIS

FOR

Mr. HADDAD

ISSUE

DESCRIPTION

DATE

AMENDMENTS

DRAWN

DATE

DESIGNED

DATE

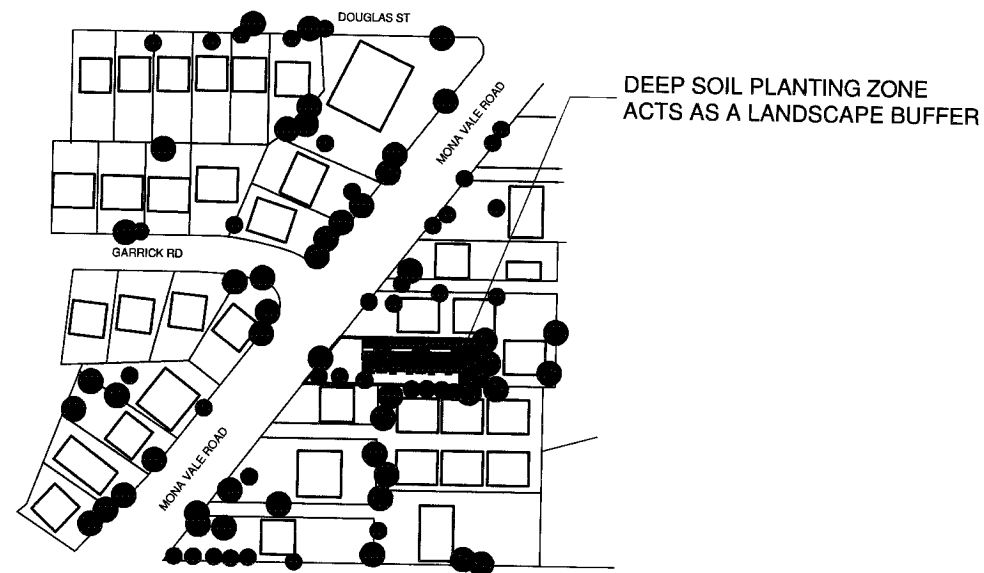
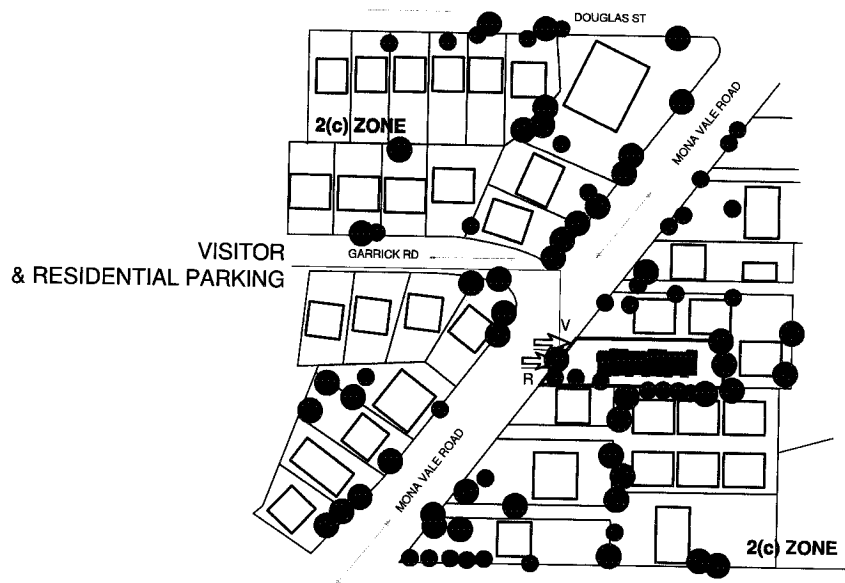
SCALE

TOR

DRAWING NO.

ISSUE

DATE



3 SITE ACCESS AND MOVEMENT SCALE 1:2,500

Legend

- Site Boundary
- Primary Streets
- Secondary Street
- ⇒ Site Access
- V COMMERCIAL ENTRY (vehicle)
- P COMMERCIAL ENTRY (pedestrian)

4 EXISTING TREES SCALE 1:2,500

Legend

- Site Boundary
- Existing trees
- Proposed Landscaping

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4/81 JARVIS STREET MARRIBONGH VIC 3040
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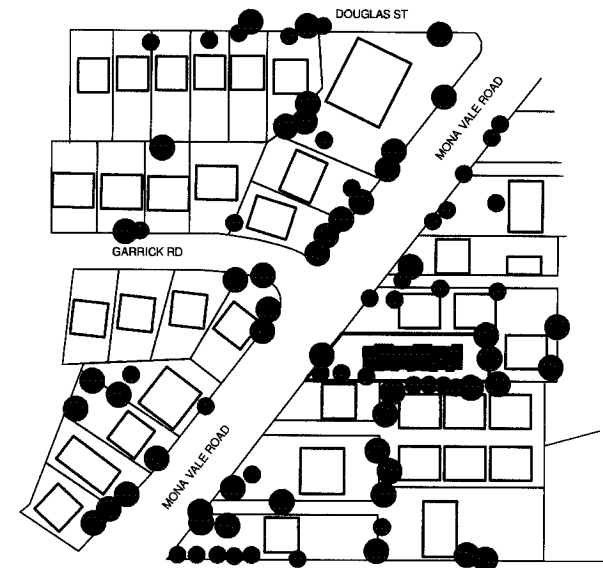
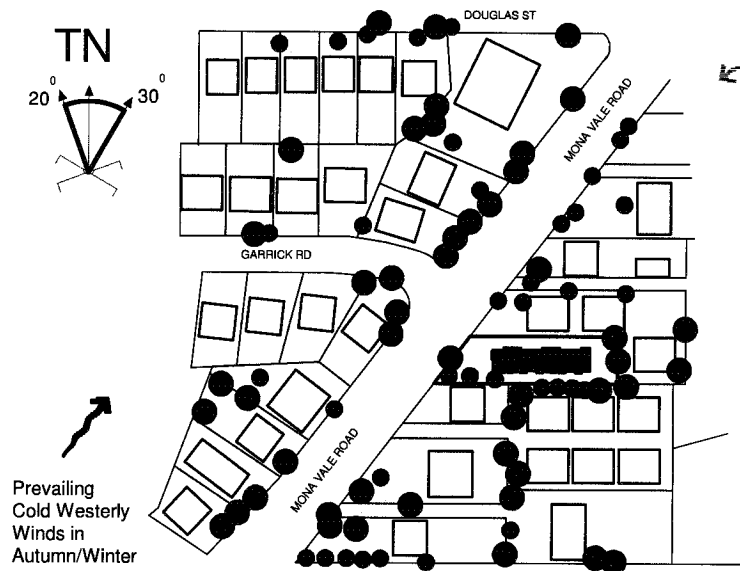
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ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INCLUDING RAINWATER TANKS, SHOWER HEADS, WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH 5 STAR RATED HOT WATER HEATERS. HOUSE SCORE OF 35 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE TO BE ENCOURAGED TO USE AAA RATED DISH WASHING MACHINES AND FRONT LOADING WASHING MACHINES WHERE POSSIBLE.

ISSUE	DESCRIPTION	DATE
AMENDMENTS		

PROJECT:	PROPOSED RESIDENTIAL DEVELOPMENT	AT:	281 MONA VALE Rd. ST IVES
LOCAL GOVERNMENT AREA:	KU-RING-GAI COUNCIL	FOR:	Mr. HADDAD
DRAWING TITLE:	SITE ANALYSIS	DRAWN:	
		DATE:	
		DESIGNED:	
		DATE:	
		SCALE:	
		FOOT:	
		ISSUED:	
		DATE:	



5 PREVAILING WINDS & SOLAR ACCESS

SCALE 1:2,500

Legend

— Site Boundary

6 OVERLAND FLOW

SCALE 1:2,500

Legend

— Site Boundary — Direction of Overland Flow (Drainage)

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NOTES: USE FINISHED DIMENSIONS ONLY. DO NOT SCALE. FINISHED GROUND LEVELS SHOWN ON PLAN ARE SUBJECT TO SITE CONDITIONS. ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE MEASURE DURING CONSTRUCTION. NO ALLOWANCE HAS BEEN MADE FOR SHRINKAGE OR MILLING POSITION OF ELECTRICAL METER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE TURRET POSITION FRONT GARDEN LAP ON METER.

ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES, INCLUDING: RAINWATER TANKS, SHOWER HEADS, WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH MINIMUM GREENHOUSE SCORE OF 4.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. COMPLIANTS ARE

PROJECT

PROPOSED RESIDENTIAL DEVELOPMENT

LOCAL GOVERNMENT AREA

KU-RING-GAI COUNCIL

DRAWING TITLE

SITE ANALYSIS

DRAWN

DATE

DESIGNED

DRAWN

SCALE

FOR

DRAWING

DATE

BY

AT
281 MONA VALE Rd.
ST IVES

FOR
Mr. HADDAD

SELECTED METAL ROOFING
TAILED TO MANUFACTURES
TAILS, PROVIDE INSULATION
& SARKING AS SPEC.

TIMBER ROOF TRUSSES TO
MANUFACTURES DETAILS
AT 600mm CENTRES

PLASTERBOARD LINING TO
CEILING & WALL AS SPEC.
270mm DOUBLE BRICK
WALL

REINFORCED CONC. WALLS

CONC. SLAB TO ENG. DETAILS

REINFORCED CONCRETE

IGS TO ENGINEERS DETAILS

WATERPROOF MEMBRANE

UNDERSIDE OF SLAB

REINFORCED CONCRETE SLAB

TO ENGINEERS DETAILS

SECTION A-A
SCALE 1:200

SELECTED METAL ROOFING
INSTALLED TO MANUFACTURES
DETAILS, PROVIDE INSULATION
& SARKING AS SPEC.

SELECTED COLOUR BOND FASCIA & GUTTER
STEEL ROOF TRUSSES TO
MANUFACTURES DETAILS

270mm DOUBLE BRICK
WALL

REIN. CONC. SLAB TO ENG. DETAILS

PLASTERBOARD LINING TO
CEILING & WALL AS SPEC.

REIN. CONC. STAIRS TO ENG. DETAILS

200mm REINFORCED CONC. WALLS

REINFORCED CONCRETE

FOOTINGS TO ENGINEERS DETAILS

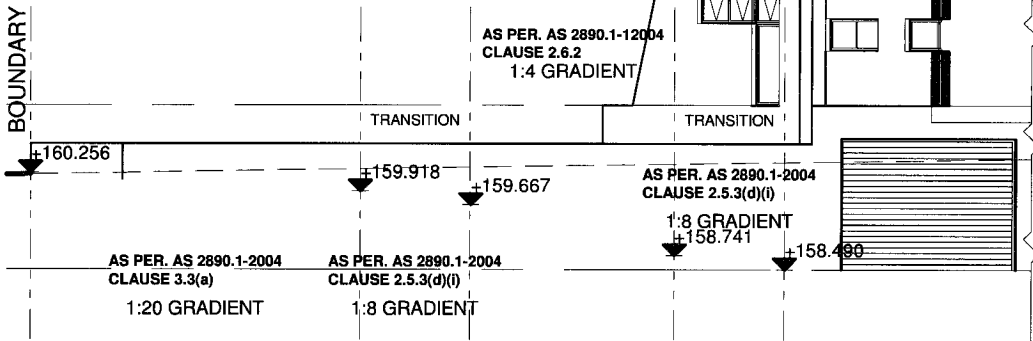
WATERPROOF MEMBRANE

UNDERSIDE OF SLAB

REINFORCED CONCRETE SLAB

TO ENGINEERS DETAILS

SECTION B-B
SCALE 1:200



DRIVEWAY PROFILE
SCALE 1:100
281 MONA VALE RD, ST IVES

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THESE NOTES MUST BE READ IN CONJUNCTION WITH COLOUR SELECTION FOR ADDITIONAL DETAILS
ON APPLIANCES, PC ITEMS & COLOURS, SHOWER SIZES SHOWN ON PLAN ARE INSIDE HOR DIMENSIONS
SHOWER SCREENS TO BE FITTED ON INSIDE OF HOR BATH HEADS MAY BE REQUIRED TO ACCOMMODATE
DRAINAGE LINES AND STILL BATHS POSITION TO BE DETERMINED ON SITE.
NOTES: USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. FINISHED GROUND LEVELS SHOWN ON PLAN
ARE SUBJECT TO SITE CONDITIONS. ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE MEASURE.
DURING CONSTRUCTION, NO ALLOWANCE HAS BEEN MADE FOR SHRINKAGE OR MILLING POSITION OF
ELECTRICAL METERS TO BE DETERMINED ON SITE IN ACCORDANCE TO THE METER POSITION FROM
GARDEN TAP ON METER.

ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INC. USING RAINWATER TANKS, SHOWER HEADS, WATER LAP
FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH
MINIMUM GREEN HOUSE SCORE OF 3.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE

PROJECT:

PROPOSED RESIDENTIAL
DEVELOPMENT

AT

281 MONA VALE Rd.
ST IVES

LOCAL GOVERNMENT AREA:

KU-RING-GAI COUNCIL

DRAWING TITLE:

SECTIONS

FOR

Mr. HADDAD

DRAWN

DATE

DESIGNED

DATE

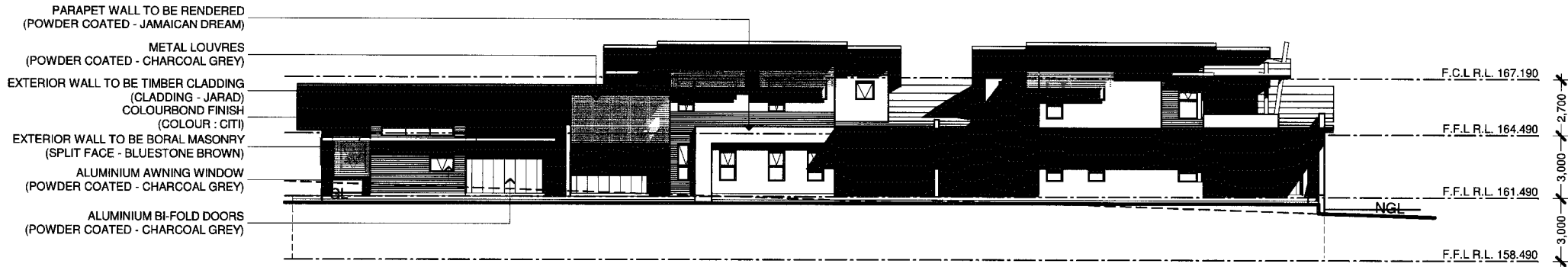
SCALE

FOR

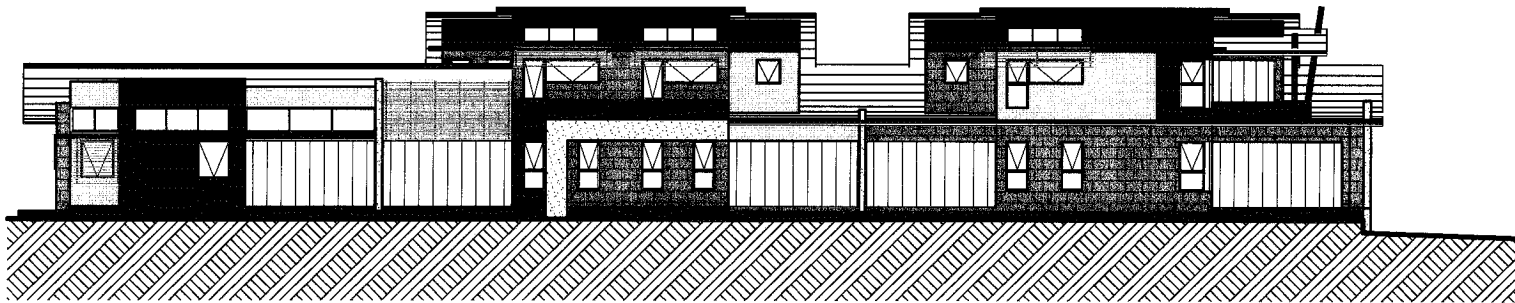
DRAWING NO.

ISSUE

JOB NO.



NORTH ELEVATION
SCALE 1:200



NORTH ELEVATION
SCALE 1:200

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THESE NOTES MUST BE READ IN CONJUNCTION WITH COLOUR SELECTION FOR ADDITIONAL DETAILS.
ON APPLIANCES, PC ITEMS & COLOURS, SHOWER SIZES SHOWN ON PLANS ARE INSIDE HOR. DIMENSIONS.
SHOWER SCREENS TO BE FITTED ON INSIDE OF TUB BULKHEADS MAY BE REQUIRED TO ACCOMMODATE
DRAINAGE LINES AND STEEL BEAMS POSITION TO BE DETERMINED ON SITE.
NOTES: USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. FINISHED GROUND LEVELS SHOWN ON PLAN
ARE SUBJECT TO SITE CONDITIONS. ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE MEASURE.
DURING CONSTRUCTION NO ALLOWANCE HAS BEEN MADE FOR SHRINKAGE OR MILLING POSITION OF
ELECTRICAL METER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE TURNOUT POSITION FROM
GARDEN TAP OR METER.

ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INCLUDING RAINWATER TANKS, SHOWER HEADS, WATER TAP
FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH
MINIMUM GREEN HOUSE SCORE OF 3.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE

PROJECT

**PROPOSED RESIDENTIAL
DEVELOPMENT**

LOCAL GOVERNMENT AREA

KU-RING-GAI COUNCIL

DRAWING TITLE

NORTH ELEVATION

DRAWN

DATE

DESIGNED

DATE

SCALE

FOR

DRAWING NO.

ISSUE

DATE

AT

**281 MONA VALE Rd.
ST IVES**

FOR

Mr. HADDAD

B

AMENDED PLANS

20-03-2006

ISSUE

DESCRIPTION

DATE

Architectural elevation drawing of a building facade. The drawing shows a long, low structure with various wall finishes, windows, and doors. On the left, a list of materials and finishes is provided, with lines pointing to the corresponding elements in the drawing. On the right, vertical level markers are indicated.

Material Specifications (Left):

- PARAPET WALL TO BE RENDERED (POWDER COATED - JAMAICAN DREAM)
- EXTERIOR WALL TO BE BORAL MASONRY (SMOOTH - ALABASTER)
- EXTERIOR WALL TO BE BORAL MASONRY (HONED - PEARL GREY)
- COLOURBOND FINISH (COLOUR : CITI)
- EXTERIOR WALL TO BE TIMBER CLADDING (CLADDING - JARAD)
- ALUMINIUM DOORS (POWDER COATED - CHARCOAL GREY)
- EXTERIOR WALL TO BE BORAL MASONRY (SPLIT FACE - BLUESTONE BROWN)
- ALUMINIUM BALUSTRADE (POWDER COATED - CHARCOAL GREY)
- ALUMINIUM AWNING WINDOW (POWDER COATED - CHARCOAL GREY)
- REINFORCED STRUCTURAL COLUMNS (POWDER COATED - CHARCOAL GREY)

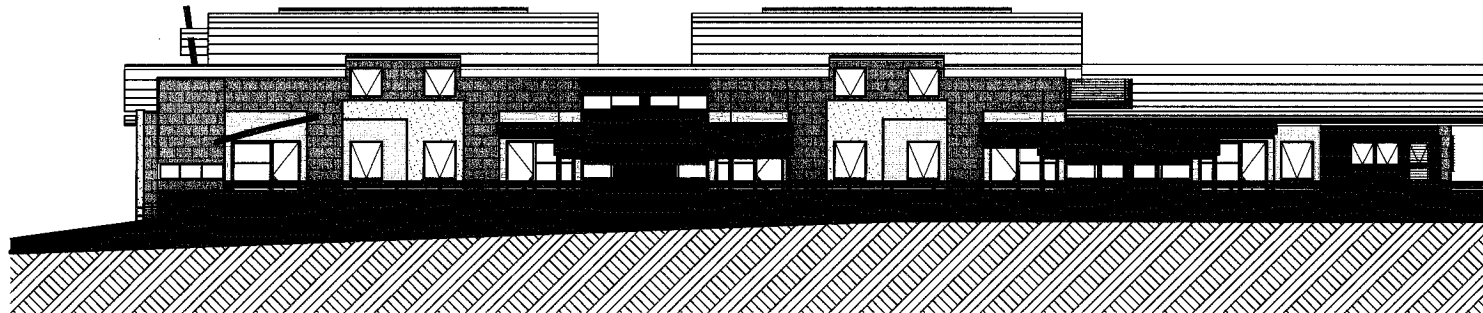
Level Markers (Right):

- F.C.I.R.L. 167.190
- F.F.L.R.L. 164.490
- F.F.L.R.L. 161.490
- F.F.L.R.L. 158.490

Other Labels:

- NGL (Natural Ground Level)
- PGL (Proposed Ground Level)

SOUTH ELEVATION
SCALE 1:200



SOUTH ELEVATION
SCALE 1:200

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THESE NOTES MUST BE READ IN CONJUNCTION WITH OUR SELECTION FOR ADDITIONAL DETAIL S ON APPLICATIONS PG ITEMS & COLOURS SHOWER SIZES SHOWN ON PLAN AN INSIDE HOBB DUBENSIONS SHOWER SCREENS TO BE FITTED ON INSIDE OF HOB BULKHEADS MAY BE REQUIRED TO ACCOMMODATE DRAINAGE LINES AND STEEL BENCH POSITION SHOULD BE DETERMINED ON SITE

NOTES: 1. FIGURED DIMENSIONS ONLY. DO NOT SCALE. FINISHED GROUND LEVELS SHOWN ON PLAN ARE SUBJECT TO SITE CONDITIONS ALL CALCULATED DIMENSIONS ARE SUBJECT TO SITE REQUIREMENTS 2. ALL WORK SHALL BE IN ACCORDANCE WITH THE N.M.A.S. STANDARDS FOR CHIMNEYS OUTLETTING FOOTING OF ELECTRICAL METER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE TURBOT POSITION PRINT GARDEN'PLAN ON MEET.

ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INCLUDING FANWAIR TANKS SHOW RHEADS, WATER FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH MINIMUM GREEN HOUSE SCORE OF 3 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE

PROJECT:

PROPOSED RESIDENTIAL DEVELOPMENT

281 MONA VALE Rd.
ST IVES

LOCAL GOVERNMENT AREA.

KU-RING-GAI COUNCIL

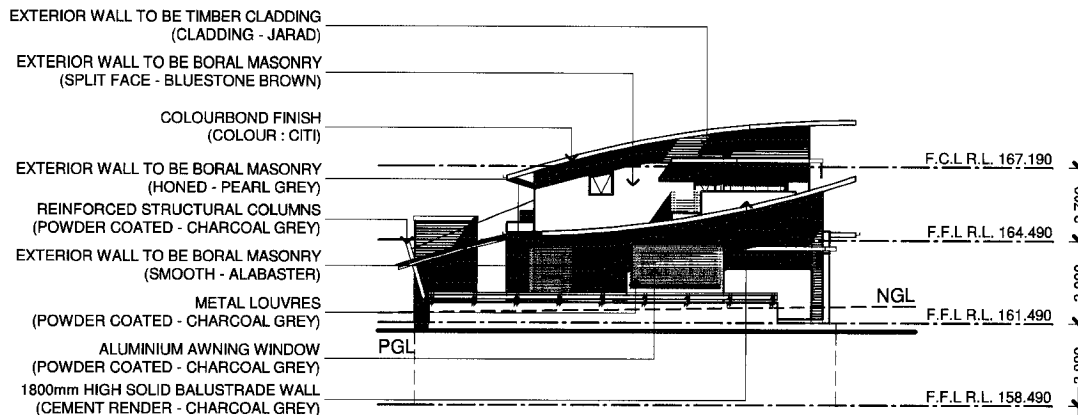
DRAWING TITLE

SOUTH ELEVATION

704

Mr. HADDAD

DRAWN:	DATE:	DESIGNED:	DATE:	BY: A.E.	LCN	INSTRUMENT NO.	USAFE	SHEET No.
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EAST ELEVATION
SCALE 1:200



EAST ELEVATION
SCALE 1:200

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14/11/2016 14:11:11
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SHOWER SCREENS TO BE FITTED ON INSIDE OF HOOR DIVISIONS MAY BE REQUIRED TO ACCOMMODATE
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DURING CONSTRUCTION NO ALLOWANCE HAS BEEN MADE FOR SHRINKAGE OR SETTLING POSITION OF
ELECTRICAL METER TO BE DETERMINED ON SITE IN ACCORDANCE TO THE TURRET POSITION. FRONT
GARDEN TAP ON METER.

ENERGY SMART DESIGN

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B AMENDED PLANS 20-03-2006

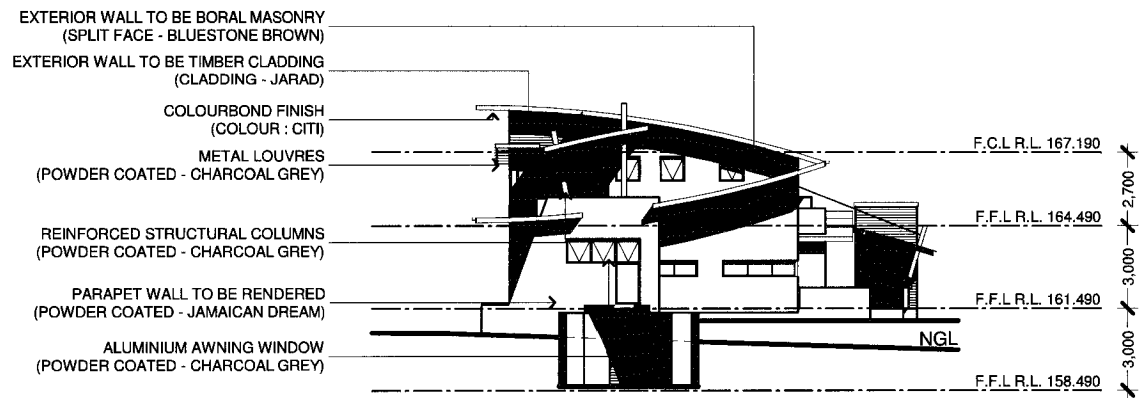
ISSUE DESCRIPTION DATE

PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT AT 281 MONA VALE Rd. ST IVES

LOCAL GOVERNMENT AREA: KU-RING-GAI COUNCIL

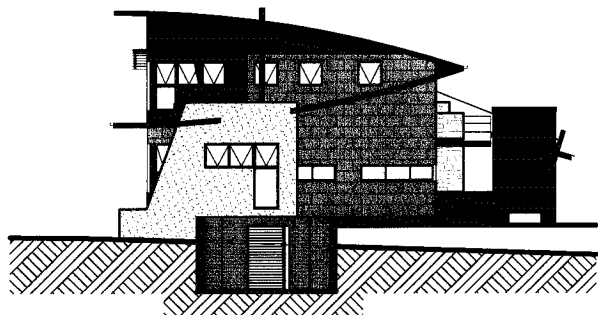
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DRAWN: DATE: DESIGNED: DATE: SCALE: 1:200



WEST ELEVATION

SCALE 1:200



WEST ELEVATION

SCALE 1:200

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1/191 CARLTON STREET, SYDNEY, NSW 1588
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GARDEN TAP ON METER.

ENERGY SMART DESIGN

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B AMENDED PLANS 20-03-2006

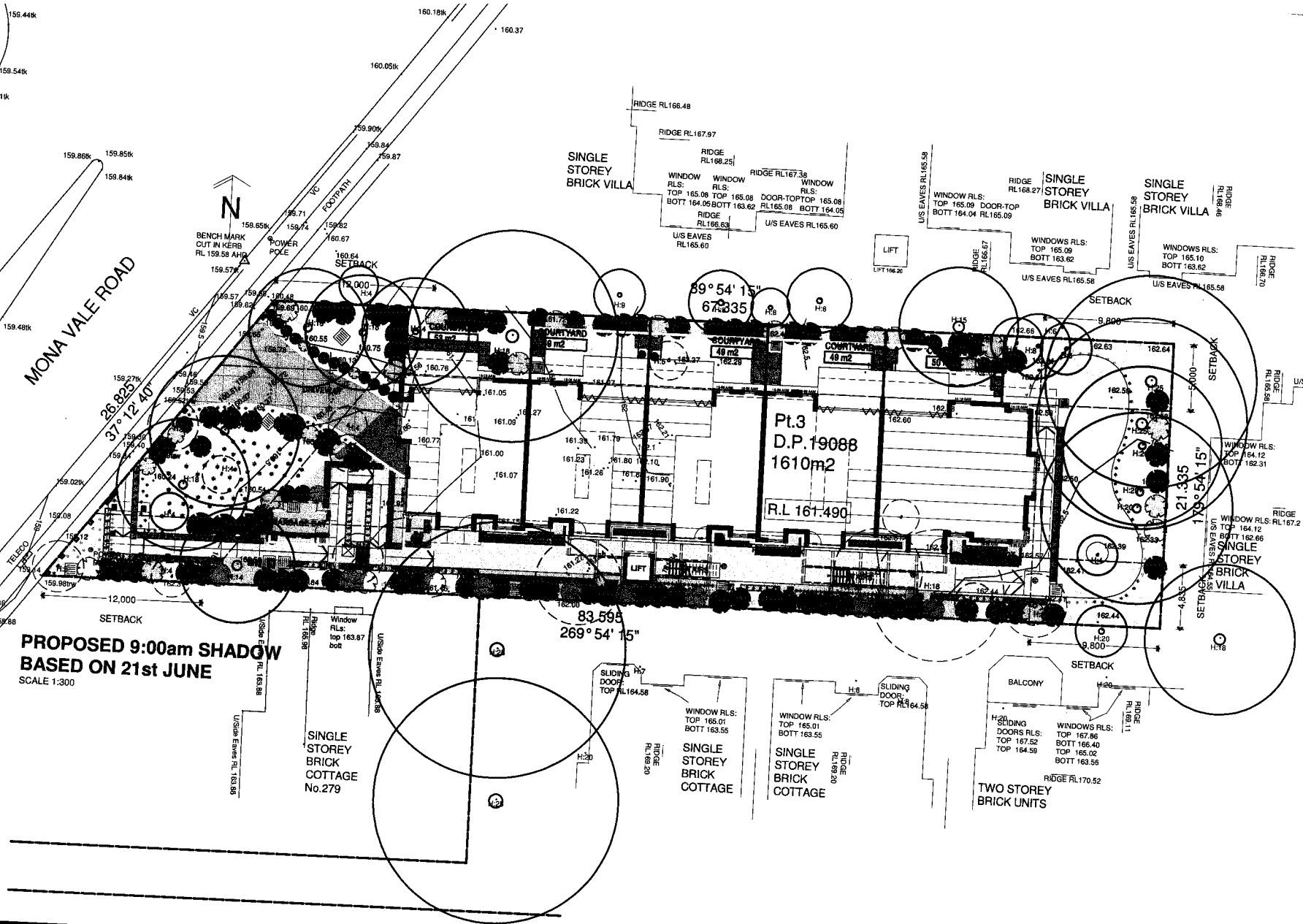
ISSUE DESCRIPTION DATE

PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT AT: 281 MONA VALE Rd. ST IVES

LOCAL GOVERNMENT AREA: KU-RING-GAI COUNCIL

DRAWING TITLE: WEST ELEVATION FOR: Mr. HADDAD

DRAWN: DATE: DESIGNED: DATE: SCALE: ECH: DRAWING: ISSUE: JOUR: No



**PROPOSED 9:00am SHADOW
BASED ON 21st JUNE**
SCALE 1:300

**SINGLE STOREY BRICK COTTAGE
No.279**

SINGLE STOREY BRICK COTTAGE

TWO STOREY BRICK UNITS

**PROPOSED 9:00am SHADOW
BASED ON 21st JUNE**
SCALE 1:300

**PROPOSED 9:00am SHADOW
BASED ON 21st JUNE**
SCALE 1:300

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27/01/2016 STREET, MCKENZIE
P.O. BOX 427 MCKENZIE NSW 1590
E: plans@idraft.com.au

THESE NOTES MUST BE READ IN CONJUNCTION WITH COLOUR SELECTION FOR ADDITIONAL DETAILS ON APPLIANCES, FC ITEMS & COLUMNS SHOWER SIZES SHOWN ON PLAN ARE INSIDE HOB DIMENSIONS. SHOWER SCREENS TO BE FITTED ON INSIDE OF HOB BULKHEADS MAY BE REQUIRED TO ACCOMMODATE DRAINAGE LINES AND STEEL BEAMS POSITION TO BE DETERMINED ON SITE.

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ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INCLUDING RAINWATER TANKS SHOWER HEADS, WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH MINIMUM GREENHOUSE SCORING OF 4.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE TO BE ENCOURAGED TO USE AAA RATED DISH WASHING MACHINES AND FRONT LOADING WASHING MACHINES WHERE POSSIBLE.

AMENDED PLANS

AMENDMENTS

20-03-2006

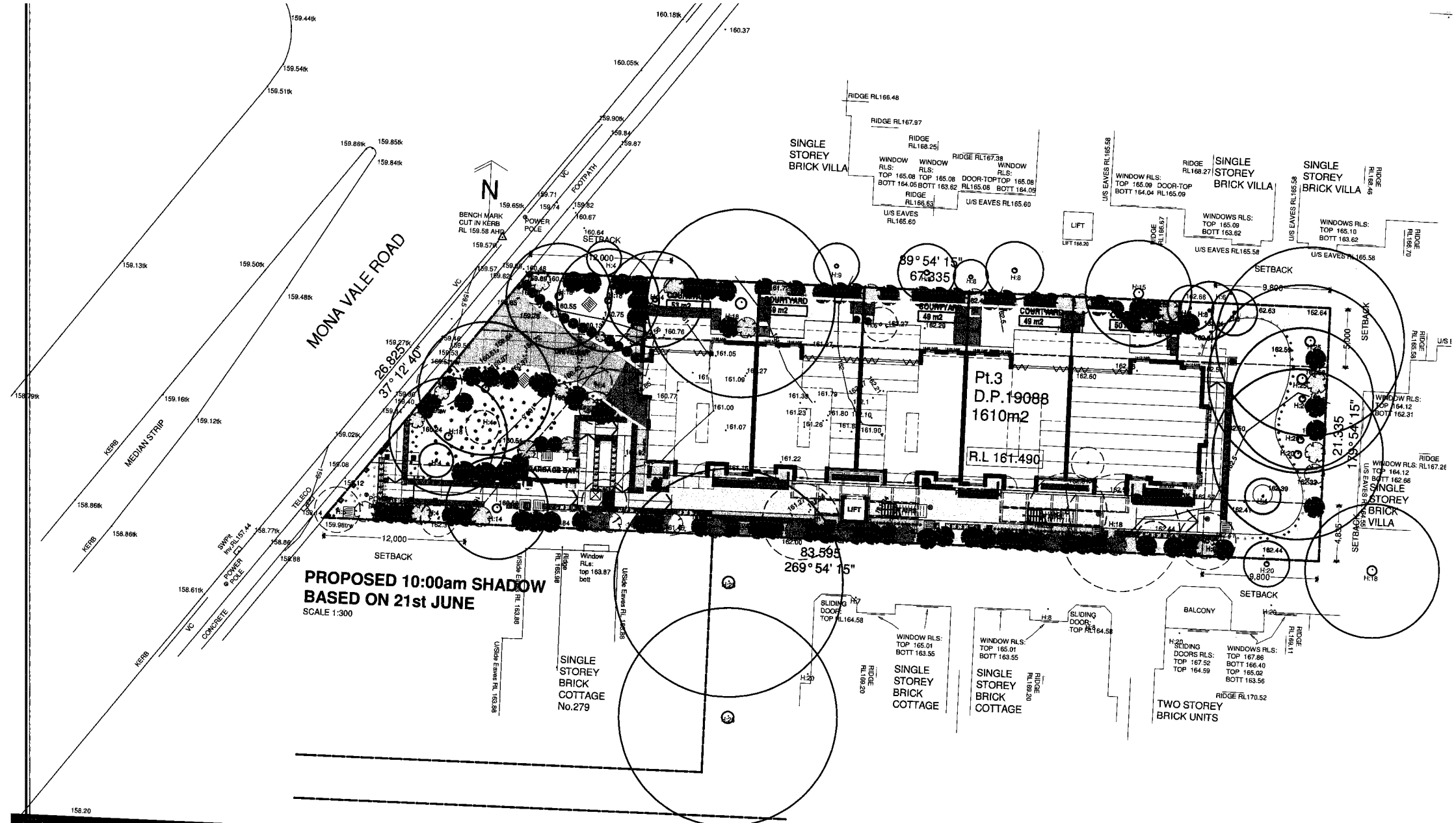
**PROPOSED RESIDENTIAL
DEVELOPMENT**

KU-RING-GAI COUNCIL

SHADOW 9:00am

**281 MONA VALE Rd.
ST IVES**

Mr. HADDAD



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ENERGY SMART DESIGN
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MACHINES WHERE POSSIBLE.

AMENDED PLANS

ISSUE

DESCRIPTION
AMENDMENTS

20-03-2006

DATE

PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT

LOCAL GOVERNMENT AREA
KU-RING-GAI COUNCIL

DRAWING TITLE:
SHADOW 10:00am

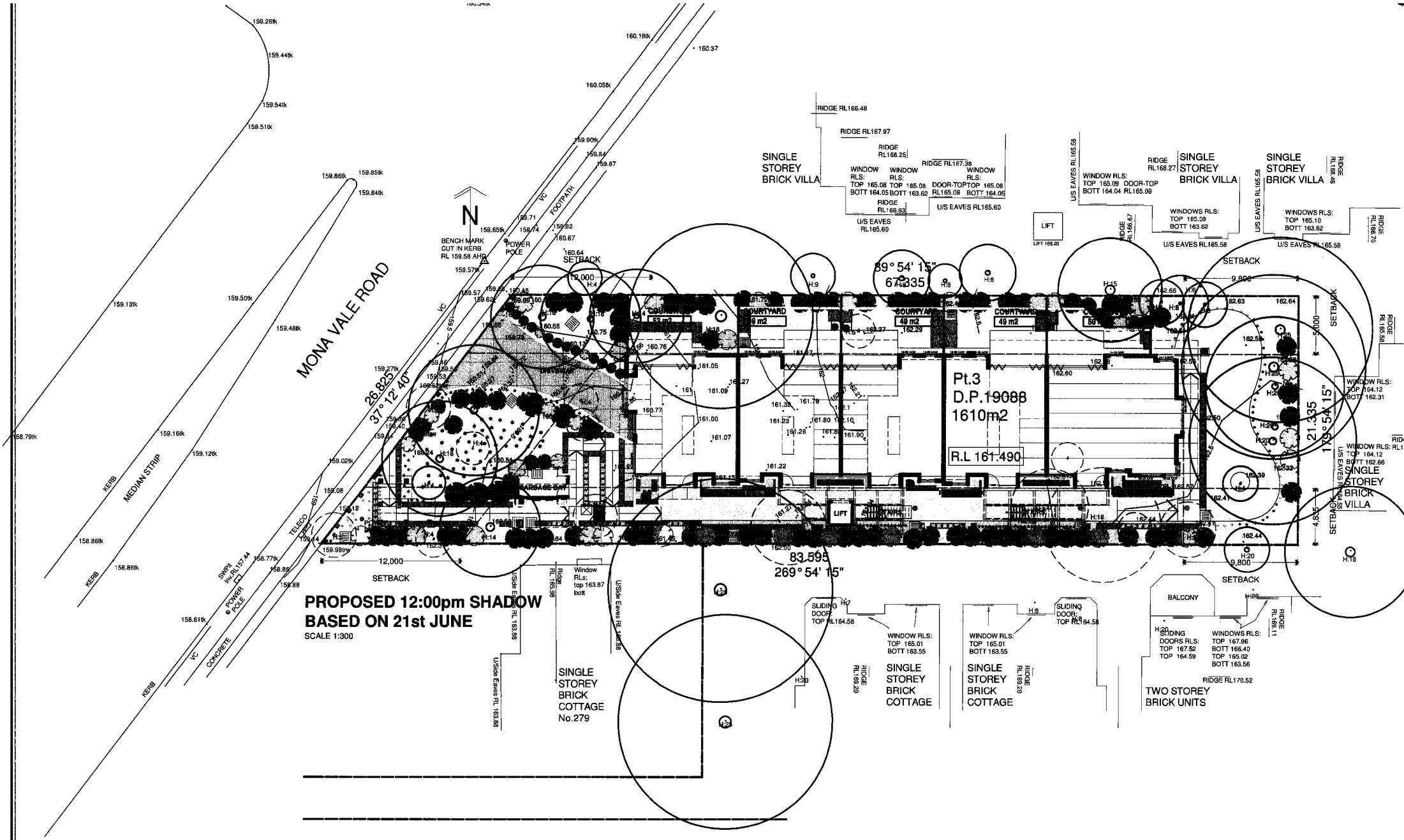
DRAWN: MICHAEL
DATE: 28-10-05
DESIGNED: FRANK

SCALE: 1:300

AT:
281 MONA VALE Rd.
ST IVES

FOR:
Mr. HADDAD

DRAWING



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THESE NOTES MUST BE READ IN CONJUNCTION WITH COLOUR SELECTION FOR ADDITIONAL DETAILS ON APPLIANCES. PO ITEMS & COLOURS SHOWN SIZES SHOWN ON PLAN ARE INSIDE DIMENSIONS. SHOWER SCREENS TO BE FITTED ON INSIDE OF HOBB BULKHEADS MAY BE REQUIRED TO ACCOMMODATE DRAINAGE LINES AND STEEL BEAMS POSITION TO BE DETERMINED ON SITE.
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ENERGY SMART DESIGN

AAA RATED WATER CONSERVATION DEVICES INCLUDING RAINWATER TANKS SHOWER HEADS WATER TAP FLOW REGULATORS, DUAL FLUSH TOILETS & CISTERNS AND COMPLIANT HOT WATER SYSTEMS WITH MINIMUM GREENHOUSE SCORE OF 3.5 STARS ARE TO BE USED IN THIS DEVELOPMENT. OCCUPANTS ARE TO BE ENCOURAGED TO USE AAA RATED DRY WASHING MACHINES AND COLD CLOTHING WASHING.

PROJECT

**PROPOSED RESIDENTIAL
DEVELOPMENT**

LOCAL GOVERNMENT AREA

KU-RING-GAI COUNCIL

DRAWING TITLE

SHADOW 12:00pm

DRAWN

DATE

DESIGNED

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DRAWING NO

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JOB NO

AT

**281 MONA VALE Rd.
ST IVES**

FOR

Mr. HADDAD

B

AMENDED PLANS

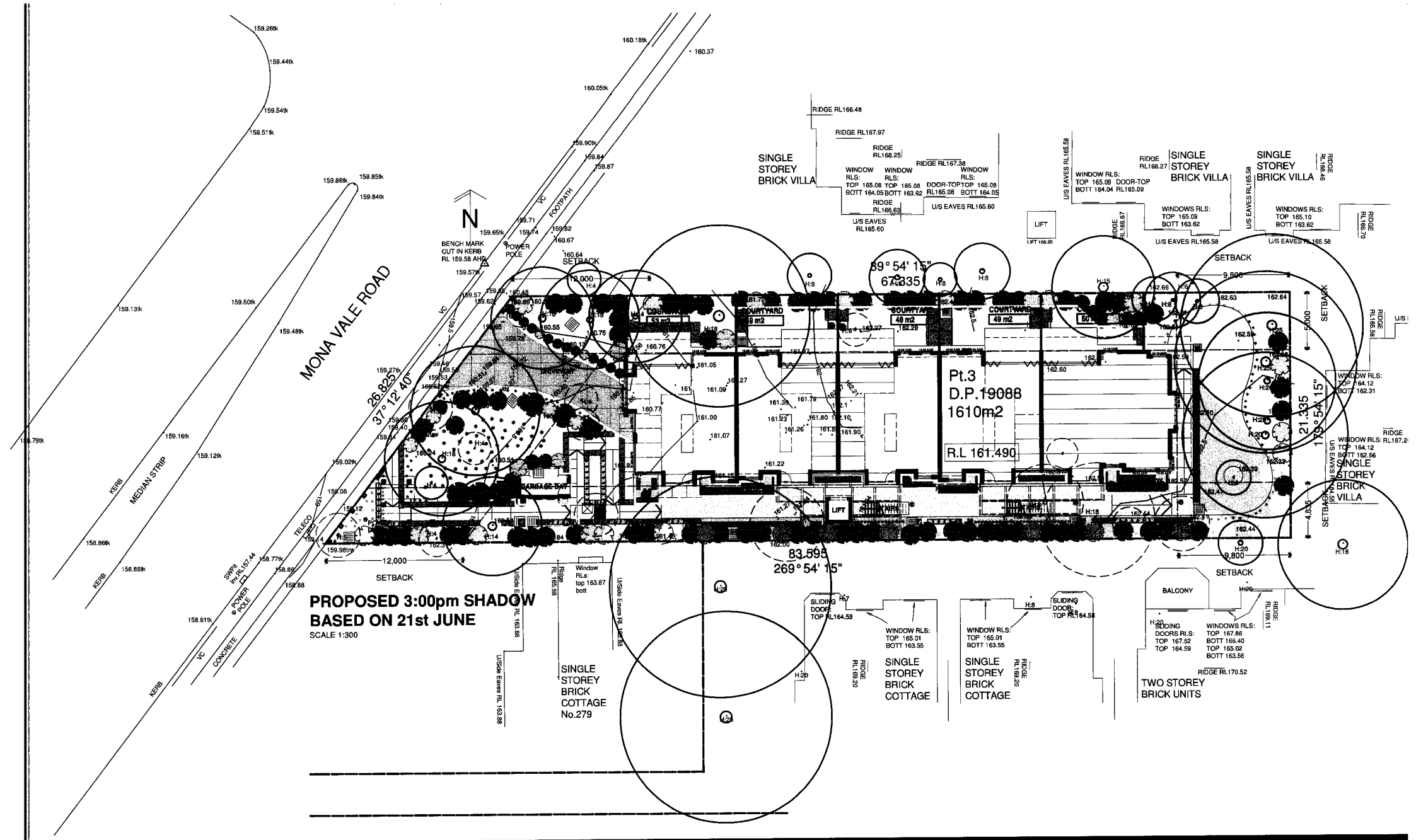
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DESCRIPTION

DATE

AMENDMENTS



**PROPOSED 3:00pm SHADOW
BASED ON 21st JUNE**
SCALE 1:300

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PROJECT:	PROPOSED RESIDENTIAL DEVELOPMENT	AT:	281 MONA VALE Rd. ST IVES
LOCAL GOVERNMENT AREA:	KU-RING-GAI COUNCIL	FOR:	Mr. HADDAD
DRAWING TITLE:	SHADOW 3:00pm	DATE:	20-03-2006
DRAWN:	DATE:	DESIGNED:	DATE:
SCALE:	FOR:	DRAWING ID:	ISSUE:
JOB NO:			

ISSUE	DESCRIPTION	DATE

DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	1 KINTORE STREET, WAHROONGA - DEMOLITION AND CONSTRUCTION OF SENIORS LIVING DEVELOPMENT COMPRISING 4 DWELLINGS
WARD:	Wahroonga
DEVELOPMENT APPLICATION N^o:	DA0470/05
SUBJECT LAND:	1 Kintore Street, Wahroonga
APPLICANT:	The Turnbull Group Pty Ltd
OWNER:	Robert Fechter
DESIGNER:	Hugh Slayter and Associates
PRESENT USE:	Residential
ZONING:	Residential 2(c)
HERITAGE:	Within UCA 28
PERMISSIBLE UNDER:	SEPP (Seniors Living) 2004
COUNCIL'S POLICIES APPLICABLE:	DCP 47 Water Management, DCP 43 Car Parking, DCP 31 Access, DCP 40 Waste Management and DCC 1/99 Housing for Older People and People with a Disability
COMPLIANCE WITH CODES/POLICIES:	Yes
GOVERNMENT POLICIES APPLICABLE:	SEPP (Seniors Living), SEPP 55, SREP 20
COMPLIANCE WITH GOVERNMENT POLICIES:	Yes
DATE LODGED:	17 May 2005
PROPOSAL:	Demolition and construction of seniors living development comprising 4 dwellings
RECOMMENDATION:	Approval

Item 4

DEVELOPMENT APPLICATION N^o	DA0470/05
PREMISES:	1 KINTORE STREET, WAHROONGA
PROPOSAL:	DEMOLITION AND CONSTRUCTION OF SENIORS LIVING DEVELOPMENT COMPRISING 4 DWELLINGS
APPLICANT:	THE TURNBULL GROUP PTY LTD
OWNER:	ROBERT FECHTER
DESIGNER	HUGH SLAYTER AND ASSOCIATES

PURPOSE FOR REPORT

To determine Development Application No.470/05.

EXECUTIVE SUMMARY

The proposal involves the demolition of an existing single storey dwelling and the construction of a development comprising 2 x 2 attached 2 storey SEPP (Seniors Living) dwellings, landscaping and associated infrastructure works.

HISTORY

Site history:

The site has historically been developed and used for low density residential purposes. There is no recent development history of relevance to the proposal.

Development application history:

17 May 2005:	Application lodged.
30 May 2005:	Request for additional information (geotechnical report) sent to the applicant.
8 June 2005:	Public notification of application.
22 February 2005:	Council officers informed the applicant of concerns relating to traffic, tree removal and deep soil landscaping.
23 November 2005:	Amended plans/information lodged.
6 December 2005:	Public re-notification.
22 February 2006:	Further request for amendments (tree retention, deep soil zones).
16 March 2006:	Amended plans received.
30 March – 13 April 2006:	Public re-notification of amended plans.

THE SITE AND SURROUNDING AREA

Zoning:	Residential 2(c)
Visual Character Study Category:	1920-1945
Lot Number:	A
DP Number:	656258

Item 4

Area:	1655.8m ²
Side of Street:	Southern side of Kintore and western side of Grosvenor
Cross Fall:	2m from south to north-west
Stormwater Drainage:	Street
Heritage Affected:	Yes, within UCA 28
Integrated Development:	No
Bush Fire Prone Land:	No
Endangered Species:	No
Urban Bushland:	No
Contaminated Land:	No

The site

The site is rectangular, with frontages of 21.07m to Kintore Street and 48.375m to Grosvenor Street. The site measures 1655.8m² and is generally level, with a cross fall of 2m from the southern boundary towards the north-western corner (Grosvenor and Kintore Streets).

The site contains a two storey dwelling house, with detached garage and carport. Vegetation exists around the periphery of the site and the built improvement is obscured by planting and a significant tree canopy. Numerous mature, native trees exist along the road reserve. These trees contribute to the landscaped and low density visual character of the neighbourhood.

Surrounding development

The site is located within a characteristically low density area. The local housing stock is mixed in style and scale and is generally recessive, behind dense landscaping. Existing development along Kintore and Grosvenor Streets comprises a mixture of one and two storey dwellings. Dwellings are predominantly set back between 15-17m along Kintore Street. Dense landscaping/hedging/understorey and tall canopy trees form the dominant visual feature of the streetscape. Fencing along Kintore Street is generally low in height. Higher, more solid, fences exist along Grosvenor Street.

No.'s 9, 73, 38-42 and 29B Kintore Street and No.'s 15, 31, 81, 93, 16, 18, 28, 32, 82 and 102 Grosvenor Street are listed as local heritage items under the Ku-ring-gai Planning Scheme Ordinance (KPSO). These items are located within proximity of the site. The heritage item located at 28 Grosvenor Street is directly opposite the proposed development.

The site is adjoined to the south and east by large 2 storey dwelling houses.

THE PROPOSAL

The proposal, as amended, involves the demolition of an existing dwelling and the construction of 4 dwellings under SEPP (Seniors Living), landscaping, fencing and engineering works.

The dwellings are to be constructed of rendered and painted face brick, with painted timber verandahs and fascias, cedar louvres, a concrete tile roof, colourbond steel guttering and powdercoated aluminium window and door frames. Applied finishes are generally beige, white and grey with a charcoal coloured roof.

Item 4

A new front fence is also proposed and will be a low 600mm sandstone structure to match the existing.

On 26 August 2005 Council officers advised the applicant of concerns in relation to unacceptable/unsafe driveway access, excessive scale, insufficient tree retention and insufficient setbacks and deep soil zones. Consequently, the proposal was amended on 16 November 2005. The amended plans reduced the density of the development to four dwellings in order to provide car access and parking at grade, to reduce scale and increase deep soil zones in accordance with Council's requirements.

On 22 February 2006 Council officers advised the applicant of concerns relating to the impacts of driveway location/excavation and on-site detention on trees and inadequate deep soil zones. Amended plans were received on 16 March 2006 relocating driveway areas clear of Trees 10 and 11, providing flexible driveways to protect Trees 1 and 17, increasing the building set back to Tree 24 and increasing deep soil zones. The amended plans also retained the existing shrubs along the Kintore Street frontage and additional planting was provided on the landscape plan to the satisfaction of Council's Landscape Officer.

CONSULTATION - COMMUNITY

In accordance with Council's Notification DCP, owners of adjoining properties were given notice of the original application and subsequent amendments.

Original Scheme

Thirty-three (33) objections received.

Amended Plans (November 2005)

Thirty (30) objections.

Objections were received from the following in response to the first two (2) notifications:

Robertson and Hindmarsh Pty Ltd on behalf of residents of 5, 6, 8, 11, 9, 10, 12, 14, 23, 29, 29A and 38 Kintore Street, 49 and 38 Lochville Street, 8, 29 and 45 Braeside Street, 7, 11, 17, 29, 31, 32 and 42 Grosvenor Street and 146 Eastern Road, Wahroonga

Ian and Susan Maxton - 32 Grosvenor Road, Wahroonga

Mike Healy - 26 Grosvenor Road, Wahroonga

Lillian Armitage - 36 Lochville Street, Wahroonga

Brian and Anne Bartlett - 48 Grosvenor Street, Wahroonga

N J and S E Nolan - 7 Grosvenor Street, Wahroonga

Paul M Cook - 97 Boundary Road, Wahroonga

L J and M J Perrett - 12 Braeside Street, Wahroonga

John and Sally Asnicar - 14 Kintore Street, Wahroonga

Roger and Judith Lipscomb - 17 Grosvenor Street, Wahroonga

Yvonne Bain - 8 Wahroonga Avenue, Wahroonga

Item 4

Daniel and Joumana Sukari – 3 Kintore Street, Wahroonga
Peter Berkley – 12A Water Street, Wahroonga
Andrew Hestelow – 41 Braeside Street, Wahroonga
Graham and Marjorie Coulsen – 34 Kintore Street, Wahroonga
Charles and Margaret Sharpe – 24 Water Street, Wahroonga
B A and P M Pointon – 45 Braeside Street, Wahroonga
Robert and Christine Bruce – 41 Kintore Street, Wahroonga
Wu Family – 5 Kintore Street, Wahroonga
Rowe and Rhonda Kelly – 1 Braeside Street, Wahroonga
Megan Allsop – PO Box 219 Wahroonga
Dr JVV and K A Read – 33 Kintore Street, Wahroonga
Simon and Anne Olding – 16 Mona Street, Wahroonga
Ingham Planning on behalf of 43 affected residents
Perfect Outdoors on behalf of Moira Hill – 8 Kintore Street, Wahroonga
L and A Kennedy – 53 Kintore Street, Wahroonga
Brendon and Ginetta Shrifffer – 7 Kintore Street, Wahroonga
David and Diane Gold – 41a Kintore Street, Wahroonga
Claudine Parr – 42 Water Street, Wahroonga
Dr N P J and Mrs L A Stamford – 16 Bareena Avenue, Wahroonga
Brian Wright – 9 Kintore Street, Wahroonga
Brent Hudson – 50 Kintore Street, Wahroonga
Mr W S Claros – 21 Braeside Street, Wahroonga
Douglas and Jennifer Meares – 42 Grosvenor Street, Wahroonga
L E Tutt – 29 Kintore Street, Wahroonga
Lori and John Feely – 6 Kintore Street, Wahroonga
G and R Ward – 46 Kintore Street, Wahroonga
D C W and M Hill- 8 Kintore Street, Wahroonga
David and Karen Peaston – 10 Kintore Street, Wahroonga
A W and D J Hirst – 29 Grosvenor Street, Wahroonga
J A Hungerford – 31 Grosvenor Street, Wahroonga
Thomas Kennedy – 12 Kintore Street, Wahroonga
B A and P M Pointon – 45 Braeside, Wahroonga
Peta Edwards – 52 Kintore Street, Wahroonga
J W and P Mitchell – 10 Braeside Street, Wahroonga
E R and B C Kennedy – 65a Kintore Street, Wahroonga

Further Amended Plans (February 2006)

Thirty two (32) objections were received:

B A and P M Pointon - 45 Braeside Street, Wahroonga
Peta Edwards – 52 Kintore Street, Wahroonga
M W S Claros – 21 Braeside Street, Wahroonga
Brent Hudson – 50 Kintore Street, Wahroonga
K L Moore – 22 Kintore Street, Wahroonga
Brian L Bolton – 4 Braeside Street, Wahroonga
Christopher Capelle – 18 Kintore Street, Wahroonga

Item 4

Ruth Wetmore – 47 Kintore Street, Wahroonga
Judith Anne Hungerford – 31 Grosvenor Street, Wahroonga
N J and S E Nolan – 7 Grosvenor Street, Wahroonga
Lori and John Feely – 6 Kintore Street, Wahroonga
Dianne and Ian Grant – 15 Bareena Avenue, Wahroonga
D C W and M Hill – 8 Kintore Street, Wahroonga
M Donaldson – 8 Braeside Street, Wahroonga
R E Kennedy, 12 Kintore Street, Wahroonga
Scott J Barnett – 11 Kintore Street, Wahroonga
Barry and Pamela Foster – 15 Kintore Street, Wahroonga
Dr N P J and L A Stamford – 16 Bareena Avenue, Wahroonga
Roger and Judith Lipscomb – 17 Grosvenor Street, Wahroonga
R and J Lenehan – 28 Grosvenor Street, Wahroonga
Douglas and Jennifer Meares – 42 Grosvenor Street, Wahroonga
Janet and Owen Thomas – 40 Grosvenor Street, Wahroonga
Ian and Susan Maxton -32 Grosvenor Road, Wahroonga
Brian Wright – 9 Kintore Street, Wahroonga
E R and B C Kennedy- 65A Kintore Street, Wahroonga
John and Sally Asnicar – 14 Kintore Street, Wahroonga
Marisa and David Johnston – 6 Grosvenor Street, Wahroonga
Roberston and Hindmarsh – 26 Station Street, Naremburn on behalf of local residents
Patrick and Margaret Sutcliff – PO Box 1096, Wahroonga
Graham and Shirley Lightfoot – 6 Wahroonga Avenue, Wahroonga
Dr R Lloyd Williams – 146 Eastern Road, Wahroonga
David and Karen Peaston – 10 Kintore Street, Wahroonga

The objections to the original scheme and subsequent amendments raised the following issues:

Impact on heritage items

Concern was raised over the impact of the development upon the heritage character of Wahroonga, Urban Conservation Area No. 28 and on heritage properties opposite the site at 28 and 32 Grosvenor Street.

Concern was raised over the impact of the development on the landscaped character of the locality. Concern related particularly to the impact of the development on the landscaped setting, visual impact/dominance of the proposed built form (4 houses in place of 1), impact on the public domain and impact on heritage items in the vicinity.

The site is located within Urban Conservation Area 28 and Nos. 28 and 32 Grosvenor Street, located opposite the site, are classified as a contributory heritage items.

The amended proposal will not have any direct impact on any adjoining or surrounding heritage items. The proposed yield has been reduced from 7 to 4 dwellings and the development form is now townhouses/villas rather than a residential flat building as originally proposed. The proposed setbacks and landscaping have been modified to retain maximum visually significant canopy trees and shrubs along the Kintore and Grosvenor street frontages, diminishing visual impact of built

Item 4

form within the streetscape. The existing low stone fence is proposed to be retained along the Kintore Street frontage and continued along the Grosvenor Street frontage.

Subject to conditions, the built form and landscaping proposed maintains the character of the area and preserves the integrity of the heritage items. Additional discussion is provided under *Heritage Advisor's* comments below.

Removal of understorey planting and tall trees, effect on biodiversity, impact of excavation on trees and ecological impacts

Objection was raised to the removal of trees and shrubs on the site necessitated by the development, particularly the number and types of trees proposed to be removed. Local residents considered that the development would diminish the 'heritage, treed streetscape' and impact on mature trees which provide habitat for local wildlife.

The proposed development will require removal of some significant trees. The proposed density and setbacks have been amended to retain maximum landscaping along the street frontages and side and rear boundaries and to accommodate replenishment planting to screen the development from the street.

The amended proposal involves the retention of 4 significant trees (Trees 1, 10, 11 and 17) as recommended by Council's Landscape Development Officer. The ratio of deep soil landscaping to built upon area has been amended to 30% of the site (refer to discussion of SEPP (Seniors Living)) which will provide opportunity tall tree planting and deep soil zones.

Subject to conditions, the proposal is consistent with the aims of SEPP Seniors Living in relation to maintaining the landscaped character of the area and the streetscape. The amended plans have been endorsed by Council's Landscape Development Officer.

The development is inappropriate, out of context with scale and pattern of surrounding development and 'garden suburb' and will result in streetscape impacts

Residents expressed a sense of pride and identity with the area renowned for its garden, architectural and heritage aesthetics. Objectors considered the proposed development to be incompatible with the surrounding pattern of low density family housing, in terms of its scale and density. Concern was expressed over the dominance of garaging and driveways within the streetscape and the removal of canopy trees.

The proposal originally involved the demolition of the dwelling and the construction of 7 dwellings with basement car parking. Although the proposal generally complied with the numerical development standards of SEPP (Seniors Living), Council officers considered the scheme to be unacceptable with respect to scale, density, tree removal, visual dominance and access. Consequently, the application has been amended by the applicant.

The second amendment reduced the number of dwellings from 7 to 4. The third/latest amendment changed the proposed driveway design/construction and building setbacks to allow the retention of

Item 4

4 mature trees along the Grosvenor and Kintore Street frontages, changes to the proposed landscaping/deep soil zone.

Although the proposed development is higher in density than surrounding developments, it is compliant with the standards of the SEPP (Seniors Living). The design has been amended to reflect the low density and landscaped character of the area in accordance with the objectives of the policy (refer to discussion of SEPP (Seniors Living)). Subject to conditions, the current proposal is considered acceptable in relation to providing a mix of housing whilst preserving the essential elements of the area's character.

Non-compliance with SEPP (Seniors Living) with respect to setbacks, density, scale/massing, area character and tree retention

The proposal complies with SEPP (Seniors Living) as is confirmed in the assessment of the development against statutory controls and the *Compliance Table* below.

Increase in traffic volumes, increased parking and traffic congestion on local network and impact on pedestrian and vehicular safety, inadequate provision of on site parking for visitors

Concern was raised by residents in relation to the impact of the increased dwelling density on local traffic volumes and in terms of pedestrian and vehicular hazards. It was considered that the proposed driveways are in unsafe locations and that insufficient on-site parking provision was made for visitors, placing additional pressure on street parking.

Council's Development Engineer has assessed the traffic impacts of the proposal and made the following comment:

Traffic

The property shares a vehicular crossing with the neighbour at 3 Kintore Street. This is to be retained for the use of Unit 1 only, which is acceptable. Three other entry driveways are to be constructed along the Grosvenor Street frontage. Since the boundary is 48 metres long and Council requires a minimum frontage of 18 metres for two crossings, it is considered that three will be acceptable in this case. Each is for the use of one unit only.

Internal garbage collection is not required since the number of units no longer exceeds six.

A construction and traffic management plan will be required prior to commencement of works, as well as photographs of the road and Council infrastructure outside the site.'

Part 2, Clause 20 of SEPP (Seniors Living) requires that the development is designed and restricted by title to elderly and disabled persons (**Condition No. 35**). Part 2 Clause 26 (site related requirements/proximity to public transport) anticipates low reliance on car transport and requires demonstrated availability of bus public transport services. Refer to the discussion of SEPP (Seniors Living) under statutory controls. The development complies with the SEPP in relation to car parking provision.

Item 4

The RTA Guidelines for Traffic Generating Developments stipulates that aged and disabled housing generates 1-2 daily vehicle trips per dwelling. Each proposed dwelling has a separate driveway and garaging/driveway hardstand. The additional vehicle movements are considered minimal and the proposed driveways are located in appropriate locations, distributing traffic evenly from the site to the local road network.

The proposed development is not considered to place unreasonable pressure on local traffic. Appropriate visitor parking may be accommodated on the individual driveway areas.

Oversupply of SEPP 5/SEPP (Seniors Living) housing and planning precedent

Objectors claim that recently constructed SEPP 5 and SEPP (Seniors Living) developments in Wahroonga have not been sold and that there is an oversupply. There is concern that the proposal establishes a precedent for similar types of densities/developments in characteristically low density areas within Ku-ring-gai and that the development involved a 'spot rezoning'.

The site is zoned Residential 2(c) and the proposal does not involve a spot rezoning. SEPP (Seniors Living) is a state planning instrument which applies to areas within New South Wales where land is 'zoned for urban purposes' on which dwelling houses, flat buildings, hospitals and special uses (churches education establishments, schools etc) are permissible.

The marketing and sale of the development is not a planning consideration under Section 79C of the Environmental Planning and Assessment Act, 1979. The SEPP allows the development of accessible housing where a site has appropriate access to services, transport and medical facilities. The development does not set a precedent for this type of development within Ku-ring-gai.

Loss of privacy

Concern was raised over loss of privacy for directly adjoining properties.

Under Clause 32 of SEPP (Seniors Living), development should consider the acoustic and visual privacy of surrounding properties through the appropriate location and design of buildings, windows, balconies and appropriate vegetation and screening devices.

This issue is detailed within the consideration of SEPP (Seniors Living) below.

Clause 38 stipulates a maximum building height and envelope to protect adjoining development. Clause 38(b) restricts a SEPP (Seniors Living) development to 8m or 2 storeys in height. Subclause (c) requires a building located in the rear 25% of the site to be no more than 1 storey.

The proposed dwellings do not exceed a height of 2 storeys. Proposed Unit 3, located to the rear, adjoining No. 19 Grosvenor Road is single storey in height for the rear 25% section of the site. The second storey of this dwelling is set back 13.5m from the rear boundary or 16m from the north-facing elevation of the rear adjoining dwelling. One small bedroom window is proposed at first floor level of Unit 3. Direct privacy impacts to the rear will not result given the location and size of this window and the existence of landscaping and fencing along the rear boundary.

Item 4

The development adjoins a recently constructed 2 storey residence to the east. The ground floor living area of proposed Unit 1 is located 4.5m the eastern side boundary. The family room doors for this dwelling open out to the south. Ground level privacy between dwellings will be protected by and 2.5m high fence and landscaping.

The first floor of proposed Unit 1 is stepped, set back between 4.5m and 7.5m from the eastern boundary. Two small bedroom windows are proposed along the eastern elevation and are located in the corners of Bedrooms 3 and 4, preventing direct sight lines across to the east. The first floor of Unit 3 is set back 11.9m, with one small bedroom window located at the corner of the northern and eastern elevations. It is considered that adequate separation is provided and privacy impacts will not result.

Kintore and Grosvenor Streets adjoin the site to the north and west and the development will not compromise visual or acoustic privacy to residential properties in these directions.

Inadequate services, public transport and infrastructure to support the development

Objectors claimed that the site is not within 400m of a reliable/frequent bus service and not within close walking distance of medical and retail facilities.

The site is within 400m of bus stops for the Shorelink 575 and 576 bus routes. Route 576 provides at least 1 service between 8am and 12pm per day and at least 1 service between 12pm and 6pm each day in accordance with Clause 25 of SEPP (Seniors Living). There are also weekend services along route 575.

Condition Nos 14 and 85 will ensure the appropriate upgrading of utility services for the development. The SEPP requires the provision of a Section 73 certificate for the development, ensuring adequate provision of water services (refer discussion of Clause 27 SEPP (Seniors Living)). Sufficient infrastructure is available to service the development.

The design and layout represents poor site planning and does not maximise energy efficiency, solar access and natural shading. Inadequate provision is made for garbage disposal and recycling

Council's Development Engineer has assessed the proposal as being satisfactory with respect to garbage collection.

As detailed within this report, the development is complies with the design requirements of SEPP (Seniors Living) and the Development Control Code for Housing for Older People and People with a disability in relation to energy efficiency and solar performance. Further assessment is provided under of *SEPP (Seniors Living) and the Development Control Code for Housing for Older People and People with a Disability* below.

CONSULTATION – WITHIN COUNCIL

Item 4

Engineering

Council's Development Engineers, Team Leader, Kathy Hawken, has assessed the proposal and made the following comment:

Traffic

The property shares a vehicular crossing with the neighbour at 3 Kintore Street. This is to be retained for the use of Unit 1 only, which is acceptable. Three other entry driveways are to be constructed along the Grosvenor Street frontage. Since the boundary is 48 metres long and Council requires a minimum frontage of 18 metres for two crossings, it is considered that three will be acceptable in this case. Each is for the use of one unit only.

Internal garbage collection is not required since the number of units no longer exceeds six.

A construction and traffic management plan will be required prior to commencement of works, as well as photographs of the road and Council infrastructure outside the site.

Stormwater drainage

The stormwater concept plans show retention and re-use of roof water as well as on site detention. This is satisfactory and in accordance with DCP 47.

Access

The access report confirms that the site is within 400 metres of a bus stop. Some kerb ramps may need to be upgraded. Details can be submitted prior to Construction Certificate issue.

The application is supported subject to conditions.

The application is considered acceptable, subject to engineering conditions which are included in the recommendation.

Landscape

Council's Landscape Officer, Geoff Bird, has assessed the application and made the following comment:

The proposed amendments are considered satisfactory in relation to landscape issues. The amendments are as follows;

Tree removal

No objection is raised to the removal of the following trees.

Tree No / Species / Health & Condition

Tree 2 / Eucalyptus racemosa (Large Scribbly Gum) / 20 metres high in fair condition

Tree 6 / Ulmus sp. (Elm) / 25 metres high in good condition

Item 4

Tree 7 / Ulmus sp. (Elm) / 12 metres high in good condition
Tree 8 / Eucalyptus racemosa (Large Scribbly Gum) / 20 metres high in fair condition.
Tree 9 / Lophostemon confertus (Brushbox) / 25 metres high in fair condition
Tree 12 / Eucalyptus racemosa (Large Scribbly Gum) / 20 metres high in fair condition
Tree 15 / Liquidambar styraciflua (Liquidambar) / 14 metres high in poor condition
Tree 21 / Fraxinus sp / 18 metres high in fair condition
Tree 22 / Eucalyptus racemosa (Large Scribbly Gum) / 20 metres high in fair condition
Tree 23A & B / Syncarpia glomulifera (Turpentine) / 25 metres high in good condition
Tree 27 / Syncarpia glomulifera (Turpentine) / 20 metres high in fair condition, smothered in ivy
Tree 29 / Acer negundo (Box Elder) / 10 metres high in fair condition
Tree 30 / Acer negundo (Box Elder) / 10 metres high in fair condition
Tree 32 / Betula pendula (Silver Birch) / 7 metres high in fair condition
Tree 33 / Brachychiton acerifolius (Flame Tree) / 10 metres high in poor condition

Recommended tree removal

The plans shall indicate the removal of Tree 28 – Eucalyptus racemosa (Large Scribbly Gum) as the main branch has failed and is considered unstable.

Tree replenishment

Ten (10) existing trees will be retained and will comply with Clause 5.3.6 of DCP38.

Stormwater proposal

The stormwater plan by Toby Fiander & Associates, Plan No. TFA2944/01 and dated 10/05/05 is considered satisfactory in relation to landscape issues.

Deep soil zone

The DSZ complies with Clause 81d of the Seniors Living Policy

Landscape proposal

The landscape plan by Landscape Architectural Services, Drawing No. LPDA 06-86/1 and dated November 2005 is not satisfactory and will require the following amendments.

- *The 1200mm high picket fence shall be deleted.*
- *The existing healthy mature shrubs along the northern and western boundaries shall be individually noted on the plan to be retained and the replanting of additional species reduced or changed to suit.*
- *The plan shall indicate the removal of Tree 28.*
- *The plan shall note the use of medium to large pebbles as mulch along the eastern boundary as this area will be a stormwater flow path. No ground covers such as Myoporum or Trachelospermum shall be planted as they will interrupt the overland flow.*

Item 4

- *The proposed cultivar that will reach a minimum height of 3 to 4 metres of Syzygium paniculatum (Brush Cherry) shall be indicated.*

The above amendments are incorporated in **Conditions Nos 3-5, 64-69 and 77-82.**

Heritage

Council's Heritage Advisor, Paul Dignam, has assessed the application and made the following comments:

'The application has been amended in the following ways:

- *4 new dwellings rather than 7 dwellings as proposed in the earlier application;*
- *In form, the dwelling are "town houses" as opposed to "residential flat building" as proposed on the previous application;*
- *On grade car parking, not basement parking;*
- *Common open areas have been removed and each dwelling has its own courtyard area on the ground floor;*
- *Setbacks are improved;*
- *Lifts have been removed and all dwellings have a separate ground floor entrance with upper floor containing the additional bedroom accommodation with living areas on the ground floor;*
- *The upper floor is smaller;*
- *Facades propose similar materials and architectural elements;*
- *First floor balconies have been remove apart from the balcony to unit No. 1; and*
- *A number of trees will be retained around the perimeter of the site.*

In my earlier memo, I made the following conclusion:

'I do not object to demolition of the subject building provided archival recording is undertaken as it is graded as contributory item in UCA 28.

In my opinion, the impacts on the nearby heritage items are minor and related to a minor loss of context and setting. There would be no substantial loss of heritage significance to No. 28 Grosvenor Street or 32 Grosvenor Street resulting from this development.

The proposed development would impact on the streetscape of Kintore Street, Grosvenor Street and UCA No. 28, primarily because it is not consistent with the existing setbacks, density gardens and landscapes and does not have a harmonious relationship with the low intensity of nearby development as it will read as an attached 'flat type' buildings.

In my opinion increase setbacks, unifying the facades to read as two separate distinct buildings rather than attached 'flat type' dwellings and less intensive development on

the site would result in an acceptable impact on the streetscape of Kintore Street, Grosvenor Street and UCA 28.'

Impact on nearby heritage items

In my earlier memo, I did not consider that the impact on the nearby heritage items at No. 28 and No. 32 Grosvenor Street was sufficient to refuse the application. This revised application has not resulted in additional impacts and is considered satisfactory.

Impact on streetscape and UCA

The house is similar in scale to other houses in the area, is graded as contributory but is not considered remarkable. The contribution of the existing site to the UCA and streetscape is primarily the contribution of its dense vegetation which visually screens the house and its garden setting.

The revised application proposes a 'town house' type development rather than a 'flat type' development as proposed in the first scheme. Parking is on grade rather than basement parking and a separate entry is provided to each dwelling rather than common foyer areas and lifts which is typical of 'flat development'. Some of the tall gums around the perimeter of the site will be retained, which would assist the contribution of the site to the UCA and streetscape. The majority of first floor balconies have been deleted and setbacks are slightly more generous.

In my earlier comments, I suggested that increased setbacks, unifying the facades to read as two separate distinct buildings rather than attached 'flat type' dwellings, and less intensive development on the site would result in an acceptable impact on the streetscape of Kintore Street, Grosvenor Street and UCA 28. Some of the suggestions have been followed.

The development would read as two large separate buildings rather than 'flat type' accommodation. The setbacks are marginally improved, however, are still not consistent with the setbacks in the existing streetscape and UCA. A number of trees around the perimeter of the site are to be retained. In my opinion, given the standards for Seniors Living, the applicant has tried to develop a workable scheme. However, the fact remains that this type of development does not exist in the streetscape and UCA 28 and conflicts with it mainly due to the intensity of the building on the site, lack of garden setting, the setbacks and conflict with the predominant residential pattern which is single residential houses on medium to large lots with established gardens and generous front and side setbacks.

Conclusions and recommendation

Demolition of the existing house is acceptable provided archival recording is undertaken prior to demolition.

Item 4

Impacts on the nearby heritage items are related to loss of context and setting. In my opinion, the revised application would have minor and acceptable impacts on the significance of the nearby heritage items.

The revised scheme is an improvement over the first scheme, however, the setbacks and intensity on the site would still conflict with the existing streetscape and UCA. I note that retention of some of the perimeter trees would assist in providing a better relationship with the streetscape and UCA.'

The proposal will not directly impact upon any heritage items. The proposal has been amended to increase setbacks and to retain additional trees and increase deep soil zones within the front setback. The amended scheme maintains the landscaped curtilage and is generally consistent with the existing neighbourhood character. The proposed development is not considered to unreasonably impact upon the heritage character of the area or the streetscape.

PROVISIONS OF RELEVANT LEGISLATION

State Environmental Planning Policy (Seniors Living) 2004

Part 1 - General

Clause 2 (c) - Aims of policy:

Housing is to be of good design. Built form should be designed to respond to the characteristics of the site and surrounding built form (Clause 2(2)).

As discussed within this report, the proposal is considered to be of good design and responds to the site and area characteristics.

Part 2 – Key concepts

The proposal is defined as 'self contained dwellings' under Clause 13, which means that a dwelling, whether attached or not, provides housing for seniors or people with a disability where private facilities for cooking, sleeping and washing are included in the building.

Part 3 Development for seniors housing

Part 2- Site related requirements

Pursuant to Clause 16, the proposal provides an opportunity for housing to be located and designed particularly suited to seniors who are independent and mobile or frailer and people with a disability (regardless of their age).

Under Clause 18, development consent is required from Ku-ring-gai Council for the carrying out of the proposed development.

Item 4

Clause 20 requires that Council, as the consent authority, to impose a condition limiting the development for the accommodation of seniors or people who have a disability, people who live within the same household with seniors or people who have a disability or staff employed to assist in the administration of and provision of services to housing provided under this policy.

Condition No. 35 is recommended in this regard.

Clause 25 - Location and access to facilities:

The Policy requires access to facilities and services to be located at a distance of not more than 400m from the site of the proposed development with an overall average gradient of not more than 1:14.

An access report was provided by Accessibility Solutions, which details compliance of the development with the access requirements of SEPP (Seniors Living). Two Shorelink bus services (575 and 576) operate through the area with bus stops in each direction are located approximately 125m from the site. The 576 provides 16 services between 6.39am to 6.48pm Monday to Friday. The 575 service provides 17 services between 9.23am and 9.23pm Monday to Friday, 11 services between 8.23am and 6.23pm Saturdays and 6 services between 8.23am and 6.23pm on a Sunday.

These services connect the site with Wahroonga, North Wahroonga and Turramurra, including stations, shops and medical facilities at Wahroonga and Turramurra. In this regard, the proposal is consistent with the requirements of the SEPP.

SEPP (Seniors Living) stipulates that facilities, either local services or transport links to local services, be provided with an overall average gradient of no more than 1:14. The proposed footpaths in the area have a maximum gradient of 1:30 along Grosvenor Street and 1:40 along Kintore Street. This provides a continuous path of travel for all units and accessibility for people using wheelchairs in accordance with the requirements.

Clause 27 – Water and sewer

Clause 27(1) SEPP (Seniors Living) states that Council must not consent to a development application unless satisfied by written evidence that the housing will be connected to a reticulated water system with adequate facilities for the removal or disposal of sewerage.

Hydraulic information has been provided with the application, detailing that satisfactory provision is made for water and sewer. Furthermore, **Condition No. 14** is recommended, requiring the upgrading of water services in accordance with Sydney Water requirements.

Part 3 – Design requirements

Clause 28 – Site analysis

Clause 28 requires the submission of a site analysis plan accompanied by a written statement detailing the site, surrounding development and how the proposed design responds to the site analysis. Clause 28(3) and (4) sets out in detail the required details to be included in the site analysis documentation.

A site analysis plan (Plan No. 49105.DA7) has been provided with the application and is consistent with the provisions of Clause 28.

Clause 30 – Design of residential development

SEPP (Seniors Living) requires that consent must not be granted unless Council is satisfied that adequate regard has been given to the following design principles (Division 2).

Division 2 Design principles

Clause 31 Neighbourhood amenity and streetscape

Pursuant to the SEPP, a development should recognise the desirable elements of the area character and

‘retain, complement and sensitively harmonise with any heritage conservation areas in the vicinity and any relevant heritage items that are identified in a local environmental plan’.

Development should maintain reasonable neighbourhood amenity and appropriate residential character by providing setbacks to reduce bulk and overshadowing, using building form and siting that relates to the topography of the site, reflecting building heights and street frontages compatible in scale with adjacent development. Planting must be sympathetic to the streetscape.

The proposal is a 1/2 storey townhouse development, surrounded by existing planting which is to be retained and supplementary landscaping. Whilst it is acknowledged that the proposal involves a denser dwelling yield than currently characteristic of the area, the proposal accords with the objectives of SEPP Seniors Living in relation to housing types and accessibility.

The proposed setbacks and landscaping have been modified to maximise the retention of existing trees and landscaped features. Each dwelling facade is uniquely articulated, with detailing which provides architectural relief and prevents monotony within the streetscape. The sandstone wall existing along Kintore Street is to be retained and continued along the Grosvenor Street frontage. This will contribute to the retention of the historical, garden streetscape elements of the area.

Subject to conditions, the architectural design and massing of development, landscaping and fencing references the dominant elements of the existing streetscape, consistent with Clause 31.

Clause 32 Visual and acoustic privacy

Clause 32 of SEPP (Senior Living) requires the development to consider the visual and acoustic privacy of neighbours and residents by appropriate site planning, location and design of windows and balconies, use of screening devices and landscaping and locating bedrooms away from driveways, parking area and paths.

Item 4

The issue of privacy has been discussed in detail under the *Submissions* section of the report. Sufficient building separation, fencing, landscaping and window placement is provided along the boundaries to prevent direct overlooking. Therefore, the proposal is consistent with Clause 32.

Clause 33 Solar access and design for climate

The design of development should provide adequate daylight to main living areas of surrounding neighbours and substantial areas of private open space. Site planning should ensure that dwelling design and landscaping reduces energy use and makes the best practicable use of natural ventilation, lighting by locating the windows of living areas in a northerly direction.

The proposed dwellings feature living/family areas with northern and eastern orientations, providing good sunlight access. Outdoor courtyard areas also face north and east so as to provide good residential amenity for occupants. Shadow diagrams were submitted with the application detailing that shadow cast by the development will not unduly impact upon the outdoor or indoor areas of adjoining properties and the development is acceptable in this regard.

Clause 34 Stormwater

Pursuant to SEPP (Seniors Living) development should control and minimise stormwater runoff and impacts. On-site detention should be provided.

Council's Development Engineer is satisfied that, subject to conditions, stormwater can be collected and drained via gravity. Refer *Development Engineer* comments above.

Clause 35 Crime prevention

Clause 32 of SEPP (Senior Living) requires the development to provide personal property security for residents and visitors and encourage crime prevention through site planning allowing views from inside each dwelling, general observation of the street, the site and the approaches to dwelling entries.

As noted previously, the proposal provides living areas which overlook approaches to the development. The front setbacks are open and well lit, preventing entrapment areas.

Clause 36 Accessibility

Clause 36 of SEPP (Senior Living) requires that attractive, safe, environments are provided for pedestrian and motorists with convenient access and parking for residents and visitors.

The proposed development provides separate pedestrian and vehicular access for each dwelling. Information has been provided by Project Planning and Associates detailing that the driver sight distance/visibility exceeds the minimum requirements specified in *AS 2890.1 (Parking Facilities)* and the *Austroads Guide to Traffic Engineering Projects*. Council's Development Engineer has assessed the accessibility aspects of the proposal and found it to be consistent with Clause 36.

Clause 37 Waste management

Item 4

The Statement of Environmental Effects states that a waste management facility has been provided at the entry of the development between the entry and exit driveways, details are provided on the site plan. Garbage bins will be stored behind the building line of each dwelling and will be collected via Kintore and Grosvenor Streets according to local services.

A Waste Management Plan has been provided detailing the disposal of demolition materials and is satisfactory.

Part 4 - Development standards to be complied with:

Clause 38(i) provides that a consent authority must not consent to a development application made pursuant to this chapter unless the proposed development complies with the standards specified in this clause.

Clause	Standard	Proposal	Compliance
38(2) - Site size	Min 1,000m ²	1655.8m ²	YES
38(3) - Site Frontage	Min 20m	43.375m (Grosvenor St) 21.97m (Kintore St)	YES YES
38(4) - Height	Max 8m	8m	YES
38(4)(b) - Height	Not more than 2 storeys in height adjacent to a boundary of the site.	2 storeys	YES
38(4)(c) - Height	A building in the rear 25% area of the site must not exceed 1 storey in height.	1 storey in height in the rear 25% of the site.	YES

The proposal complies with the 8m height limit. Unit 4, which is at the rear of the site complies with the one storey height limit (rear 25% of the site) as detailed above.

Clauses 41-49 lists specific design/building specifications to ensure access and useability. Accessibility Solutions, access consultants have provided details addressing these aspects. The development will be required to comply by **Conditions Nos 16-18**.

Clause 52 – Siting standards

Clause 52 of SEPP states that if the whole of the site does not have a gradient of less than 1:10, 1:10 or 50%, whichever is the greater, dwellings must have wheelchair access by a continuous accessible path of travel.

The access report details that the maximum average gradients are 1:30 along Grosvenor Street and 1:40 along Kintore Street. Wheelchair access and a continuous path of travel is available for all proposed dwellings and the proposal complies with Clause 52.

Division 4 – Self contained dwellings

Item 4

The access assessment prepared by *Accessibility Solutions* demonstrates compliance with the accessibility requirements in Clauses 53-72.

Part 7 – Development standards that cannot be used as grounds to refuse consent –

Clause (a) – Building height	Height to be less than 8m	All dwellings less than 8m in height	YES
Clause (b) - Density & scale	0.5:1	0.49:1	YES
Clause (c) - Landscaped area	Minimum 30% of the site be landscaped (383m ²)	50% landscaped 40% deep soil	YES
Clause (d) - Deep soil zones	15% site area with 2/3 being located at the rear with minimum dimension of 3m.	Rear: 2/3 min dimension 3m Total 917m ² or 55%	YES
Clause (e) - Solar access	Min 70% of dwellings receive 3 hours direct sunlight between 9am-3pm in mid-winter.	All dwellings receive 3 hours direct sunlight	YES
Clause (f) - Private open space for in-fill housing	Single level or ground floor dwellings 15m ² (incl. Area 3m x 3m accessible from living area)	All 2 storey dwellings with >15m ² of private open space (courtyards)	YES
Clause (g) - Visitor parking	2 parking spaces required for developments comprising 7 or 8 dwellings (not on clearway).	Site not situated on a clearway. One (1) visitor space provide on site (driveway areas) per dwelling	YES
Clause (h) - parking	0.5 car spaces per bedroom (1.5-2 spaces required per proposed dwelling)	2 car parking spaces provided for each proposed dwelling	YES

State Environmental Planning Policy No 55 - Remediation of Land

Under Clause 7 of SEPP 55, a consent authority must not grant consent to any development on land unless it has considered whether the land is contaminated, and if contaminated, it is satisfied the land is suitable in its contaminated or remediate state for the purpose for which development is proposed.

There is no evidence to suggest any potential contamination of the site, given the subject site and adjoining properties have historically been used for residential purposes.

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

Item 4

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 increased hard surfaces proposed will increase stormwater runoff and impact on water quality and volumes to the catchment.

However, Council's Development Engineer is satisfied that stormwater generated as a result of additional impermeable surfaces will be collected in pits, directed into one of 2 proposed on-site detention tanks and either dissipated on to the or directed gradually into Council's piped stormwater system. Subject to conditions, the proposed development is considered acceptable against the provisions of SREP 20.

Ku-ring-gai Planning Scheme Ordinance

The site is zoned Residential 2(c) under Part 3 of Ku-ring-gai Planning Scheme Ordinance. The erection of a residential flat building (as defined pursuant to the KPSO) is prohibited within the zone. However, the provisions of SEPP (Seniors Living) 2004 override the controls of the KPSO and the proposed SEPP (Seniors Living) 2004 development is permissible pursuant to that SEPP.

Clause 38B does not allow consent to be granted for development unless a water supply is provided to the development and a suitable drainage system can be provided for the development. Council's Development Engineer considers the proposal acceptable with respect to drainage, subject to **Conditions No.'s 14, 72-75, 92-93.**

Schedule 9 sets out the aims and objectives for residential zones:

1. General aims

- a. "to maintain and, where appropriate, improve the existing amenity and environmental character of residential zones; and*
- b. to permit new residential development only where it is compatible with the existing environmental character of the locality and has a sympathetic and harmonious relationship with adjoining development.*

Specific objectives contained within Schedule 9 that relate to this development must ensure that,

- (c) any building or development work on a site shall maintain or encourage replacement of tree cover wherever possible to ensure the predominant landscape quality of the municipality is maintained and enhanced;*
- (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 a soft landscaping area;*
- (e) ...where larger buildings are proposed they are designed so as not to dominate and so far as possible to harmonise with neighbouring development;*

Item 4

(g) ...reasonable space on site for forward entrance and exit of vehicles.

The proposal is considered to accord with the general aims of the KPSO and maintains the existing streetscape and environmental (landscaped) character of the locality. The development will not unduly impact upon the residential amenities of adjoining properties. The layout of the development allows for the retention of significant trees and shrubs along the Grosvenor and Kintore street frontages. The proposal provides for 44% landscaping and an appropriate site density, avoiding overdevelopment of the site. The development provides for the safe movement and maneuvering of vehicles.

POLICY PROVISIONS

Seniors Living Policy – Urban Design Guidelines for infill development

DIPNR/Urban Design Advisory Service developed the Seniors Living Policy (urban design guidelines) to promote *‘a balance between the need for greater housing choice and the need to safeguard the character of residential neighbourhoods’*. The proposal is assessed against the following guidelines:

- improving neighbourhood fit
- improving site planning and design
- reducing impact on streetscape
- reducing impacts on neighbouring properties

Key issues to consider include: location of living area and private open space in adjacent dwellings, overlooking and overshadowing, retaining neighbours outlook to existing mature planting and tree canopy, reducing apparent bulk and providing adequate building separation.

- Improving internal site amenity (including privacy, safety, security, useability and attractiveness of the living environment)

The proposal has been amended on two occasions in response to concerns from Council staff. The proposed development is considered to represent good site planning and design in that the development provides accessible housing, with good internal amenity, without unreasonably compromising the amenity of existing residents or the streetscape.

The proposal has been designed to reflect existing building forms and styles and to retain significant trees, planting and fencing within the streetscape.

Accordingly, the proposal is therefore consistent with the SEPP (Seniors Living) urban design guidelines.

Development Control Code 1/99 Housing for Older People and People with a Disability

Item 4

Council's Code includes references to the statutory development standards of State Environmental Planning Policy (Seniors Living) in relation to height, density, landscaped area and parking. The Code also provides guidelines relating to development standards considered by Council to be more appropriate to the Ku-ring-gai area.

The Code includes strict locational criteria, particularly regarding shops and facilities. The subject site generally satisfies these requirements. It should be noted that, where requirements in the Code are inconsistent with standards in SEPP (Seniors Living), provisions of the SEPP apply, and local planning controls are set aside.

The following table presents an analysis of the development in respect of the provisions of Council's Development Code.

Provision	Proposed	Compliance
Zoning	Residential 2(C)	YES
500m to local shops	The proposed development is within 400m of a bus service to transport residents to the Wahroonga shopping centre 1.2 km away.	YES
250m to public transport	Bus stop located within 125m of the site.	YES
Site analysis required	Matter addressed under <i>SEPP (Seniors Living)</i> assessment	YES
SEPP (Seniors Living) development standards	Matter addressed in SEPP (Seniors Living)	YES
Sympathetic design	Matter addressed under <i>SEPP (Seniors Living)</i>	YES
Buildings to address street	The front entry, feature windows and roof treatment should be oriented towards the street.	YES
Minimise visual impact of driveway	The entry driveway proposed does have a visual impact.	NO
No bland building facades	The front building facade is well integrated and has variation in the setback.	YES
Emphasise entry	The entry to the building is considered to be satisfactory.	YES
Match setbacks	The proposal does not quite match adjoining setbacks. It is slightly forward of the line between the existing buildings	NO
Integrated garages	Garages are provided under the building.	YES
Level private open space	All units have level open space.	YES
1.8m courtyard fences	No internal fences are proposed.	NO
Living areas link to open space	All units have acceptable open space links.	YES
Landscaping to enhance and screen	Refer to comments by Council's Landscape Development Officer.	YES
Significant trees	Matter addressed above by Landscape Development Officer.	YES
Carparking to meet demand	Matter addressed under <i>SEPP (Seniors Living)</i> .	YES

Item 4

Provision	Proposed	Compliance
Energy efficiency	Solar access and cross ventilation is acceptable.	YES
Privacy	Matter addressed under <i>SEPP (Seniors Living)</i>	YES
Lighting	Matter addressed under <i>SEPP (Seniors Living)</i> .	YES
Waste collection	In accordance with Council's Waste Management Policy.	YES
Letterboxes, TV antenna, services, house numbers	Matter addressed in <i>SEPP (Seniors Living)</i> assessment, will comply at Construction Certificate stage.	YES
Covered entry porch	As above	YES
Internal space location, wall length, hobby space and eating areas	As above	YES
Bedroom design	As above	YES
Support services	Matter addressed under <i>SEPP (Seniors Living)</i>	YES

The proposal complies with the requirements of SEPP (Seniors Living) which prevails to the extent of any inconsistency with Councils Controls. Notwithstanding, the proposal is considered to acceptably conform to the above criteria.

Development Control Plan 31 – Access

Access within the development has been considered in relation to clause 13A of SEPP 5 by the applicant's access consultant and is acceptable.

Development Control Plan 40 – Waste Management

DCP 40 aims to decrease the impact of waste generated by development and to promote principles of ecologically sustainable development. Waste management facilities should be conveniently located to enable easy access for on-site movement and collection. Proximity to site occupants should be considered in terms of noise and odour control.

Part 2 of the DCP requires an applicant to submit a Construction and Demolition Waste Management DCP.

A Construction and Demolition Waste Management Plan has been submitted with the application, to the satisfaction of Council. Adequate space is provided in association with each proposed dwelling for the safe and tidy storage of garbage bins. The proposal is acceptable when assessed against DCP 40.

Section 94 Plan

A section 94 contribution is required for the 3 additional dwellings proposed. A credit is given for the existing large dwelling on the site. **Condition No 76** requires payment of this fee with the application for a Construction Certificate.

LIKELY IMPACTS

The amended proposal is unlikely to have any significant impact on the environment, landscape or scenic quality of the locality, threatened species, populations or ecological communities or their habitats or any other protected fauna or protected native plants.

SUITABILITY OF THE SITE

The site is suitable for the development proposed.

ANY SUBMISSIONS

Submissions received have been detailed and addressed above.

PUBLIC INTEREST

Subject to conditions, the proposal is considered to be in the public interest.

CONCLUSION

The proposal complies with the objectives and provisions of SEPP (Seniors Living) and associated Urban Design Guidelines, the Ku-ring-gai Planning Scheme Ordinance and Council's Development Control Plans and Codes. Subject to conditions, the proposal will not result in adverse amenity, streetscape or environmental impacts and is recommended for approval.

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 470/05 for demolition of an existing building and construction of a SEPP Seniors Living Development comprising 4 dwellings on land at 1 Kintore Street, Wahroonga, 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 to be in accordance with Development Application No 470/05 and Development Application plans prepared by HSA Architects, reference number 49105.DA1, Issue C, 49105.DA2, Issue C, 49105.DA3, Issue C, 49105.DA4, Issue C, 49105.DA5, Issue C, dated 9 March 2006 and Landscape Plan prepared by Landscape Architectural Services, Drawing No.LPDA 06 – 86/1, dated November 2005 and endorsed with Council's approval stamp, except where amended by the following conditions:
2. 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.

Item 4

3. 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 No /Species /Location	Radius From Trunk
Tree 10 / <i>Eucalyptus racemosa</i> (Large Scribbly Gum) / Western boundary	5 metres
Tree 11 / <i>Pinus patula</i> (Mexican Pine) / Western boundary	5 metres
Tree 24 / <i>Eucalyptus pilularis</i> (Blackbutt) / Southern boundary	7 metres

4. All excavation carried out within the specified radius of the trunk/s of the following tree/s shall be hand dug:

Tree No /Species /Location	Radius From Trunk
Tree 10 / <i>Eucalyptus racemosa</i> (Large Scribbly Gum) / Western boundary	7 metres
Tree 11 / <i>Pinus patula</i> (Mexican Pine) / Western boundary	7 metres
Tree 24 / <i>Eucalyptus pilularis</i> (Blackbutt) / Southern boundary	7 metres

5. To preserve the following tree, the driveway to Unit 1 shall be constructed of asphalted concrete.

Tree No /Species /Location
Tree 1 / <i>Angophora costata</i> (Sydney Red Gum) / North-eastern corner

6. 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.
7. A mandatory rainwater re-use tank system, together with the additional on-site stormwater detention/retention requirements described in chapter 6 of Councils Water Management Development Control Plan 47 (DCP47), shall be provided for the development. DCP47 is available in hard copy at Council and on the Council website.

Item 4

8. 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.
9. 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.
10. 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.
11. 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.
12. Driveways and 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 Australian Standard 2890.1 – 2004 "Off-Street car parking".
13. For the purpose of any 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 consent from Council.
14. 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

Item 4

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.

15. Stormwater quality control measures as described in chapter 8 of Councils Water Management Development Control Plan 47 (DCP47), shall be provided for the development. DCP47 is available in hard copy at Council and on the Council website.
16. 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.
17. The proposed development is to be compliant with both AS 1428 (Design for Access and Mobility) and AS 4299 (Adaptable Housing) and the design requirements of SEPP (Seniors Living).
18. The interior design of dwellings, ancillary facilities (eg letterboxes, lighting etc) and circulation space within the development shall comply with the standards contained in clause 13A of SEPP 5. A Compliance Certificate prepared by a suitably qualified and experienced person, certifying compliance with the provisions and standards contained in this clause, shall be submitted to the Principal Certifying Authority prior to occupation of the development.
19. 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.
20. No mobile outdoor surveillance systems shall be installed without prior approval of Council.
21. No advertising signs are to be erected without the prior consent of Council.
22. Master TV antennas are to be provided to avoid having individual antennas. The master antenna should be located at the rear of the site to reduce visibility from the street. Alternatively, location within the roof space should be considered.
23. Letter boxes must be provided in accordance with the requirements of Australia Post and be accessible to wheelchair users
24. On site power must be underground and satisfy the requirements of Energy Australia.
25. Unit/dwelling numbers must be clearly displayed and visible for emergency vehicles and visitors.
26. Each dwelling must have a child proof storage place for poisons or other dangerous substances.

Item 4

27. Main entry doors to each unit shall be provided with peep holes.
28. Walls and Fences within the development are to be in accord with Council's Development Control Code 1/99 or as otherwise directed or approved.
29. The development is to provide night lighting along all driveways and footpaths throughout the site such that the full length of travel paths are illuminated. Lighting is to be shielded so that neighbouring residences are not adversely affected.
30. Throughout the development it is necessary to utilise non-slip materials. Surfaces which will be slippery when wet are not permitted. Loose material such as gravel or sand should be avoided near footpaths.
31. Locate TV antenna outlets on interior walls (away from windows and potential glare problems) in positions that maximise, options for TV location in the living and sleeping areas.
32. Locate telephone sockets so that residents have a choice of places/rooms to put a telephone and its related furniture.
33. Courtyard fences between units shall be constructed of masonry to a height of 1.8 metres or as otherwise indicated.
34. The use of landscaping should not affect driver sight distance to see other vehicles/pedestrians etc. for vehicles entering /exiting the subject site. The use of low growing shrubs around driveways is recommended.
35. The creation of a Restriction as to use of land under Section 88E of the Conveyancing Act 1919, restricting the occupation of the premises to:
 - a. People 55 or over or people who have a disability;
 - b. People who live with people 55 or over or people who have a disability;
 - c. Staff employed to assist in the administration of and provision of services to housing provided in this development.
36. The development is to remain as Housing for Aged or Disabled Persons within the meaning of State Environmental Planning Policy (Seniors Living) at all times.
37. All advertising, signage, marketing or promotion of the sale of the dwellings in this development shall make clear reference to the fact that this is a SEPP (Seniors Living) development and that at least one occupier shall be aged 55 years or over or have a disability.
38. 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.
39. 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

Item 4

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.

40. 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.

41. 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.
42. A sign shall be erected in a prominent position on the site which states the name and contact details of the Principal Certifying Authority.
43. To maintain existing ground levels all excavated material shall be removed from the site.
44. For the purpose of maintaining visual amenity, no permanent electricity supply poles are to be erected forward of the building setback without the prior Consent of Council. It is the onus of the applicant to consult with the authorised statutory electricity provider prior to construction commencing to ensure that direct connection to the building is possible. Details of any proposed permanent pole must be submitted to and approved by Council prior to installation.
45. The applicant is advised that the Construction Certificate plans and specifications must comply with the provisions of the Building Code of Australia.
46. 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.

47. 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

Item 4

- 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.

- 48. 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.
- 49. 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.
- 50. The demolition is to be carried out in accordance with the guidelines contained in Australian Standard 2601-1991: The Demolition of Structures.
- 51. 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.
- 52. 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.

- 53. Erosion control measures shall be provided on demolition sites to prevent the siltation of watercourses and drainage systems.
- 54. Dust control measures shall be taken on all demolition sites so as to avoid a nuisance to adjoining properties and harm to the environment.

Item 4

- 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.
55. 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.
56. 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.
57. 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.
58. 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.

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

59. 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.

60. 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

Item 4

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).

61. 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.
62. 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.
63. 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.
64. The submitted landscape plan by Landscape Architectural Services, Drawing No. LPDA 06-86/1 and dated November 2005 is not approved. 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, and conditions of consent by a Landscape Architect or qualified Landscape Designer to enhance the amenity of the built environment and protect the

Item 4

Ku-ring-gai landscape character. 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 in accordance with the approved landscape plan.

The following amendments to the plan shall apply:

- The 1200mm high picket fence shall be deleted.
 - The existing healthy mature shrubs along the northern and western boundaries shall be individually noted on the plan to be retained and the replanting of additional species reduced or changed to suit.
 - The plan shall indicate the removal of Tree 28.
 - The plan shall note the use of medium to large pebbles as mulch along the eastern boundary as this area will be a stormwater flow path. No ground covers such as Myoporum or Trachelospermum shall be planted as they will interrupt the overland flow.
 - The proposed “cultivar” that will reach a minimum height of 3 to 4 metres of Syzygium paniculatum (Brush Cherry) shall be indicated.
65. The property shall support a minimum number of 10 canopy trees that will attain 13.0 metres in height on the site, to preserve the tree canopy of Ku-ring-gai, the existing tree/s, and additional tree/s to be planted, shall be shown on the Landscape Plan/Site Plan. The plan shall be prepared by a Landscape Architect or qualified Landscape Designer and be submitted to the Principal Certifying Authority for approval prior to release of Construction Certificate.
66. A cash bond/bank guarantee of \$8,000.00 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 bond will be refunded upon issue of the Occupation Certificate, 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. A cash bond/bank guarantee of \$15,000.00 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 Occupation Certificate, provided the trees are undamaged.

Item 4

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 No /Species /Location /Bond

Tree 1 / *Angophora costata* (Sydney Red Gum)
/ North-eastern corner
/ \$4,000.00

Tree 5 / *Lophostemon confertus* (Brushbox)
/ North-western corner
/ \$3,000.00

Tree 10 / *Eucalyptus racemosa* (Large Scribbly Gum)
/ Middle of western boundary
/ 2,000.00

Tree 11 / *Pinus patula* (Mexican Pine)
/ Middle of western boundary
/ \$2,000.00

Tree 24 / *Eucalyptus pilularis* (Blackbutt)
/ Middle of southern boundary
/ \$4,000.00

68. To preserve the following trees the proposed driveways to Units 2 & 3 shall be constructed at existing soil levels and suspended on isolated piers within the specified radius of the trunks. The piers shall be located such that no roots of a diameter greater than 50mm shall be severed or injured in the process of any site works during the construction period. The beam shall be located on or above existing soil levels.

The location and details of the footings shall be submitted to the Principal Certifying Authority for approval prior to release of the Construction Certificate.

Tree No /Species /Location	Radius in metres
Tree 10 / <i>Eucalyptus racemosa</i> (Large Scribbly Gum) / Western boundary	7 metres
Tree 11 / <i>Pinus patula</i> (Mexican Pine) / Western boundary	7 metres

69. To preserve the following tree/s, footings of the proposed Unit 4 shall be isolated pier or pier and beam construction within the specified radius of the trunk/s. The piers shall be located

Item 4

such that no roots of a diameter greater than 50mm shall be severed or injured in the process of any site works during the construction period. The beam shall be located on or above existing soil levels.

The location and details of the footings shall be submitted to the Principal Certifying Authority for approval prior to release of the Construction Certificate.

Tree No /Species /Location	Radius in Metres
Tree 24 / <i>Eucalyptus pilularis</i> (Blackbutt) / Middle of southern boundary	7 metres

70. Prior to issue of the Construction Certificate, submission of details and certification by a qualified civil/traffic engineer, for approval by the Principal Certifying Authority (PCA), that the parking provisions comply with the following standards:
- The State Environmental Planning Policy for Seniors Living (particularly relating to height clearances and space dimensions) and
 - Australian Standard 2890.1 – 2004 “Off-street car parking”.
71. Prior to issue of the Construction Certificate the applicant shall submit, for approval by the Principal Certifying Authority (PCA), a Soil and Erosion Control Plan prepared in accordance with the Landcom document “Managing Urban Stormwater – Soils and Construction, Volume 1” (2004). A suitably qualified and experienced civil/environmental engineer or surveyor shall prepare this plan in accordance with the above guidelines and section 8.2.1 of Councils Water Management DCP 47 (avail able on the Council website).
72. The Applicant must carry out the following infrastructure works in the Public Road:
- Construct kerb ramps to Council’s specification between the subject site and the nearest bus stop.
- 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**

Item 4

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.

73. 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 may be generally based on the concept plans TFA2944/01 Sheets 1 to 3 Issue A by Toby Fiander & Associates, advanced for construction purposes. The storage volumes and design shall comply with Councils 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. Water quality measures are to be included as required by DCP47. 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.
74. 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 Councils Water Management Development Control Plan 47 available on the Council website and at Council, and AS 3500.2 - Plumbing and Drainage Code.
75. Prior to issue of the Construction Certificate footpath and driveway levels for the new vehicular crossings between the property boundary and road alignment must be obtained from Council. The footpath crossings are to be constructed according to Council's specifications "Construction of Gutter Crossings and Footpath Crossings". These are issued with alignment

Item 4

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.

76. 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 4 (FOUR) ADDITIONAL DWELLINGS IS CURRENTLY \$12,306.64 (including a credit for the existing dwelling on the site). 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 (If Seniors Living \$412.07)	\$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:

Item 4

OCCUPANCY RATES FOR DIFFERENT DWELLING SIZES

Small dwelling (under 75sqm)	1.27 persons
Medium dwelling (75 - under 110sqm)	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	1.3 persons

CONDITIONS TO BE COMPLIED WITH PRIOR TO WORK COMMENCING

77. To preserve and enhance the natural environment, the downslope side of the proposed construction area of the site is to be enclosed with a suitable erosion control barrier (e.g. straw bales or geofabric fence) along contour before any other work on the site commences.
78. To preserve the following tree/s, no work shall commence until the trunk/s are protected by the placement of 2.0 metre lengths of 50 x 100mm hardwood timbers spaced at 150mm centres and secured by 2mm wire at 300mm spacings over suitable protective padding material. The trunk protection shall be maintained intact until the completion of all work on site. Any damage to the tree/s shall be treated immediately by an experienced Horticulturist/Arborist, with minimum qualification of Horticulture Certificate or Tree Surgery Certificate and a report detailing the works carried out shall be submitted to the Principal Certifying Authority:

Tree No /Species /Location

Tree 1 / *Angophora costata* (Sydney Red Gum)
/ North eastern corner

Tree 16 / *Eucalyptus racemosa* (Large Scribbly Gum)
/ South western corner

Tree 36 / *Nyssa sylvatica* (Tupelo)
/ Grosvenor Street nature strip

79. 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 driveways 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 No /Species /Location

Radius in Metres

Tree 3 / *Acer palmatum* (Japanese Maple)
/ Northern boundary

3 metres

Tree 5 / *Lophostemon confertus* (Brushbox)

3 metres

Item 4

/ North western corner	
Tree 10 / <i>Eucalyptus racemosa</i> (Large Scribbly Gum)	3 met res
/ Middle of western boundary	
Tree 11 / <i>Pinus patula</i> (Mexican Pine)	3 metres
/ Middle of western boundary	
Tree 24 / <i>Eucalyptus pilularis</i> (Blackbutt)	5 metres
/ Middle of southern boundary	
Tree 34 / <i>Acer palmatum</i> (Japanese Maple)	3 metres
/ Front boundary	
<i>Franklinia axillaris</i> (Gordonia)	3 metres
/ Western boundary near northern end	

80. The tree protection fence shall be constructed of galvanised pipe at 2.4 metres spacings and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres prior to work commencing.
81. To preserve the following tree, no work shall commence until temporary measures to avoid soil compaction (eg rumble boards) beneath the canopy of the following tree is installed over the proposed designated construction entrance/exit off Grosvenor Street.

Tree/Location

Tree 10 / *Eucalyptus racemosa* (Large Scribbly Gum)
/ Middle of western boundary

82. 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.
83. 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,
- A dedicated unloading and loading point within the site for all construction vehicles, plant and deliveries

Item 4

- Material, plant and spoil bin storage areas within the site, where all materials are to be dropped off and collected.

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 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.
 - 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.
84. Prior to the commencement of any works on site the applicant must submit to Ku-ring-gai Council and the Principal Certifying Authority a photographic record on the visible condition of the existing public infrastructure over the full site frontage (in colour - preferably saved to cd-rom in ‘jpg’ format). The photos must include detail of:
- The existing footpath
 - The existing kerb and gutter
 - The existing full road surface between the opposite kerb
 - The existing verge area
 - The existing driveway and layback where to be retained
 - Any existing drainage infrastructure including pits, lintels, grates.
 - Particular attention must be paid to accurately recording any pre-developed *damaged* areas on the aforementioned infrastructure so that Council is fully informed when assessing damage to public infrastructure caused as a result of the development (which is not to be repaired by the Applicant as part of the development). The developer may be held liable to all damage to public infrastructure in the vicinity of the site, where such damage is not accurately recorded and demonstrated under the requirements of this condition prior to the commencement of any works.
85. 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.
86. A simple photographic record of the affected parts of the heritage item are to be submitted to Council prior to the commencement of work. Recording shall be undertaken in accordance

Item 4

with the *Guidelines for Photographic Recording of Heritage Sites, Building and Structures* prepared by the New South Wales Heritage Office.

Information shall be bound in an A4 report format. It shall include copies of black and white photographs, referenced to plans of the affected property. Two (2) copies (one (1) copy to include negatives of photographs) shall be submitted to Council's Department of Environmental and Regulatory Services, to be held in the Local Studies Collection of Kuring-gai Library.

CONDITIONS TO BE COMPLIED WITH PRIOR TO OCCUPATION

87. 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.
88. 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.
89. Prior to issue of an Occupation Certificate, the following works must be completed:
 - a. Construction of the new driveway crossings and laybacks 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 areas 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 integration of levels and materials.
 - c. Any sections of damaged grass verge are to be fully 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. This shall be at no cost to Council.

90. Prior to issue of an Occupation Certificate, the approved road, footpath and/or drainage works must be completed in the road reserve, in accordance with the Council approved *Roads Act 1993* drawings, conditions and specifications. The works must be supervised by the applicant's designing engineer and the works shall be completed and approved in full to the satisfaction of Council's Engineers. The supervising consulting engineer is to provide certification upon completion that the works were constructed in accordance with the Council approved drawings. The works are also to be subject to inspection by Council at the hold points noted on the approved drawings. Any conditions attached to the approved drawings for these works must be met in full.
91. Prior to issue of an Occupation Certificate, the Section 73 Sydney Water compliance certificate must be obtained and submitted to the Principal Certifying Authority (PCA).

Item 4

92. Prior to occupation, issue of an Occupation Certificate or issue of the Final Compliance Certificate (and at the completion of works), the applicant shall submit to the Principal Certifying Authority (PCA) certification from a suitably qualified and experienced traffic/civil engineer, that:
- a. The dimensions of all as-constructed private carparking spaces meet the dimension requirements of the Seniors Living SEPP (as last amended), and
 - b. The as-constructed carpark complies with the approved Construction Certificate plans, and
 - c. The vehicular headroom requirements of:
the Seniors Living SEPP (as last amended) for accessible parking spaces, and
Australian Standard 2890.1 - "Off-street car parking", are met.
93. 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:
- 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 all toilet flushing, laundry and garden irrigation.
 - 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.
94. 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:
- a. As built (reduced) surface and invert levels for all drainage pits.
 - b. Gradients of drainage lines, materials and dimensions.

Item 4

- c. As built (reduced) level(s) at the approved point of discharge to the public drainage system.
- d. 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.
- e. The achieved storage volumes of the installed retention and detention storages and derivative calculations.
- f. As built locations of all access pits and grates in the detention and retention system(s), including dimensions.
- g. The size of the orifice or control fitted to any on-site detention system.
- h. Dimensions of the discharge control pit and access grates.
- i. The maximum depth of storage possible over the outlet control.
- j. 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.

- 95. Prior to issue of an Occupation Certificate, the applicant is to create a Restriction-on-Use under the Conveyancing Act, restricting the occupation of the premises to:
 - a. People aged 55 years or over, or people with a disability as defined by the provisions of the State Environmental Planning Policy for Seniors Living.
 - b. People who live with such people as defined in (a) above.
 - c. Staff employed to assist in the administration of and provision of services to housing provided in this development.
- 96. Prior to issue of an Occupation 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/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 instrument for protection of on-site detention 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 On-Site Detention/ retention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

Item 4

N Richter

Acting Team Leader

**Development Assessment -
North**

R Kinninmont

Acting Manager

**Development Assessment
Services**

M Miocic

Director

**Development &
Regulation**

Attachments:

Location Sketch - 629357

Zoning extract - 629362

Elevations - 629364

Shadow diagrams - 629368

Confidential attachments (Floor, landscape and site plans)

LOCATION SKETCH

1 Kintore Street, WAHROONGA NSW



SCALE: 1:3000

DATE: 31-05-2005

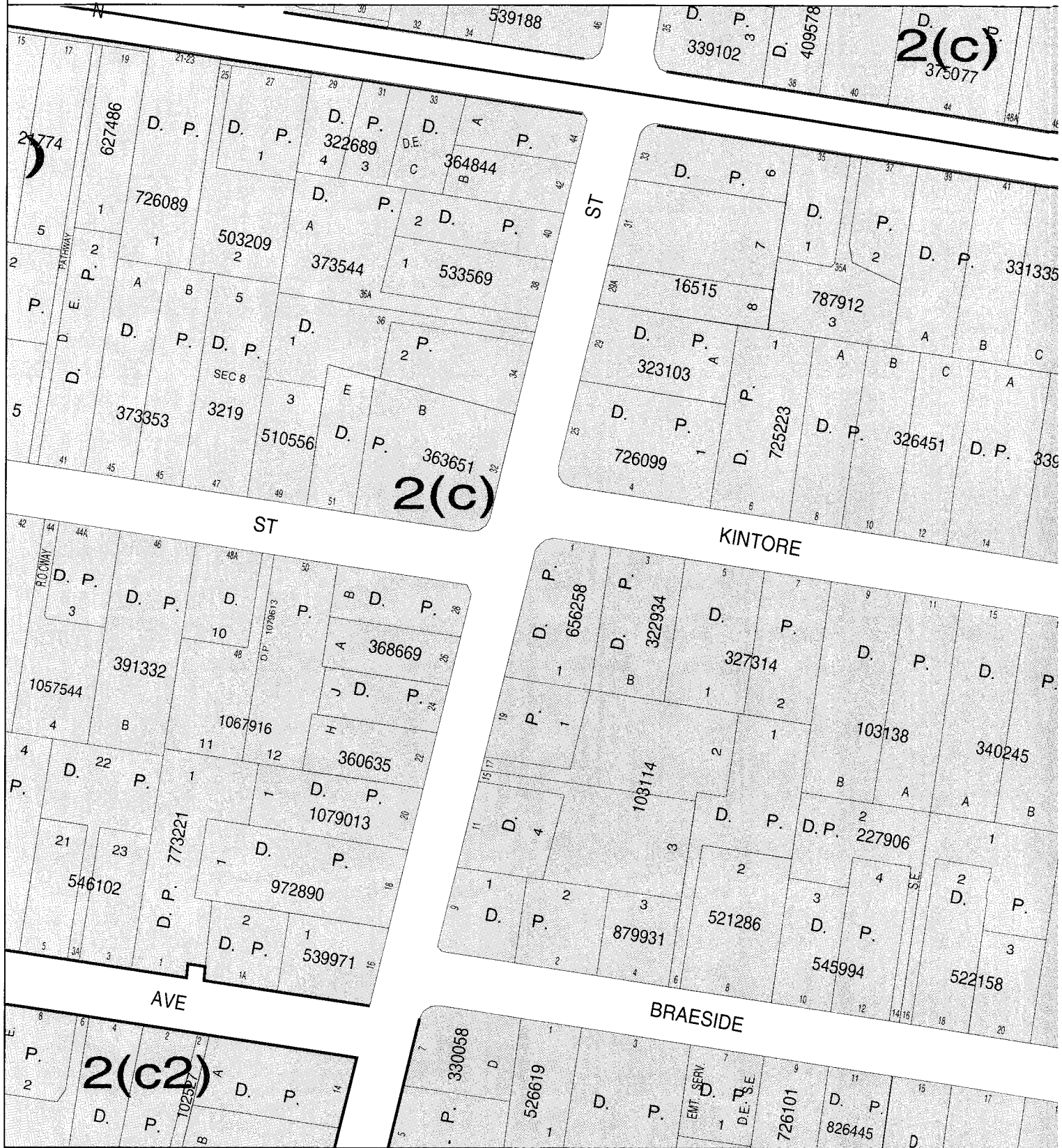


SUBMISSIONS received (none) 01/06/05
SUBJECT LAND



Zoning Extract

1 KINTORE STREET WAHROONGA



ZONES

2. RESIDENTIAL

- (a) RESIDENTIAL A
- (b) RESIDENTIAL B
- (c) RESIDENTIAL C
- (c1) RESIDENTIAL C1
- (c2) RESIDENTIAL C2
- (d) RESIDENTIAL D
- (d3) RESIDENTIAL D3
- (e) RESIDENTIAL E
- (f) RESIDENTIAL F
- (g) RESIDENTIAL G
- (h) RESIDENTIAL H

3. BUSINESS

- (a) RETAIL SERVICES
- FLOOR SPACE RATIOS
- A1 2.0:1
- A2 1.0:1
- A3 0.75:1
- (b) COMMERCIAL SERVICES
- FLOOR SPACE RATIOS
- B1 1.0:1
- B2 1.0:1

5. SPECIAL USES

- (a) SPECIAL USES A (Schools etc)
- (a1) SPECIAL USES A1
- (b) SPECIAL USES (Railway)

6. OPEN SPACE

- (a) RECREATION EXISTING
- (b) RECREATION PRIVATE
- (c) RECREATION PROPOSED

RESERVATIONS

OPEN SPACE

- (a) OPEN SPACE (Public Parks & Recreation)
- (b) COUNTY OPEN SPACE
- SPECIAL USES
- SPECIAL USES (Parking etc)

ROADS

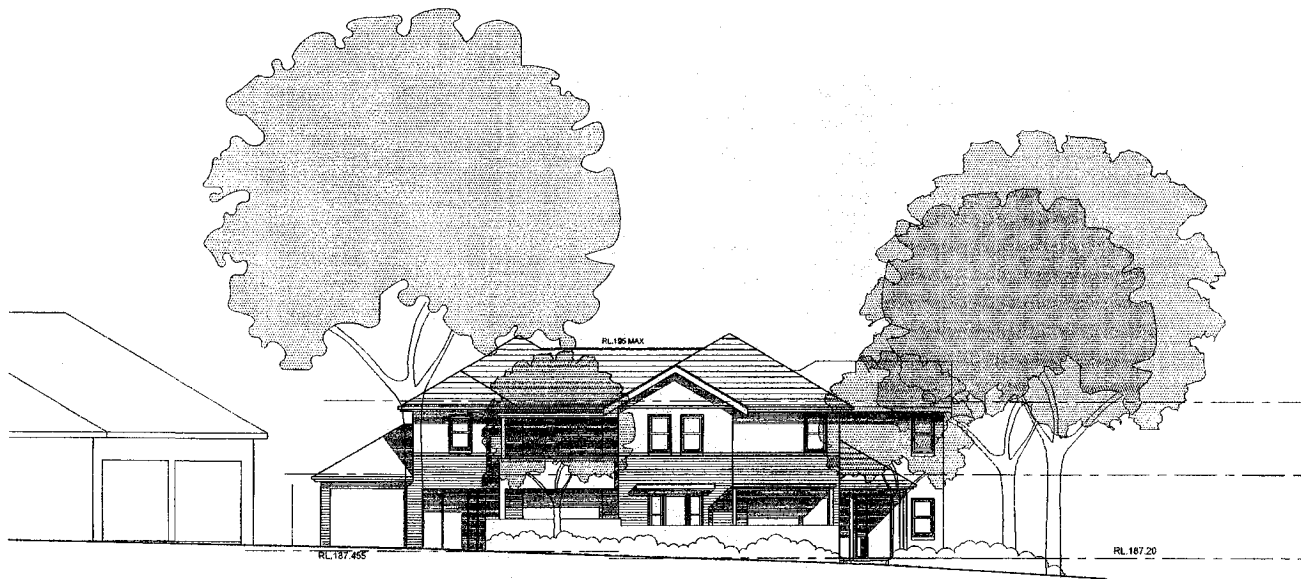
- (a) COUNTY ROAD PROPOSED
- (b) COUNTY ROAD WIDENING
- (c) LOCAL ROAD PROPOSED

GENERAL

- EXISTING COUNTY ROAD
- OTHER PLANNING INSTRUMENTS



Scale: 1:2000
Date: 07-06-2006



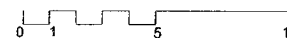
NORTH ELEVATION
(KINTORE ROAD)

EXTERNAL FINISHES		
WALLS	FACE BRICK RENDERED & PAINTED Balcony Elements Walls above Face Brick	Boral "Herford Bronze" Dulux "Regency White"
VERANDAH POSTS AND BEAMS	PAINTED TIMBER	Dulux "Egyptian Red"
LOUVRE PANELS	CEDAR	Natural-stain finish
ROOF	CONCRETE ROOF TILES	Boral StyleLinea Colour "Charcoal"
EAVES GUTTERS	COLORBOND STEEL	"Slate Grey"
FASCIAS	PAINTED TIMBER	Dulux "Beige"
WINDOWS	POWDER COATED ALUM.	"Off White"



WEST ELEVATION
(GROSVENOR STREET)

ISSUE	DATE	REVISION / AMENDMENT
A	6.5.08	DEVELOPMENT APPLICATION
B	31.10.08	Amended elevations, drawing No. amended
C	9.3.09	Increased distance between road 2 and 3 garages Unit 4 rooftop amended: Windows to lot 4 removed



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HSA
Architects

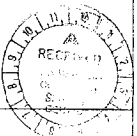
PROJECT
1 KINTORE STREET, WAHROONGA

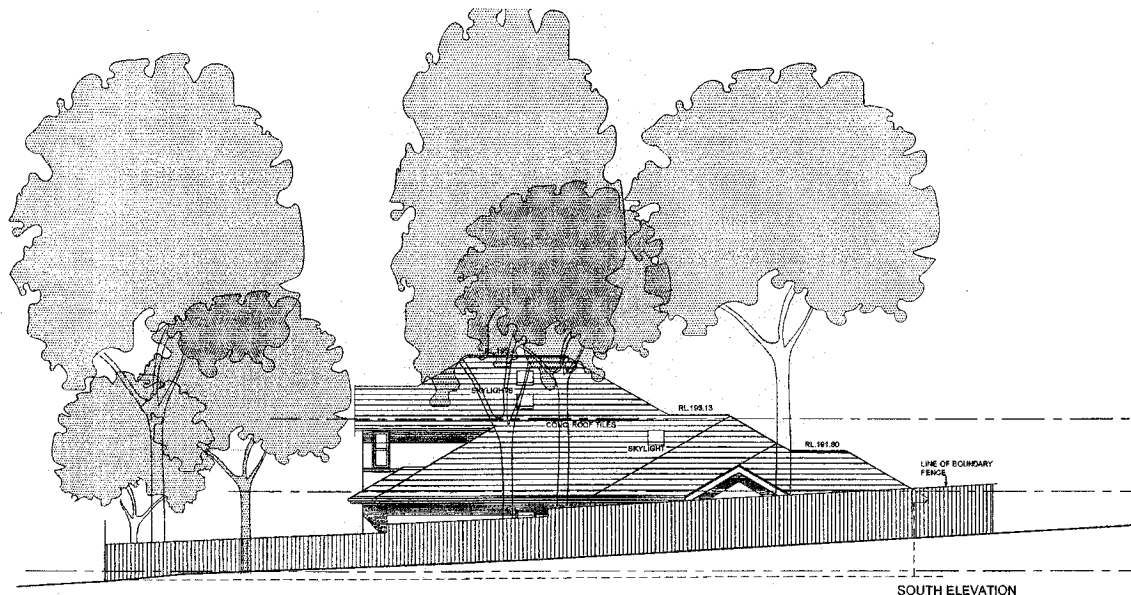
DRAWING
ELEVATIONS

49105.DA4

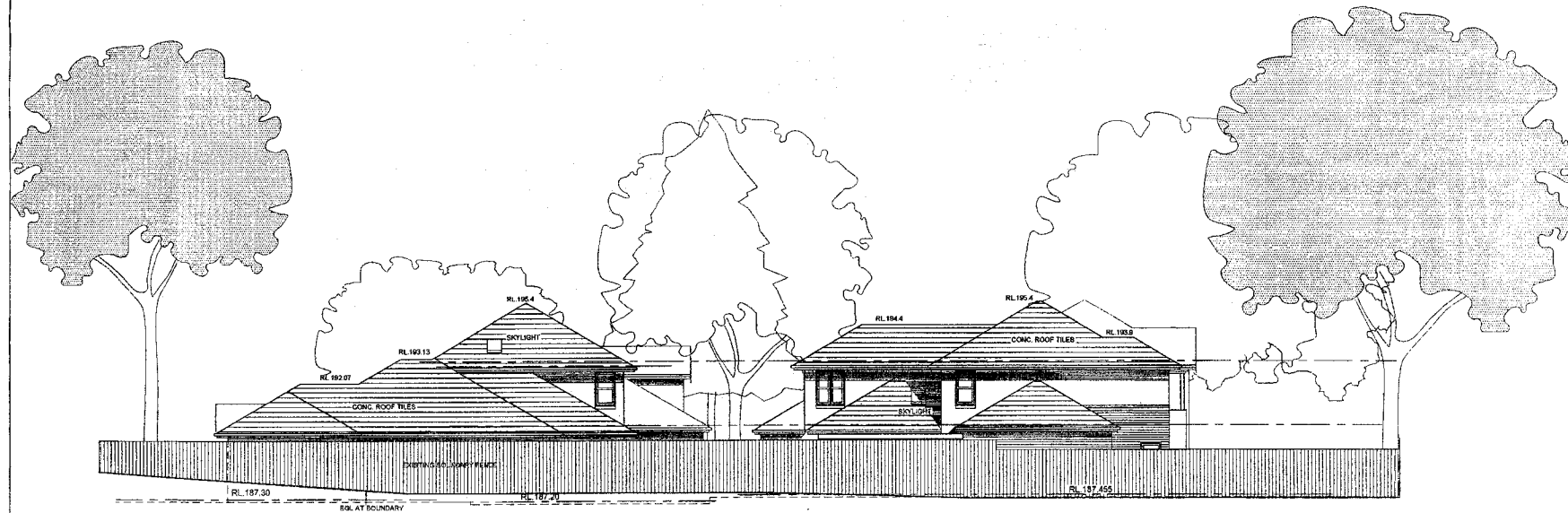
ISSUE
c

SCALE DATE APPR/ART



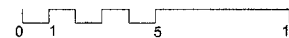


SOUTH ELEVATION



EAST ELEVATION

ISSUE	DATE	ISSUE / AMENDMENT
A	05.05	DEVELOPMENT APPLICATION
B	31.10.05	Amended elevations, Activity No. amended
C	03.08	Uppt 4 outline amended



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PROJECT
1 KINTORE STREET, WAHROONGA

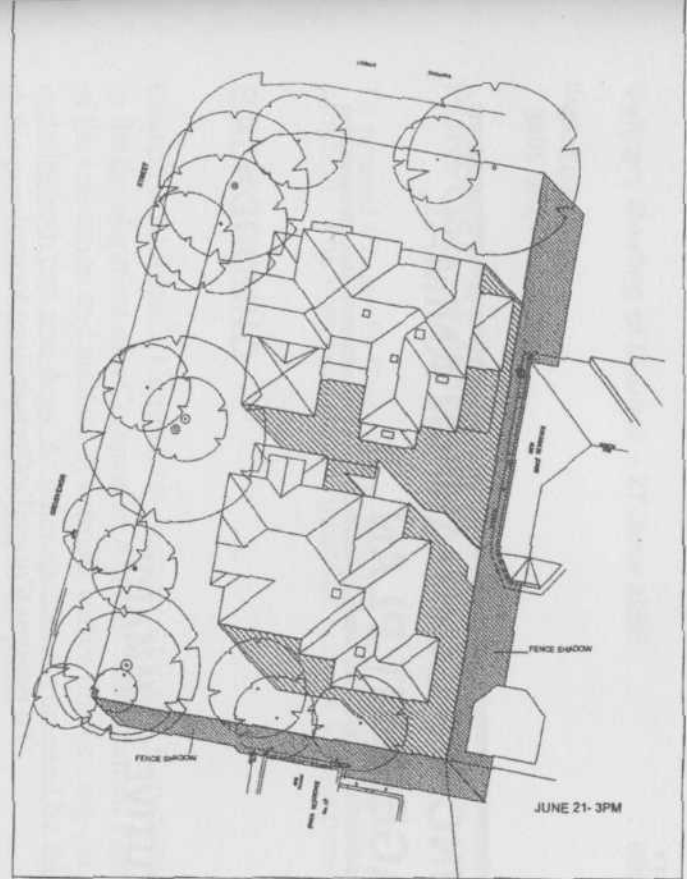
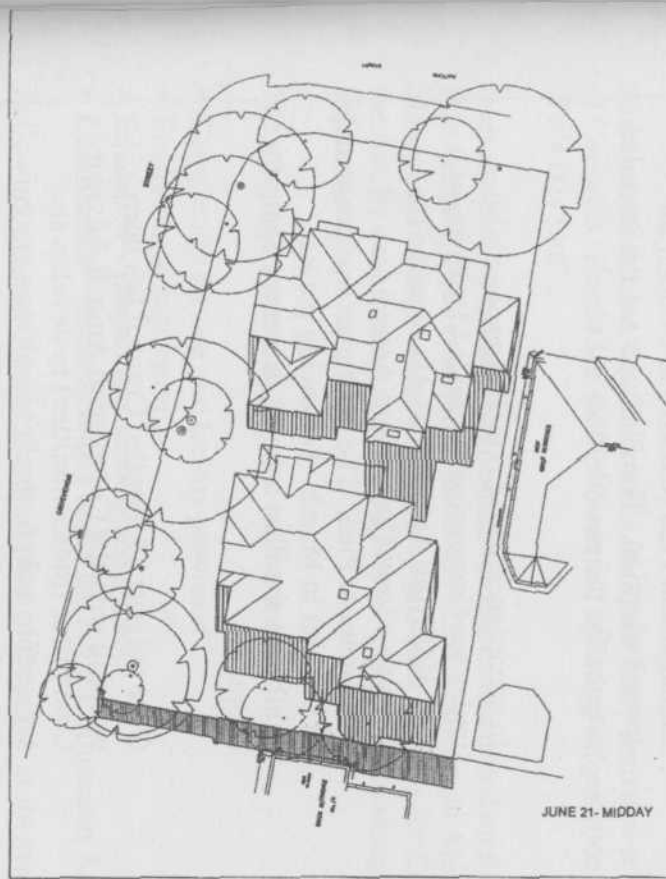
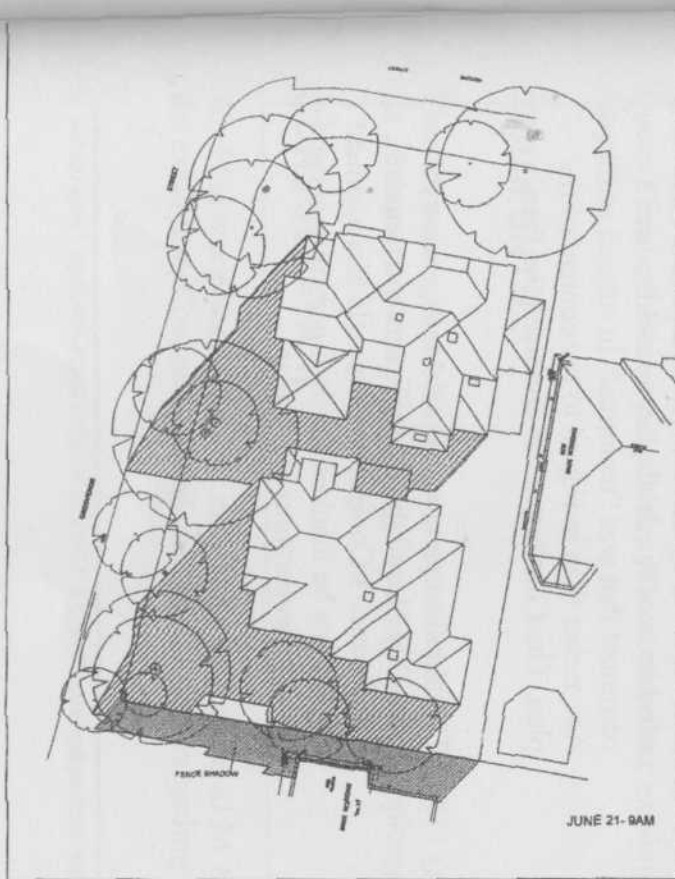
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SHADOW DIAGRAMS

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NOTES DATE APPROVED

NOTE: EXISTING RETAINED TREES INDICATED
REFER TO LANDSCAPE PLAN FOR NEW TREE
PLANTING

HSA
Architects
Hugh Slatyer & Associates
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PROJECT
1 KINTORE STREET, WAHROONGA

REV DATE REVISION
A 21.05.06 DEVELOPMENT APPLICATION
B 21.05.06 Approved plan, drawing for approval
C 21.05.06 Shadow diagram for approval

ADOPTION OF COUNCIL'S COMPANION ANIMAL MANAGEMENT PLAN

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To present Council's Companion Animal Management Plan (CAMP) to Council for formal adoption. The Plan sets out the intended actions for the period 2006-2011.

BACKGROUND:

In accordance with Council's responsibilities under the Companion Animals Management Act, 1998 (the Act), Council is required to develop a local Companion Animals Management Plan. The draft plan was presented to Council in March. Following public exhibition the Plan is being presented again for adoption.

COMMENTS:

Over the past 24 months, Council has been working with the Companion Animal Advisory Committee (the Committee) to develop an achievable and comprehensive Companion Animals Management Plan. The public exhibition of the draft plan resulted in one comment that was "technical" in respect of the Act, rather than in regard to the content of the plan. The Committee has endorsed the Plan.

RECOMMENDATION:

That the Companion Animal Management Plan 2006-2011 be adopted for implementation and that Council's Companion Animals Management Committee be thanked for their commitment and effort in preparation of the plan.

PURPOSE OF REPORT

To present Council's Companion Animal Management Plan (CAMP) to Council for formal adoption. The Plan sets out the intended actions for the period 2006-2011.

BACKGROUND

Council established a Companion Animals Advisory Committee in late 1999, its purpose being to assist in the development of a Companion Animals Management Plan and make recommendations in respect of the recreation and welfare of animals within the Ku-ring-gai area. The term "Companion Animals" includes both cats and dogs, no other species are covered by this plan, however some reference is made to the protection of local wildlife within the plan.

Since establishment, the Committee has been fairly active over the years, assisting with the preparation of Council's "Handbook for Pet Owners", updating information on Council's web site and hosting of "Pet's Day Out".

Over the past 24 months, the Committee has concentrated on the development of a Companion Animals Management Plan, as required under the NSW Companion Animals Act. The Companion Animals Management Plan is a document which provides a means for Council to fulfil its responsibilities under the Act, by determining relevant objectives and priorities along with a clear program for implementation.

The four main areas that the plan targets are:

- Community service and facility provision
- Environment protection
- Education – community schools and general
- Compliance – responsibilities under the NSW Companion Animals Act 1998

Following presentation of the draft plan to Council at its meeting held 28 March 2006, the plan was amended so as to include notation of the current trails of leash free areas at Warrimoo Oval and Queen Elizabeth Reserve and then placed on public exhibition for the period 14 April 06 to 12 May 06.

COMMENTS

The Companion Animals Management Plan 2006 – 2011 (**attached**) has been on public exhibition for 28 days. It is considered ready for adoption and implementation.

CONSULTATION

The Plan was placed on public exhibition for the period 14 April 06 to 12 May 06. As a result of the exhibition, Council received one (1) comment regarding the term 'under effective control' that was used in the Plan. This terminology is derived directly from the NSW Companion Animals Act 1998 and must remain in the document. No further comments have been received.

FINANCIAL CONSIDERATIONS

The implementation of the plan contains no “surprise” budget expectations. Most work being part of Council’s day to day obligations in respect of animal management. The one exception is the hosting of the annual special community event - “Dog Day Out” which is estimated to cost approximately \$5000 p.a.

From year to year, application for grants will also be made so as to assist with delivery of special educational programs.

SUMMARY

The Companion Animals Management Plan represents Council’s continued commitment to provide services to all sectors of the community. It lays the framework for activities in respect of companion animals management over the coming years and will assist in the preparation of annual work plans and associated budgets. The plan has been developed with the full commitment of community representatives whom collectively form the Companion Animals Advisory Committee. It is believed that the plan reflects what the community is looking for.

RECOMMENDATION

- A. That the Companion Animals Management Plan 2006-2011 be adopted for implementation.
- B. That Council’s Companion Animals Management Committee be thanked for their commitment and effort in preparation of the plan.

Anne Seaton
Manager Regulation & Compliance

Michael Miodic
Director Development & Regulation

Attachments: Companion Animal Management Plan - 629156



Companion Animals Management Plan

Ku-ring-gai Council
March 2006

Contents

1.	Introduction.....	3
2.	Policy statement for companion animal management.....	5
3.	Ku-ring-gai Council's mission and vision for companion animals	7
4.	Current companion animal figures ...	8
5.	Division areas:	10
	5.1 Community service & facility provisions	
	5.2 Environmental protection	
	5.3 Education – community, schools & general	
	5.4 Compliance – responsibilities under the	
	NSW Companion Animals Act	
6.	Action plan.....	11
7.	Performance indicators and targets	21
8.	Monitor and review.....	23
9.	Acknowledgements	25



1. Introduction

Term of Plan

This Plan is to facilitate the management of companion animals and associated areas within Ku-ring-gai for the period 2006 – 2011.

Profile of Ku-ring-gai Council area and its pet community

The Ku-ring-gai local government area covers approximately 84 square kilometres or 8,446 hectares. Ku-ring-gai contains nine suburbs and displays a wide variation in landscape and wildlife, with significant areas of urban bushland identified as having high conservation status. The area is bounded by Garigal National Park to the east, Lane Cove River Park to the west and Ku-ring-gai Chase National Park to the north. The estimated residential population as at June 2004 was 108 000.

Ku-ring-gai Council encourages responsible pet ownership. The majority of households within Ku-ring-gai own or have owned pets and the NSW Companion Animals Register, shows that there are approximately 13,000 dogs and 4,000 cats in Ku-ring-gai. Below is a list of the most popular cat and dog breeds in the area.

Most popular cat breeds

1. Domestic Cat
2. Burmese
3. Siamese
4. Birman
5. Himalayan
6. Abyssinian
7. Persian
8. Russian Blue
9. British Shorthair
10. Tonkinese

Most popular dog breeds

1. Labrador Retriever
2. Golden Retriever
3. Border Collie
4. Jack Russell Terrier
5. Maltese
6. German Shepherd Dog
7. Cavalier King Charles Spaniel
8. Schnauzer (Miniature)
9. Poodle (Miniature)
10. Staffordshire Bull Terrier

Within the Ku-ring-gai Council area we have:-

- 3 dog training clubs
- 18 leash free areas for dog socialisation.
- 9 veterinary clinics,
- 3 pet shops
- 4 grooming salons
- 3 mobile dog groomers



The NSW Companion Animals Act was introduced in July 1998. The Act introduced major reforms in the keeping and control of companion animals.

The Act was developed with the understanding that all sectors of the community will benefit from having more proactive and enforceable laws. The community expectation is that Council will provide quality services relating to companion animal control.

Education and promotion of responsible pet ownership is the guiding principle behind the plan and many of the issues faced within companion animal's management are related to irresponsible pet ownership. Council strives to encourage animal owners to be more responsible for their pet's behaviour and in doing so; many of the plan objectives can be met.

Council's plan identifies three main factors in companion animal management – the animals, the community and the surrounding environment. All areas are contributing factors to our recommendation and strategic actions.

The plan aims to:-

- balance the needs of the community, the environment and companion animals;
- identify gaps in previous planning and education;
- provide a framework for directing and prioritising actions;
- provide measurable indicators for the assessment of plan results and outcomes.

The plan has been developed following consultation and input from Council's Companion Animals Advisory Committee, Councillors, staff and the general community.

2. Policy statement for companion animal management

Three main goals:

Service	To provide quality customer service for all matters involving person-animal relationships to the community.
Education	To disseminate knowledge to the community about responsible pet ownership and benefits of people-pet relationships via educational programs
Compliance	Meet optimum requirements under legislation

Council's education programs will be guided by the following principles of responsible pet ownership:

1. Appropriate pet selection
2. Basic health and welfare principles for pets
3. Identification of companion animals
4. Lifetime registration
5. Desexing
6. Secure confinement
7. Environmental enrichment
8. Socialisation
9. Training
10. Lifetime commitment

Our objectives are based on providing pet owners with support, education, regulation and facilities to accommodate companion animals, while protecting the needs of the broader community and the environment. They are as follows:-

- to create an environment where owners can enjoy the benefits of pet ownership and pets become a welcomed part of the community;
- to advocate responsible pet ownership by the use of community education programs;
- to encourage owners to have their animal's microchipped and lifetime registered as required by the NSW Companion Animals Act and to facilitate the prompt return of stray companion animals to their owners;
- to minimise negative impacts by companion animals on the community, wildlife and the environment;
- to enhance the quality of customer service by improving communication methods, access to information and by increasing the knowledge of relevant Council staff;
- promote community involvement with companion animal issues, programs and volunteer programs;
- to ensure dangerous dogs are monitored and controlled to create a safe environment for the community.

- to encourage companion animal owners to incorporate physical and mental challenges & stimulation for their animals so as to improve behaviour and quality of life;
- to increase awareness of child safety around companion animals by including local schools in education programs.

Responsible pet ownership

Education and promotion of responsible pet ownership is the guiding principle behind the plan. Many of the companion animal issues that impact upon the community are related to irresponsible ownership and ignorant management by owners. By encouraging responsible ownership and increasing the awareness of pet management, many of the plans objectives can be met.

Areas of responsible pet ownership are:-

In the home – Confining pets to their property and preventing escape. Ensuring adequate environmental enrichment is provided to reduce the likelihood of nuisance behaviour such as barking and damage of property and personal effects.

In public places (dogs) – Keeping pets under effective control by means of chain, cord or leash (except in leash-free areas). Ensuring pets are properly trained when encountering the wider community.

Identification and registration – Ensuring pets are adequately identified by a collar, name tag and microchip and carry out lifetime registration at the appropriate age.

Training and socialisation – Giving pets adequate training and socialisation to become obedient and manageable in the majority of circumstances and making use of our facilities eg leash free areas, dog training clubs, etc.

Desexing - Having pets desexed to reduce unwanted animals and to discourage nuisance behaviour or otherwise ensuring appropriate control measures are provided to facilitate the needs of an undesexed animal.

Environmental awareness - Cleaning up after their pets so as to minimise impact on wildlife and the environment.

Animal welfare - Providing care, and if needed, appropriate medical treatment for their pet.

3. Ku-ring-gai Council's mission and vision for companion animals

Mission

Ku-ring-gai is considered a leader in companion animal management, recognising and balancing the needs of pet owners in the natural and built environment.

Vision

To promote an optimal environment for people and animals to live together harmoniously

4. Current companion animal figures

So as to establish a benchmark, current statistics have been gathered so as to enable the setting of targets for the term of the plan. These benchmark figures can be used to assess our record as the plan is implemented.

The areas that figures will be collected from include:-

- Microchipping and lifetime registration
- Customer Request System (CRS) for animal control – recording system that logs requests from residents.
- Animal seizure and pound activity

Microchipping and lifetime registration

These figures have been obtained from the NSW Companion Animals Register (8 June 2005) and provide a starting point for the Companion Animals Management Plan. The plan aims to improve these figures through education, specific programs targeting microchipping and lifetime registration and regular follow ups of unregistered animals.

	1 Jan 96 – 8 Jun 05		
	Dogs	Cats	Total
Total number of animals	13147	4049	17219
Animal identified only	3414	2073	5487
Animals not registered	2597	1377	3974
Percentage registered	74.21%	48.80%	68.13%

This table shows a clear indication of the increasing number of animals and allows us to prepare and target companion animal management to accommodate these figures.

	01/02		02/03		03/04		04/05	
	Dogs	Cats	Dogs	Cats	Dogs	Cats	Dogs	Cats
Total number of animals	6418	1724	9181	2335	10892	2968	12295	3711
Animals not registered	906	338	1248	590	1557	837	1900	1112

Customer Request System (CRS) – animal control

All requests/complaints received by Council are recorded in the Customer Request System (CRS) which was implemented in October 2002. Within animal control, there are a series of request descriptions to categorise the requests. The request descriptions were recently upgraded to allow further distinction between requests/complaints and to increase the efficiency of complaint handling. Therefore, figures for certain areas may not be available.

The current request descriptions outlined within animal control are:

Request description	Definition
Dog attack	Injury or otherwise caused by dog to person or animal.
Pick up dog	Dog is contained, tied up or at a premise (eg. vet)
Stray roaming dog	Dog is currently roaming from an unknown address.
Nuisance roaming dog	Roaming dog with known address.
Barking dog	Dog is causing a nuisance to the complainant by barking.
Companion animal	All enquiries relating to microchipping & Lifetime registration, leash free area etc.
Dead animal – domestic	Request to remove a dead companion animal (dogs and cats only – no wildlife).
Other	Defecating, leash free area behaviour, cats or any other request that does not fit in the above categories.

CRS animal control request figures

These figures indicate the number of requests that were received for investigation each financial year. Recently, the categories were updated to provide further accurate information in relation to animal control matters. The aggressive dog category was divided into three groups; dog attack, stray roaming and nuisance roaming dog. There are presently no figures for these new categories.

	02/03	03/04	04/05
Dog attack	*	*	*
Aggressive dog (old)	133	111	106
Pick up dog	351	299	240
Stray roaming dog	*	*	*
Nuisance roaming dog	*	*	*
Barking dog	236	235	243
Companion animal	61	39	37
Dead animal – domestic	0	1	38
Other	315	197	198
Total complaints	1071	882	863

(*accurate figures not available)

Animal seizure and pound activity

Under the NSW Companion Animals Act 1998, an authorised officer has the option to either return the seized animal to it's owner at the address where the animal is ordinarily kept or impound the animal at our service provider. Currently, Ku-ring-gai Council uses Thornleigh Animal Hospital to provide our impounding service. Below is the activity of the animal pound for Ku-ring-gai Council.

2004/2005	cats	dogs
Animals seized & returned home	1	45
Animals seized & impounded	11	119
Public impound	6	8
Surrendered	6	9
Released to owner	3	114
Sold/rehomed	5	11
Euthanased	14	13

5. Division areas

Division areas have been created to cover all aspects of companion animal management. These incorporate Council's service to the community, facility provision, education and Council's legislative role under the NSW Companion Animals Act 1998. The four division areas are as follows:-

5.1 Community service and facility provisions

service:

- committee
- customer service
- ranger services animals other than companion animals
- companion animal management plan

facilities:

- recreation facilities
- pound/animal shelter facilities

5.2 Environmental protection

- companion animals & the bushland
- wildlife response program
- feral animal response

5.3 Education – community, schools and general

community:

- fact sheets & handbook
- pets day out
- community involvement
- animal welfare & our pound

schools:

- school education programs

general:

- specific education programs

5.4 Compliance – responsibilities under the NSW Companion Animals Act 1998

- identification and registration
- procedures – complaint & investigation & resolution
- community relations
- dangerous/aggressive dogs
- companion animal meetings

6. Action Plan

Division Name	Community service & facility provision		
Division objectives: <ul style="list-style-type: none">to provide facilities for the function enjoyment of pet ownership and utilise space provided for these reasonsto provide high level of customer service to community and local animal businesses			
Recommendation	Strategic actions	Proposed outcome & benefits	Performance indicator
S - Committee	<ul style="list-style-type: none">Establish a committee comprising of local profiles and interested parties including but not limited to: dog owners & training clubs, cat owners, vets, non-pet owners and wildlife representation.	<ul style="list-style-type: none">Create good relations with the community and establish a functional working committee.	<ul style="list-style-type: none">Companion Animal Advisory Committee operates in accordance with adopted charter.
S – Customer service	<ul style="list-style-type: none">Provide Council's Customer Service unit with a searchable computer database containing frequently asked questions in relation to companion animal issues to increase level of response to customer enquiries and increase knowledge of specific areas.	<ul style="list-style-type: none">Provide a higher level of service to residents.Residents will be presented with correct information.	<ul style="list-style-type: none">‘Frequently asked questions’ (FAQ) database is utilised by Customer Service staff on a regular basis.Monitor website enquiries, in particular the FAQ database.

Community service & facility provision cont...

	<ul style="list-style-type: none"> • Provide current and informative website relating to companion animals and include a link to pound services for further exposure to lost animals and animals looking for new homes 		
S – Ranger services	<ul style="list-style-type: none"> • Provide quality ranger duties as stated under the Companion Animals Act – respond to & investigate barking and nuisance dog complaints, collect roaming dogs, patrol nominated areas and liaise with the community. • Increase knowledge base of regulatory officers in respect of managing nuisance animals. 	<ul style="list-style-type: none"> • Display a high level of knowledge in specific areas. • Show initiative towards improving service levels for residents. 	<ul style="list-style-type: none"> • CRS monitoring for complaint resolution time. • Ensure rangers team follow adopted procedure for nuisance animal matters. • Regulatory officers undertake regular in-house refresher courses on management of nuisance animals.
S – Animals other than companion animals	<ul style="list-style-type: none"> • In consultation, develop a council code outlining the method of keeping and managing animals other than companion animals (i.e., horses, pigs, chickens, goats and domestic rabbits). 	<ul style="list-style-type: none"> • Guidelines will be available for enquiring residents and regulatory officers to enable better management of this issue. 	<ul style="list-style-type: none"> • Implementation of the guidelines for keeping other animals.

Community service & facility provision cont...

<p>S - Companion Animals Management Plan</p>	<ul style="list-style-type: none"> • Develop and implement Companion Animals Management Plan to facilitate management of companion animals in the Ku-ring-gai area. 	<ul style="list-style-type: none"> • Provides a guide to direct programs and management techniques. • Creates goals encourages focus towards achieving a harmonious environment between people, pets and nature. • Council will be acting in accordance with it's statutory requirement to establish a Companion Animals Management Plan. 	<ul style="list-style-type: none"> • Annual review and regular monitoring of the plan and adjustments made as required.
<p>F - Recreation facilities</p>	<ul style="list-style-type: none"> • Improve recognised dog off-leash areas in accordance with the prioritised capital works program. 	<ul style="list-style-type: none"> • The provision of suitable areas and promotion of their use provides a range of options for the community and assists Council in the control of non-compliance. 	<ul style="list-style-type: none"> • Facilities provided that meet the needs of dog owners (and non dog owners concerned with dog behaviour)
<p>F – Pound/animal shelter facilities</p>	<ul style="list-style-type: none"> • Provide pound facility for lost animals and animals needing new homes. Animal welfare orientated. 	<ul style="list-style-type: none"> • Council is confident that our service provided is offering a high level of care and service to impounded animals and the community. 	<ul style="list-style-type: none"> • Council enters into a long term contractual arrangement with a nominated service provider.

Division Name	Environmental protection		
Division objectives: <ul style="list-style-type: none">• protect the environment and its wildlife and continue the availability of the benefits gained from our leafy surrounds• educate pet owners on responsible behaviour in bushland to minimise impact of companion animals on the natural area			
Recommendation	Strategic actions	Proposed outcome & benefits	Performance indicator
Companion animals & the bushland	<ul style="list-style-type: none">• Encourage responsible behaviour of dogs and cats in bushland – living together with wildlife.	<ul style="list-style-type: none">• Increase awareness to protect natural flora and fauna.	<ul style="list-style-type: none">• Regular patrols of bushland interface areas by regulatory officer’s results in compliance.
Wildlife response program	<ul style="list-style-type: none">• Create a standard wildlife response program with support from ‘wildlife org’ (SMWS) for nuisance, sick and/or injured wildlife.• Create a response database for situations involving wildlife.	<ul style="list-style-type: none">• The establishment of a mutual relationship with Sydney Metropolitan Wildlife Services (SMWS).• Council can effectively respond to request from residents concerning native wildlife by working with SMWS.	<ul style="list-style-type: none">• Wildlife response database is used on a regular basis.
Feral animal response program	<ul style="list-style-type: none">• This is to include fox and rabbit control and feral cat management. Work in conjunction with Open Space.	<ul style="list-style-type: none">• Council, in conjunction with National Parks & Wildlife Services (NPWS), to undertake regular fox, rabbit and feral cat control programs.	<ul style="list-style-type: none">• Native flora and fauna have increased protection from introduced species.

Division Name	Education – community, schools and general		
Division objectives: <ul style="list-style-type: none">• target problem areas and companion animal issues with education programs designed to be noticed and encourage community involvement• reduce complaints, detected offences, impact of companion animal issues within the community and the surrounding environment• increase awareness across the community and in schools about responsible pet ownership			
Recommendation	Strategic actions	Proposed outcome & benefits	Performance indicator
C* Fact sheets & pet handbook	<ul style="list-style-type: none">• Develop standard fact sheets to address and manage companion animal issues.• Update pet owners handbook	<ul style="list-style-type: none">• Increased community awareness of being a responsible pet owner.• Providing residents with current information on companion animal issues.	<ul style="list-style-type: none">• Increased level of compliance by pet owners.• All contacts with in the Pet Handbook are current and correct.
C* Pets day out	<ul style="list-style-type: none">• Provide a pets day out, promoting responsible pet ownership and involving the community and their pets.	<ul style="list-style-type: none">• Increase interrelations between Council and the greater community.• Increase opportunities for pet socialisation and educational involvement.	<ul style="list-style-type: none">• Council hosts regular activities for pets and their owners to promote responsible pet ownership.
C* Community involvement	<ul style="list-style-type: none">• Encourage community participation in companion animal management.	<ul style="list-style-type: none">• Increasing community relations and social opportunities.	<ul style="list-style-type: none">• Companion animal management programs participated by community members.

Education – community, schools & general cont...

C* Animal welfare and our pound	<ul style="list-style-type: none"> • Establish relationship with welfare organisations and the RSPCA. • Create a positive image of the pound and its activities. 	<ul style="list-style-type: none"> • Council supports the pound and its activities. • Better ability to respond to animal matters when dealing with welfare and injury. 	<ul style="list-style-type: none"> • Regularly liaise with RSPCA and welfare organisations to keep abreast of programs as they relate to the Ku-ring-gai area. • Increase profile of pound.
S* Schools education program	<ul style="list-style-type: none"> • Initiate a schools program to educate children about companion animals. 	<ul style="list-style-type: none"> • Increased child awareness of companion animal issues and diminished chances of dog attack incidents on children. 	<ul style="list-style-type: none"> • Increase the number of schools that participate in the program. • Decrease the number of record dog attacks on children.
G* General education programs	<ul style="list-style-type: none"> • Develop specific programs targeting specific companion animal issues. 	<ul style="list-style-type: none"> • Good community relations exercise and seen as a proactive approach towards these issues. • Problem and topical areas are identified and managed through education programs. 	<ul style="list-style-type: none"> • Increase the number of programs developed and delivered. • Ensure education programs are managing problem areas.

Note: C = community education
S = schools education
G = general education

Division Area	Compliance – responsibilities under the NSW Companion Animals Act		
Division objective: <ul style="list-style-type: none">• provide an efficient and effective service to the community to incorporate the lifestyles of all members in the community• reach a high level of compliance as required by the Companion Animals Act 1998			
Recommendation	Strategic actions	Proposed outcome & benefits	Performance indicator
Identification & registration	<ul style="list-style-type: none">• Ensure companion animals are lifetime registered as prescribed by the Companion Animals Act.	<ul style="list-style-type: none">• Increase awareness throughout community of the requirement to register animals.• Council complies with its responsibilities of enforcing the Companion Animals Act.• Increased funds to Council resulting from lifetime registration fees to support companion animal programs.	<ul style="list-style-type: none">• Increase the number of companion animals registered within the Ku-ring-gai Council area.• Animals can be clearly identified by council officers when conducting investigations or locating owners of lost animals.• Ensure a constant flow of registration money is received by Council.
Procedures - complaint investigation & resolution	<ul style="list-style-type: none">• Outline the roles and responsibilities for rangers and the Companion Animals Management Officer.• Create a standard approach across	<ul style="list-style-type: none">• Reduction of repeat offenders - relating both to the pet owner and complainant.	<ul style="list-style-type: none">• Complaints are investigated and resolved in a timely manner.• Complaints are approached in a standard manner.

Compliance – responsible pet ownership cont....

	<p>the ranger team towards companion animal issues.</p> <ul style="list-style-type: none"> • Provide rangers with standard guidelines and investigation stages to enable them to resolve complaints in a quick and effective manner whilst taking into consideration the safety of themselves and members in the community. 		<ul style="list-style-type: none"> • CRS are monitored for complaint resolution time.
Community relations	<ul style="list-style-type: none"> • Develop handouts for regulatory officers to distribute to residents. 	<ul style="list-style-type: none"> • Increase awareness of responsible pet ownership. 	<ul style="list-style-type: none"> • Ranger feedback. • Monitor the number of handouts being distributed.
Dangerous/aggressive dogs	<ul style="list-style-type: none"> • Create a dog attack investigation kit • Conduct annual dangerous dog and restricted breeds inspections using a standard checklist. • Provide regular refresher training for regulatory officers in dealing with difficult dogs. 	<ul style="list-style-type: none"> • Reduce OH & S risk to the officer in the field when dealing with difficult animals. 	<ul style="list-style-type: none"> • Standard approach of evidence collecting and resolution of dog attack incidents. • Ensure dangerous dogs and restricted breeds are kept in accordance with the prescribed conditions of the NSW Companion Animals Act. • Annual inspections of dangerous dog and restricted breed are carried

Compliance – responsible pet ownership cont....

			<p>out.</p> <ul style="list-style-type: none"> • Monitor reported attack and report outcomes. • Monitor OH & S incidents for animal control.
<p>Companion animal meetings</p>	<ul style="list-style-type: none"> • Attend Councils' Unite for Pets meetings. • Attend other associated companion animal meetings. 	<ul style="list-style-type: none"> • Keep abreast of legislation, obtain new ideas and become involved with other councils. • Establish relations with other council officers and learn of their adopted programs. 	<ul style="list-style-type: none"> • Record number of meetings attended. • Participation in joint events where deemed appropriate.

7. Performance indicators and targets

The performance indicators have been taken from the Action Plan for each division, and lists the tasks involved in accomplishing the set performance indicators. The tasks have been set a priority level to ensure that tasks are completed in order of priority.

Community service & facility provision

Action plan performance indicator	Tasks involved	Priority
Companion Animal Advisory Committee operates in accordance with adopted charter	Annually review operating charter.	Medium
'Frequently Asked Questions' (FAQ) database is utilised by Customer Service staff on a regular basis.	Develop FAQ database and record use.	High
Monitor website enquiries, in particular the FAQ database.	Develop FAQ database on website and record use.	High
CRS monitoring for complaint resolution time.	Develop report to check response times.	Medium
Ensure rangers team follows adopted procedure for nuisance animal matters.	Develop and implement procedures across all relevant areas.	High
Regulatory officers undertake regular in-house refresher courses on management of nuisance animals.	Develop and maintain a training register for officers.	Medium
Develop guideline for keeping of other animals.	Implement a guideline for keeping other animals.	Low
Annual review and regular monitoring of the plan and adjustments made as required	Annual achievement report prepared.	High
Facilities provided that meet the needs of dog owners (and non dog owners concerned with dog behaviour)	Develop and implement a program to monitor the use of leash free areas and report findings.	Medium
Council to enter into a long term contract arrangement with a nominated impounding service provider.	Conduct public EOI activity to source a service provider.	Low

Environmental protection

Action plan performance indicator	Task involved	Priority
Regular patrols of bushland interface areas by regulatory officers.	Systematically patrol interface areas and report findings.	Medium
Wildlife response database is utilised by customer service officers on a regular basis to supply information to customers and residents.	Establish access relationship with relevant wildlife groups so as to utilise their databases.	Low
Native flora and fauna have increased protection from introduced species.	Create a database to record results of feral animal programs run.	Low

Education – community, schools and general

Action plan performance indicator	Task involved	Priority
Increased level of compliance by pet owners.	Increase patrols to monitor activity of companion animals. Conduct regular education projects.	High
All contacts with in the Pet Handbook are current and correct	Annually review and update booklet and website as appropriate.	High
Council to host regular activities for pets and their owners to promote responsible pet ownership	Develop events register. Organise companion animal events.	High High
Companion animal management programs participated in by community members.	Monitor participation in planned activities and report findings.	Medium
Regularly liaise with RSPCA and welfare organisations to keep abreast of programs as they relate to the Ku-ring-gai area.	Establish network between agencies and attend relevant meetings.	Medium
Increase profile of pound.	Positive media stories sent to local papers.	Medium
Increase number of schools that have participated in the program.	Develop and implement a school education program and monitor.	Medium
Decrease number of dog attacks on children.	Deliver education program focusing on dog safety for kids.	High
Increase number of education programs developed and delivered.	Develop education program register.	Medium

Ensure education programs are managing problem areas.	Monitor education program register.	Medium
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Compliance – responsible pet ownership

Action plan performance indicator	Task involved	Priority
Increase the number of Companion animals registered within the Ku-ring-gai Council area.	Implement friendly reminder project, follow up registrations and monitor.	High
Animals can be clearly identified by council officers when conducting investigations or locating owners of lost animals.	Develop a Microchip checking program to ensure details are correct.	Medium
Ensure constant flow of registration money is received by Council.	Sent out friendly reminder letters each month and maintain regular follow ups.	High
Complaints investigated and resolved in a timely manner.	Ensure procedures for rangers are developed, adopted and amended as required.	High
Complaints approached in a standard manner.	Rangers to follow procedures as adopted.	Medium
CRS's are monitored for complaint resolution time.	Monthly reporting of CRS statistics.	High
Ranger feedback.	Reports regularly supplied.	Medium
Monitor the number of handouts being distributed.	Develop handouts on current topics and monitor distribution.	Medium
Standard approach of evidence collecting and resolution of dog attack incidents.	Rangers to follow procedures as adopted.	Medium
Ensure dangerous dogs and restricted breeds are kept in accordance with the prescribed conditions of the NSW Companion Animals Act.	Rangers to follow SOP's as adopted.	Medium
Annual inspections of dangerous dogs and restricted breeds are carried out.	Annual inspection of registered premises.	Medium
Monitor reported attacks and report outcomes.	Supply annual activity report to Council.	Medium
Monitor OH & S incidents for animal control.	Supply annual activity report to Council management.	Medium
Record number of meetings attended.	Record meetings in a central register.	Low
Participation in joint events where deemed appropriate.	AMO and rangers to participate in regional events.	Low

8. Monitor and review

Monitoring and reviewing our performance regarding companion animals is a large component of this plan so as to ensure that we meet the goals and vision of the Plan.

There will be four main types of monitoring, these include:-

Monthly monitoring:

Standard figures will be collected from various areas of companion animal management and recorded at the end of each month. These figures will be used to monitor progress and provide the basis of the end of year report. The particular areas that will be monitored on a monthly basis are:-

- **No. of registrations processed** – Used to measure the efficiency of mail outs to owners of unregistered dogs and indicate the number of animals residing in the Council area.
- **No. of friendly reminders sent** - This will indicate the number of new animals that are coming into the area each month and will also show a proactive approach to promoting lifetime registration for pets over 6 months of age.
- **Percentage of animals registered** – This will indicate the percentage of animals registered and provide an indication of animals still to be registered.
- **Total complaints received for animal control** – This will allow comparisons over each financial year period to allow education and resources to be allocated effectively.
- **Individual figures for specific complaint areas** – the specific categories that are of major interest include all nuisance complaints, dog attacks and dog pick ups. This will allow Council to target problem areas within companion animal management to further reduce these figures.
- **Animal seizure and pound activity** – This information will provide an indication of the number of animals seized and the impounding rate for the Council area.

Annual monitoring

The end of year report will be prepared, collating all the data over the financial year to support the progress of the Companion Animals Management Plan.

Specific program monitoring

All companion animal programs developed and implemented will be monitored and the results will be collated in a report to determine the success or otherwise of the program.

Key area monitoring

This lists seven key areas that require high performance and is an essential component of companion animal management, these are:-

1. Animals registered
2. Animals seized
3. Complaints received
4. Barking dog complaints
5. Dog attacks
6. Nuisance roaming dogs
7. Leash free area

The following table shows our aims for each key area and outlines how we have performed over the past few years. Targets have been set for 2005/2006 and will be re-evaluated at the end of each financial year.

Key Area Aims	2002/03	2003/04	2004/05	Target 2005/06	Target 2006/07	Target 2007/08	Target 2008/09
Increase in the percentage of animals registered	*	*	68.13%	80%	85%	87%	90%
Reduction in the number of animals seized	*	*	130	≥ 115	≥ 100	≥ 95	≥ 90
Reduction in overall complaints regarding companion animals	1071	882	863	≥ 800	≥ 780	≥ 750	≥ 740
Reduction in barking dog complaints	236	235	243	≥ 220	≥ 200	≥ 195	≥ 190
Reduction in dog attacks	*	*	*	≥ 100	≥ 90	≥ 60	≥ 50
Reduction in nuisance roaming dogs	*	*	*	≥ 100	≥ 95	≥ 90	≥ 85
Ensuring that the upgrade program of leash free areas is being met as set by Council (one area per year)	Yanko Road & Bicentennial Park	Roseville Park & Sandakan Park	Westbrook Ave & light in Yanko Road	Toolang, Mitchell Cres & Barra Brui	Karuah Park	Soldiers Memorial Park	Kent Road Reserve

(* - Accurate figures not available)

(Note: Additional off leash areas under trial. During 2006 Council is conducting trials at Warrimoo Oval, St Ives and Queen Elizabeth Reserve, West Lindfield. The results of the trials will be subject to a separate report to Council for adoption and implementation.)

9. Acknowledgements

The development of this Companion Animal Management Plan has only been possible as a result of the committed and sustained effort of a dedicated team of volunteers working with Council officers, collectively forming 'The Ku-ring-gai Companion Animals Committee'.

The Committee's focus is to promote socially responsible pet ownership.



DISCLOSURE OF INTERESTS RETURN

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To table Councillor J Anderson's Disclosure of Interests Return in accordance with the Local Government Act 1993.

BACKGROUND:

The Act requires that Primary Returns for newly elected Councillors must be tabled at the first Council Meeting 3 months after being declared elected.

COMMENTS:

The Return will be tabled at the Meeting.

RECOMMENDATION:

That the tabling of Councillor Anderson's Disclosure of Interests Return be noted.

PURPOSE OF REPORT

To table Councillor J Anderson's Disclosure of Interests Return in accordance with the Local Government Act 1993.

BACKGROUND

Section 449 of the Local Government Act 1993 requires the lodgement of Returns disclosing interests of newly elected Councillors.

Councillor J Anderson was declared elected on 16 March 2006.

Under Section 450A(2)(a), the Return must be tabled at the first Council meeting held after the last day for lodgement (15 June 2006).

COMMENTS

The Return will be tabled at the Meeting.

RECOMMENDATION

That the tabling of Councillor J Anderson's Primary Disclosure of Interests Return be noted.

Geoff O'Rourke
Senior Governance Officer

John McKee
General Manager

INVESTMENT CASH FLOW & LOAN LIABILITY AS AT 31 MAY 2006

EXECUTIVE SUMMARY

PURPOSE OF REPORT:	To present to Council the investment allocation and the performance of funds, monthly cash flow and the details of loan liability for May 2006.
BACKGROUND:	Council's investments are made in accordance with the Local Government Act (1993), the Local Government (Financial Management) Regulation (1999) and Council's Investment Policy which was adopted by Council on 4 April 2006 (Minute No.112).
COMMENTS:	The Reserve Bank of Australia (RBA) increased the official cash rate from 5.50% to 5.75% in May.
RECOMMENDATION:	That the summary of investments, daily cash flows and loan liability for May 2006 be received and noted.

PURPOSE OF REPORT

To present to Council the investment allocation and the performance of funds, monthly cash flow and the details of loan liability for May 2006.

BACKGROUND

Council's investments are made in accordance with the Local Government Act (1993), the Local Government (Financial Management) Regulation (1999) and Council's Investment Policy which was adopted by Council on 4 April 2006 (Minute No. 112).

This policy allows Council to utilise the expertise of external fund managers for the investment of Council's short term surplus funds. This is done, as for many other Councils, with the advice of Grove Research & Advisory Pty Limited.

COMMENTS

During the month of May, Council had a cash inflow of \$4,150,000 and gross capital appreciation on Council's investments was \$143,300.

Council's total investment portfolio at the end of May 2006 is \$35,567,600. This compares to an opening balance of \$18,539,000 as at 1 July 2005.

Council's interest on investments for May, year to date is \$1,649,600. This compares favourably to the year to date budget of \$921,250.

Council's total debt as at 31 May 2006 stands at \$10,274,000. There were no loan repayments made during the month of May.

PERFORMANCE MEASUREMENT

Council's investment portfolio is monitored and assessed based on the following criteria:

- **Management of General Fund Bank Balance**

The aim is to keep the general fund bank balance as low as possible and hence maximise the amount invested on a daily basis.

- **Performance against the UBS Bank Bill Index**

This measures the annualised yield (net of fees and charges) for each of Council's portfolios. The weighted average return for the total portfolio of funds is compared to the industry benchmark of the UBS Bank Bill Index.

Item 7

S02722
1 June 2006

Allocation of Surplus Funds

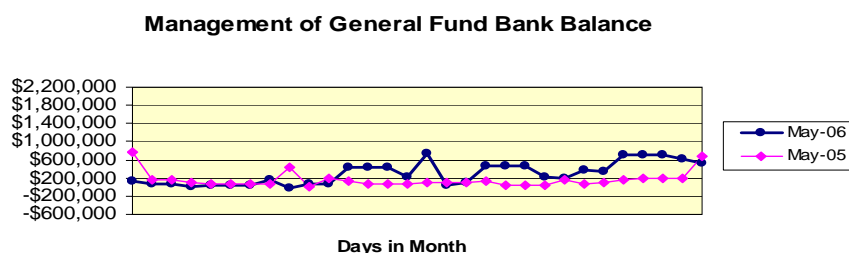
This represents the mix or allocation of surplus funds with each of Council's Fund Managers.

Council's investment policy requires that not more than 45% of funds are to be with any one Fund Manager. All funds are kept below this required level of 45%.

May 2005

Management of General Fund Bank Balance

During May, Council had an inflow of funds of \$4,150,000. This was due to the final rates instalment that fell due on 31 May and receipts for Section 94 contributions.



Funds Performance against the UBS Bank Bill Index

The weighted average return for the total portfolio of managed funds during May was 6.05% compared to the benchmark of the UBS Bank Bill Index of 5.85%.

A summary of each fund's performance is shown in the following table:

Fund Manager	Terms	Opening Balance	Cash flow Movement	Income Earned (net of fees)	Closing Balance	Interest Rate
BT Institutional Managed Cash	At Call	\$1,826,522	(\$750,000)	\$3,896	\$1,080,419	5.92%
Deutsche Income Fund	At Call	\$11,003,669		\$49,173	\$11,052,843	6.05%
Macquarie Income Plus Fund	At Call	\$8,919,058	\$2,550,000	\$40,882	\$11,509,941	6.00%
Perpetual Credit Income Fund	At Call	\$7,187,804	\$2,350,000	\$38,257	\$9,576,062	6.21%
Turramurra Community Bank	Term Deposit	\$528,300		\$2,566	\$528,300	5.83%
CBA Loan Offset No 1	Offset	\$780,000		\$3,670	\$780,000	5.72%
CBA Loan Offset No 2	Offset	\$1,040,000		\$4,889	\$1,040,000	5.72%
TOTALS		\$31,285,353	\$4,150,000	\$143,337	\$35,567,565	

Item 7

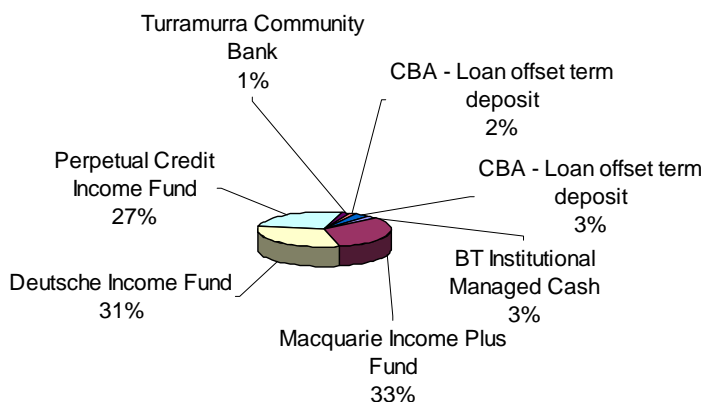
S02722
1 June 2006**Year to-date Funds Performance against the UBS Bank Bill Index**

The following table provides a year-to-date analysis of each fund's performance against the industry benchmark.

Fund Manager	Performance Annualised for May 2006	UBS Bank Bill Index Annualised for May 2006
BT Institutional Managed Cash	5.79%	5.74%
Deutsche Income Fund	6.52%	
Macquarie Income Plus Fund	6.41%	
Perpetual Credit Income Fund	6.47%	
Turramurra Community Bank	5.83%	
CBA Offset No.1	5.72%	
CBA Offset No.2	5.72%	

Allocation of Investment Funds

Council's funds during May were allocated as follows:

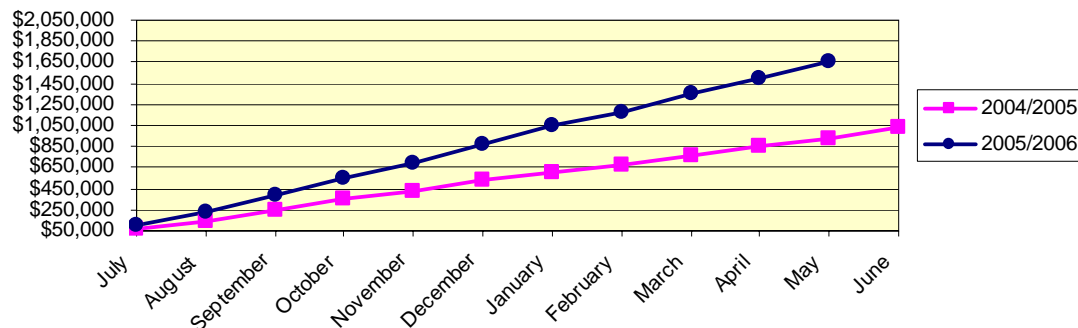
Portfolio Allocation of Investment Funds**2004/2005 versus 2005/2006****Accumulative Interest**

The following graph compares the interest earned on an accumulative monthly basis for financial years 2004/2005 and 2005/2006. At the end of May, year to date interest earnings totalled \$1,649,600. This compares to \$930,900 at the same time last year, an increase of \$718,700.

Item 7

S02722
1 June 2006

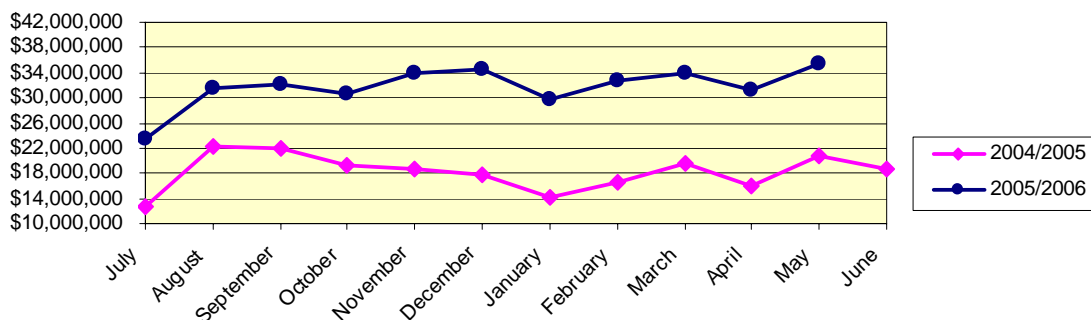
Accumulative Interest 2004/2005 v's 2005/2006



Total Investment Portfolio

The following graph tracks the monthly investment portfolio balances for 2005/2006 in comparison to 2004/2005.

Total Investment Portfolio 2004/2005 v's 2005/2006



During May 2006 Council's investment portfolio increased by \$4,150,000. In comparison, during May 2005 Council's investments increased by \$4,650,000.

Council's closing investment portfolio of \$35,567,600 in May 2006 is \$14,861,800 higher than the May 2005 closing balance of \$20,705,800.

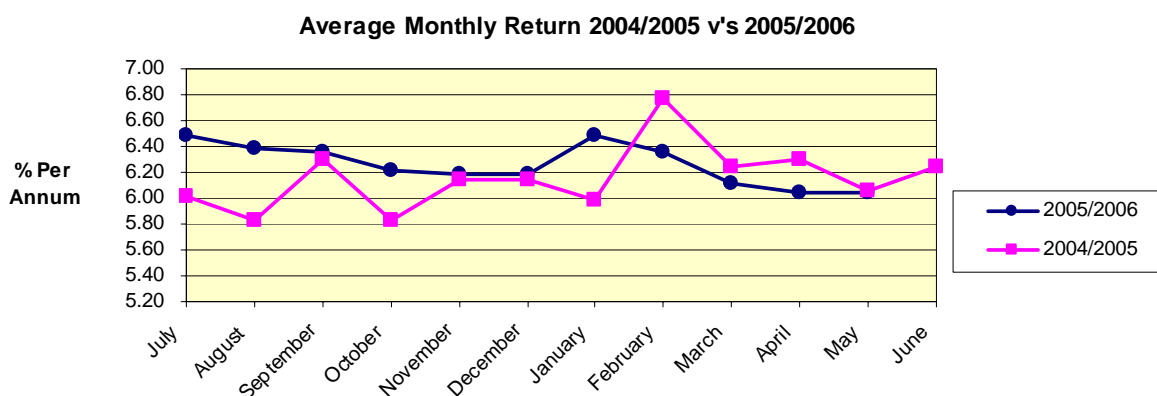
Portfolio Performance Average Return 2004/2005 versus 2005/2006

The following graph compares the monthly returns on Council's portfolio for the financial years 2004/2005 and 2005/2006.

Item 7

S02722
1 June 2006

In May 2006 earnings before fees were 6.05% compared to 6.06% in May 2005.



2005/2006 Portfolio Performance against the UBS Bank Bill Index

Council's average portfolio performance (6.05%) performed above the UBS Bank Bill Index (5.85%) in May.

Council's year to date average portfolio performance was 6.26% which compared favourably with the UBS Bank Bill Index benchmark of 5.74%.

Returns have exceeded benchmark in each of the 11 months this financial year. Fund Managers took advantage of market opportunities during the September quarter thus producing better month to month results than the December quarter. In particular both Deutsche and Perpetual funds benefited from anticipating the record volume of maturing debt in July and August, and the effect that this would have on the demand for securities as funds were reinvested. Both funds benefited from increasing their exposure to high rated, short dated securities in the preceding months.

January saw a one-off strong performance from the portfolio, out performing the benchmark by 0.70%. This was due to:

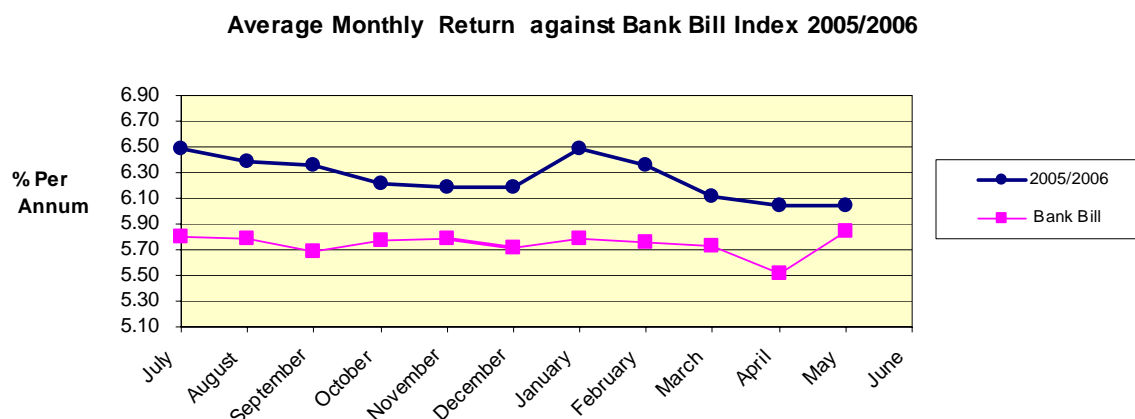
- 1) Higher levels of bank debt provided more liquidity in the market.
- 2) Significant credit spread contraction during the month.
- 3) Interest rate trading added to performance due to a wider range in yields.

Since February there were some new issuances adding to liquidity, and a reduction in the trading range in yields which therefore limited fund out performance as in January, bringing returns back to more stable levels. The portfolio's performance in May out performed the Bank Bill Index by 0.52%.

Item 7

S02722
1 June 2006

The monthly average return of portfolio against bank bill is displayed in the following graph:



Summary of Borrowings

The following is a summary of Council's borrowings, listing each of Council's loans, original amounts borrowed, principal repayments made, outstanding balances, interest rates and maturity dates.

There were no loan repayments made in May leaving total debt at \$10,274,000.

Lender	Loan Number	Original Principal	Principal Repayments	Balance Outstanding	Interest Rate	Draw Down Date	Maturity Date
Westpac	127	\$1,000,000	\$689,022	\$310,978	6.32%	29-Jun-98	29-Jun-08
CBA Offset No 1	128	\$2,600,000	\$1,820,000	\$780,000	5.87%	29-Jun-99	13-Jun-09
CBA Offset No 2	129	\$2,600,000	\$1,560,000	\$1,040,000	5.87%	13-Jun-00	14-Jun-10
CBA	130	\$2,600,000	\$973,437	\$1,626,563	6.32%	26-Jun-01	28-Jun-11
NAB	131	\$2,600,000	\$718,313	\$1,881,687	6.85%	27-Jun-02	27-Jun-12
Westpac	132	\$1,882,000	\$384,360	\$1,497,640	5.16%	27-Jun-03	27-Jun-13
CBA	133	\$1,800,000	\$203,600	\$1,596,400	6.36%	23-Jun-04	23-Jun-14
Westpac	134	\$1,600,000	\$59,261	\$1,540,739	6.05%	29-Jun-05	30-Jun-15
TOTAL		\$16,682,000	\$6,407,993	\$10,274,007			

Capital Works Projects

As at the end of May 2006, Council had total gross expenditure of \$11,160,900 on capital works, which is \$120,600 lower than at the same time last year when \$11,281,500 had been expended.

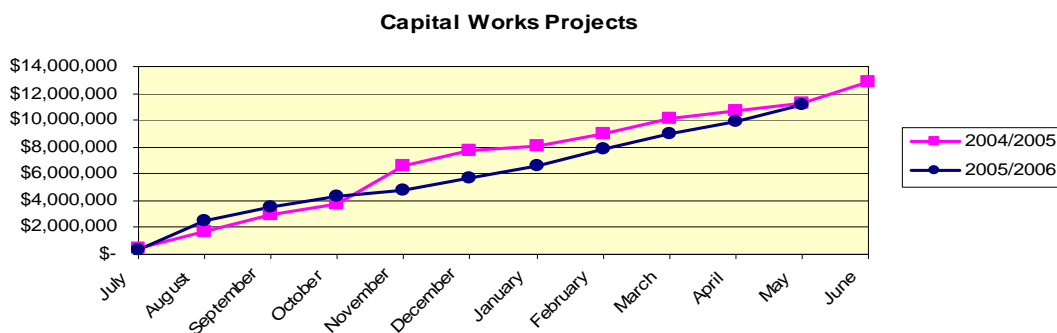
During May 2006, Council expended \$1,261,700 on capital works, which compares to \$609,200 during May 2005, an increase of \$652,500.

Item 7

S02722
1 June 2006

Council's 2005/2006 total revised budget for capital works is \$13,940,900, which leaves funds of \$2,780,000 unexpended at the end of May.

The following graph compares the gross accumulative monthly expenditure totals for capital works for financial years 2004/2005 and 2005/2006.



CONSULTATION

Not applicable

FINANCIAL CONSIDERATIONS

The Reserve Bank of Australia (RBA) increased the official cash rate in May from 5.50% to 5.75% after 14 months of stability. The market consensus for monetary policy is already shifting, with the expectation moving towards another 25bps rate before year end.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Not applicable.

SUMMARY

As at 30 May 2006:

- Council's total investment portfolio is \$35,567,600. This compares to an opening balance of \$18,539,000 as at 1 July 2005, an increase of \$17,028,600.
- Council's interest on investments totals \$1,649,600. This compares favourably to the year to date budget of \$921,250.
- Council's total debt stands at \$10,274,000.

RECOMMENDATION

That the summary of investments, daily cash flows and loan liability for May 2006 is received and noted.

John Clark
Acting Director Finance & Business

ENERGY & WATER SAVINGS ACTION PLAN

EXECUTIVE SUMMARY

PURPOSE OF REPORT:	To adopt Council's draft Energy and Water Savings Action Plan and to seek Council approval to go to tender to enter into an Energy Performance Contract.
BACKGROUND:	<i>The Administration Amendment (Water and Energy) Act 2005</i> requires Councils to prepare savings plans for high water and energy demand sites. While only 10 sites are required to meet the requirements of this Act an additional 28 sites have been identified to develop the best possible understanding of where and when water and energy is consumed and the potential for maximising saving opportunities.
COMMENTS:	A level one audit of the 38 sites has been completed and identifies areas where consumption may be reduced. The Plan must be adopted by Council and submitted to DEUS by 30 June 2006. On adoption of this plan the next stage will include more detailed auditing and implementation. An option to fund the program is through the engagement of an energy performance contractor.
RECOMMENDATION:	That Council adopt the draft Energy and Water Action Plan (see Attachment 1) and present the adopted Energy and Water Action Plan to the Department of Energy, Utilities and Sustainability in accordance with the Administration Amendment (Water and Energy Savings) Act 2005 & that Council endures a tender process pursuant to the Local Government (General Regulation 2005) to select an Energy Performance Contractor. A report will then be presented to Council recommending the appointment of an Energy Performance Contractor.

PURPOSE OF REPORT

To adopt Council's draft Energy and Water Savings Action Plan and to seek Council approval to go to tender to enter into an Energy Performance Contract.

BACKGROUND

On 12 October 2004, Council resolved:

"That the General Manager prepares a report detailing an appropriate project or series of projects with the aim of increasing the long term sustainability of Council's operations through improving our water and energy efficiency and through adopting renewable energy sources."

In addition to this resolution, the 2005/09 Management Plan included a number of key performance indicators relating to energy and water conservation:

- Identify water conservation targets
- Report on Water Smart Challenge community involvement program and "Every Drop Counts program"
- Update the Greenhouse action plan

In 2005 the Minister for Energy and Utilities announced the introduction of the *Administration Amendment (Water and Energy Savings) Act 2005*. The Act requires among other things that high water and energy users and Councils prepare savings plans. In response to this Act the Minister directed Councils and other high users to prepare energy and water conservation plans by 30 June 2005. To facilitate the implementation of the plans and other initiatives the Department of Energy, Utilities and Sustainability (DEUS) established the Water and Energy Savings Fund to a total of \$60 million per annum to support the savings measures.

Under the direction to Council, our water and energy plan was to be submitted by 31 March 2006 for the ten top Council facilities. During the development of the plan, a greater number of Council sites were identified and audited so as to provide information to inform the development of our approach and help quantify the benefits of Council's capital works programs and to provide supplementary information to the greenhouse action plan. A total of 38 sites have been included.

As a consequence of this expanded plan an extension to the deadline was requested. This was agreed and Council was advised that the plan must now be completed by 30 June 2006.

The draft Energy and Water Action Plan is provided as Attachment 1 for consideration and adoption by Council.

By way of background the cost of energy and water by Council in the 2004/2005 financial year was \$1,550,000 on energy and \$139,324 on water. Annual water costs have decreased by \$60,000

Item 8

S02166
31 May 2006

since the 2002/2003 baseline year, primarily due to the water restrictions. Council's energy costs have increased by \$80,000 from the 2002/2003 baseline figures, primarily due to increased charges by the utility provider.

COMMENTS

The draft Energy and Water Action Plan has been developed to reduce energy and water consumption at Council's major facilities. The Plan has undertaken a Level 1 audit on the energy and water consumption of 38 sites and has provided brief recommendations to reduce this consumption. For Council Chambers and the Gordon Library a level 3 audit was undertaken in 2000 that has provided greater details of potential savings, though the costs to implement and choice of technologies will have changed. However this level audit was not undertaken for the other sites as on average it would have cost approximately \$5,000 per site. Rather, as part of the implementation of the plan it is foreshadowed below that an energy services company would undertake the necessary energy and water audits as part of a contract seeking reductions in energy and water consumption.

Consumption

In the 2004/2005 financial year, Council spent \$1,550,000 on energy consumption and \$139,324 on water consumption. Tables 1 and 2 show the expenditure by key area for both energy and water.

Table 1: Energy consumption and costs per sector 2004/2005

Area	Cost	Energy kWh pa
Streetlights	\$1,218,985	4843285
Chambers	\$105,375	1054042
Libraries	\$64,593	572176
Sports facilities	\$51,042	360955
Depot	\$27,955	246363
Showground	\$21,510	124190
Halls and meeting rooms	\$16,350	132130
Other	\$13,139	104422
Golf Courses	\$11,334	93402
Art Centre	\$7,668	51430
Childcare centre	\$5,131	40762
Carparks	\$4,538	35565

Table 2 Water consumption per sector 2004/2005

Area	Cost	Water kL pa
Ovals	\$70,343	64455
Golf Courses	\$34,621	26000
Pool	\$16,136	15740
Showground	\$11,350	9801
Bowling clubs	\$8,228	9600

Item 8

S02166
31 May 2006

Area	Cost	Water kL pa
Buildings	\$18,243	7682
Other	\$8,776	6865
Nursery	\$4,561	6865
Chambers	\$6,625	3165

Since 2002/03 the annual water costs have decreased by \$60,000 due to water saving with the introduction of water restrictions. Electricity costs have increased since 2002/03 by \$80,000 per year. This is likely to be attributable to increased tariffs, installation of further street lighting to ensure compliance with Australian Standards, and a general increase in usage of sports ovals and other Council facilities.

Savings

The draft plan contains a preliminary assessment of water and energy saving opportunities at 38 targeted sites. This assessment has identified that there is likely to be water and energy savings at each site, however this will require a detailed level 3 energy audit under Australian Standard AS/NZS 3598:2000 to quantify accurate savings and costs.

A qualitative rather than detailed quantitative approach to the Plan has been undertaken due to the potentially high capital cost to undertake detailed audits of Council's facilities. Notwithstanding this approach and drawing from the experience of Hornsby and Newcastle Council it is anticipated that over 50 per cent savings can be made to both water and energy on current consumption. DEUS has indicated support for the approach outlined in this report.

In terms of current initiatives, the proposed sewer mining and stormwater harvesting projects as identified in the adopted capital works program for 2006/07 and construction of the new depot will have an immediate impact on both energy and water. Beyond this funding to implement significant projects will be dependent on the allocation of resources, as discussed in the financial section of this report.

Energy performance contractors

On adoption of the plan it is envisaged that the next stage of assessment and analysis to develop specific actions will be to undertake a detailed level three audit involving the appointment of an accredited auditor and is likely to cost in the vicinity of \$2,000 to \$10,000 per site. The costs are dependant on the size and complexity of the site.

An option to reduce this auditing cost and achieve the desired savings can be through entering into an Energy Performance Contract. Energy Performance Contracting is when an energy service company (ESCO) is engaged to improve the energy efficiency of a facility, with the guaranteed energy savings paying for the capital investment required to implement improvements. Under a performance contract for energy saving, the ESCO examines a facility, evaluates the level of energy and water savings that could be achieved, and then offers to implement the project and guarantee those savings over an agreed term. The cost of undertaking the energy and water audit and assessment of sites is incorporated into the contract and will generally cost less if the ESCO is

Item 8

S02166
31 May 2006

selected to carry out the recommendations of their assessment. (see Attachment 2 for further explanation of Energy Performance Contracting)

Energy Performance Contracting would allow Council to upgrade ageing and inefficient assets while recovering capital required for the upgrade directly from the energy savings guaranteed by the ESCO. The ESCO takes the technical risk and guarantees the savings. The ESCO is usually paid a management fee out of these savings (if there are no savings, there is no payment) and is obligated to repay savings shortfalls over the life of the contract. At the end of the specific contract period the full benefits of the cost savings revert to Council.

Hornsby Council has implemented a comprehensive local government Energy Performance Contract (EPC) involving approximately 250 council maintained buildings and park sites, including the council chambers, aquatic centres, community centres, libraries, administration buildings and major sporting fields and parks. The total cost of the EPC was approximately \$1,134,000, funded through an internal loan which is being repaid over seven years from the resulting savings in energy and water bills.

The EPC has led to considerable savings in energy, water and other operating costs, and served to update and improve Hornsby's infrastructure. The implementation of the EPC has reduced Hornsby's energy usage by approximately 20% per year and water consumption by 19% equating to a total cost saving of approximately \$178,000 per year - an internal rate of return of 16.4%.

Some of the sites targeted in the plan may be significantly modified, removed or rebuilt as part of the redevelopment of the town centres, limiting Council in what projects can be undertaken at these sites. If energy and water savings programs can be undertaken at these sites with payback achieved prior to redevelopment, then these projects will be recommended in the draft Plan. However if the payback through savings cannot be achieved prior to redevelopment, no recommendations for these sites have been included in the draft.

CONSULTATION

External organisations including the Water and Energy section of DEUS, the International Council of Local Environmental Initiatives (ICLEI), and other Councils undertaking energy and water conservation projects have been consulted as part of the development of the draft Plan.

To determine options for funding the recommendations of the draft Plan, Council staff consulted with DEUS, Baulkham Hills Council, Hornsby Council and Environmental Conservation Systems P/L, who undertook the Energy Performance Contract with Hornsby Council.

Energy Australia and Sydney Water have been extensively consulted to assist in determining consumption data and meter locations for both energy and water.

This report has also been discussed at the Finance Committee on 20 June 2006.

FINANCIAL CONSIDERATIONS

The implementation of the draft Energy and Water Action Plan will need resourcing to achieve the desired savings. Several opportunities for funding are recommended in the plan, as discussed below.

Revolving Energy Fund

Council created a Revolving Energy Fund (REF) in 1999 as part of the Cities for Climate protection program to fund energy reduction projects, injecting the financial savings back into the fund. Currently the fund contains \$20,000 from the savings achieved by installing power factor equipment in the Council Chambers building and has not been used for over four years. There is an opportunity to invest the money in this fund on energy and water projects which have a short pay back period allowing savings to be injected back into the fund for further projects. A five year rolling works program can be partially funded by this fund as part of the implementation of the Energy and Water Action Plan.

Grants and Rebates

Grants and rebates are available for any new projects and facilities that use energy or water. Projects may include energy and water efficiency at the new depot site, stormwater harvesting at ovals, and the development of the North Turramurra Sports Reserve. Funding opportunities include:

- DEUS Energy and Water Grants (\$30 million each pa). There are around 2-3 rounds per year and are allocated to energy and water efficiency projects. The grants are predominantly administered to projects listed within the Energy and Water Savings Plan.
- Renewable Energy Certificates (RECs) are issued by the Office for Renewable Energy Regulator (ORER) for renewable energy produced through solar or wind. As an example, installation of a \$2300 Solar hot water system on a Council community centre creates \$425 of RECs which can be discounted from the overall cost.
- The Photo-Voltaic Rebate Program provides a rebate on PV installations administered by the Greenhouse Office www.greenhouse.gov.au/renewable/pv
- Sydney Water Rainwater Tank Rebate Scheme

Review of utility service providers

Council has not reviewed the services provided by the energy and water utilities since the deregulation of the energy companies in 1999. There is an opportunity for Council to seek cheaper electricity through a different supplier upon further investigation of our purchasing options. Savings made by sourcing cheaper electricity can be reinvested to fund the recommendations of the Action Plan. As part of this review an opportunity exists to negotiate through a grouping of Councils such as via the Northern Sydney Regional Organisation of Councils.

Energy performance contracts

An Energy Performance Contract (EPC) commences with a detailed feasibility study, which is similar in process to a detailed energy audit (See Attachment 2 for more detail). The measures recommended in the detailed study are developed into a savings guarantee, which is implemented in an energy performance contract. The contract can also include water projects. Under the contract, the performance contractor guarantees to achieve a minimum level of savings. If these savings are

Item 8

S02166
31 May 2006

not achieved, then the contractor pays a financial penalty of some description. Performance contracts typically run for 5-10 years.

They can be funded either through an internal or external loan. Council may chose to borrow the entire cost or only a percentage of the contract cost, supplementing the project with funding from the Council budget. EPCs can include all Council sites or just one site depending on the requirements of Council.

Attachment 3 provides a detailed case study on Hornsby Council's Energy Performance Contract.

Council's investments are projected to earn 6% per annum so any return above that amount would obviously be advantageous. Therefore it would be prudent to invest Council's funds into an EPC so long as the return was guaranteed to exceed 6%. EPCs involve a guarantee by the ESCO that the savings will be achieved by reducing operating and maintenance costs. As previously stated, Hornsby Council's EPC has provided an internal rate of return of over 16%.

The risk to Council's investment would be the viability of the organisation awarded the contract, therefore it would be recommended that credit assessments be undertaken to minimise that risk. In terms of sourcing the initial outlay it is recommended that a loan be taken out against Council's New Facilities Reserve. As savings are realised throughout the life of the project, funds would be paid back into the New Facilities Reserve at the appropriate interest rate, based on Council's investment earnings. Any additional funds would be put to the Revolving Energy Fund Reserve for future use. An investment of approximately \$1 million could be sourced from internal reserves based on projections contained in Council's 10 year financial model.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

As part of the development of the draft Energy and Water Savings Action Plan, a review was undertaken of Council's management processes in regards to energy and water conservation. The review included a questionnaire to all managers who were responsible for asset or lease management and a focus group of managers to discuss the results. The review showed that there was limited knowledge at the management level of the use of energy and water at Council facilities, however in general, Council management sought to reduce consumption. The findings of this review and associated recommendations have been included in the draft Plan.

In addition to the management review, all Council staff who manage Council assets and facilities or who are responsible for leases and licensing at Council facilities were consulted extensively in the development of the draft Plan.

The financial assessment and viability to fund the program has been developed with the Business and Finance Department.

SUMMARY

In accordance with the *Administration Amendment (Water and Energy Savings) Act 2005*, Council is required to develop a water and energy savings action plan to address the growing divide between

Item 8

S02166
31 May 2006

supply and demand of these two resources. Council has developed a draft Plan (Attachment 1) in consultation with all relevant staff within Council and external organisations.

In the 2004/2005 financial year, Council spent \$1,550,000 on energy consumption and \$139,324 on water consumption. The annual water costs have decreased by \$60,000 since the 2002/2003 baseline year, due to water saving with restrictions, however annual energy costs have increased by \$80,000 from the 2002/2003 baseline figures.

Implementation of the Plan will require significant capital investment and a range of financing options have been discussed. One of the more effective financing options is the establishment of an Energy Performance Contract to have an independent contractor undertake energy and water saving projects at Council facilities providing Council with guaranteed savings (see Attachment 2).

RECOMMENDATION

- A. That Council adopt the draft Energy and Water Action Plan (see Attachment 1).
- B. That Council submits the adopted Energy and Water Action Plan to the Department of Energy, Utilities and Sustainability in accordance with the *Administration Amendment (Water and Energy Savings) Act 2005*.
- C. That Council initiates a tender process to pursuant to the Local Government (General Regulation 2005) to select and Energy Performance Contractor.
- D. That a report be presented to Council recommending the appointment of an Energy Performance Contractor.

Louise Hayward
Sustainability Officer

Peter Davies
Manager Sustainability & Natural
Environments

John Clark
Acting Director Business & Finance

Steven Head
Director Open Space & Planning

Attachments: **1. Draft Energy and Water Action Plan - 624190**
 2 & 3. Energy Performance Contract (Definition and Case Study) - 624191

Ku-ring-gai Council

Water and Energy Savings Action Plan

I certify that this Energy and Water Savings Plan has been prepared in accordance with the guidelines issued by the Minister for Utilities. I am authorised to submit this plan, on behalf of the designated user, to DEUS.

General Manager

Overview

Forward

Sydney is using more water and energy than is sustainable, and over the next twenty five years, the existing shortfall between the amount of water and energy used and the amount provided will increase. In response, the Department of Energy Utilities and Sustainability (DEUS) under the *Energy Administration Amendment (Water and Energy Savings) Act 2005*, has directed Council to develop both an Energy and Water savings action plan. This document addresses this direction according to the guidelines prepared by DEUS.

This plan includes a review of existing water and energy use of Council facilities, and documents actions which will complement the work Council has already implemented. The sites selected for inclusion in this plan are Council's twenty sites with the highest water and energy use which include libraries, community halls, sports ovals and golf courses. In addition to these sites, the plan also includes facilities which may not currently use significant amounts of water or energy, however opportunities may exist to retrofit the site or integrate them with larger projects undertaken by Council and other users. Some of Council's listed sites have been targeted for demolition or significant redevelopment. These sites have still been listed in this plan however no works will be undertaken at these sites prior to demolition unless significant resource or financial savings can be demonstrated.

This plan only undertakes a preliminary assessment of water and energy saving opportunities at the targeted sites. Within the action tables in this plan, most of the costs to implement savings or their returns are only estimates. To address this shortcoming, more detailed studies will be undertaken in the future to integrate energy and water efficiency projects into existing capital works projects and town centre redevelopments. These will allow Council to schedule works programs and assess payback periods and value for money of specific efficiency projects.

The action plan has been developed in consultation with all staff within Council responsible for the management of Council sites.

This plan will be formally reviewed every four years with annual progress reports submitted to DEUS.

Background

Water is essential for the existence of life. We use water for drinking, maintaining gardens, crops and livestock, for industry and manufacturing, cleaning and filling pools just to name some uses. The greater Sydney area and particularly within the water catchment areas, has been in an extended drought for many years which has reduced the amount of potable water available to Sydney residents, businesses and other users. As a consequence, Sydney Water has implemented water restrictions to decrease consumption, in turn increasing the security of our water resources. In addition to the pressures of the drought, the existing water resources are being stretched to service more people as the population within Sydney continually increases. Action is required by the community, Councils and industry to reduce these pressures on the finite water resources. In response to these pressures on our resources, Ku-ring-gai Council has decreased its water consumption at many of the sites throughout the local government area.

Increasing energy consumption has led to a growth in greenhouse gas emissions, localised atmospheric pollution and demands on water and other natural resources. Rising greenhouse gas emissions contribute to the threat of global climate change which, according to the CSIRO¹, means a future for New South Wales of more extreme weather events with higher temperatures, lower rainfall, increased occurrence of droughts, more storms and rising sea levels. Many of these factors of climate change will have a detrimental effect on the Ku-ring-gai community.

¹ Climate Change – Impacts for Australia, CSIRO <http://www.csiro.au/files/files/p3ct.pdf> (2001)

Electricity generation represents 43 percent of total greenhouse gas emissions in New South Wales and consumption is forecast to grow by around 2 percent per annum with peak demand at around 3 percent per annum. In addition to the effect of increased greenhouse gases, the growth in peak demand will result in rising pressure on the electricity supply system in turn driving up costs for the industry and consumers and affect the reliability of supply. Significant investment is already being spent on new network infrastructure over the next five years to service this rising peak demand.

This plan seeks to set a program of works to manage the use of water and electricity within the facilities owned and operated by Council.

Context

The Ku-ring-gai local government area covers approximately 84 square kilometers. Council manages 164 parks and ovals, 1,100ha of bush land, two golf courses, an administration building, two operations depots, swimming pool, four libraries, and a variety of other community buildings. Many of these sites require water and energy for their operation.

Many of Council's facilities contain ageing equipment such as building insulation, heating, cooling, ventilation, lighting, taps, showers and water heaters, creating inefficiencies with both water and energy use. Current water restrictions and increased patronage of Councils parks, ovals and golf courses has also meant that Council is required to find additional and alternate water supplies to maintain these sites to a standard expected by the community.

As a consequence of a revision of our planning controls permitting greater densities of residential development around our town centres, the population of Ku-ring-gai is expected to increase to XXX by 20XX. These additional people will place further demands on Council buildings, ovals and services that in turn will create greater challenges to reduce our energy and water consumption.

Response

Council has responded to both the challenges with water and energy supplies within Ku-ring-gai in a number of ways.

In response to the enhanced greenhouse effect, Council joined the Cities for Climate Protection in 1999. As part of the program, Council has developed a greenhouse action plan and has implemented some of the actions within this plan including installing Power Factor Correction equipment in the main administration building reducing energy consumption by approximately 10%, installation of solar lights in Council parks, undertaking a replacement program of fluorescent lamps in all Council buildings with efficient triphosphor globes, and the replacement of 80 Cathode Ray Tube (CRT) computer monitors with Liquid Crystal Display (LCD) screens. Council has also implemented an automated irrigation and lighting system for Council's ovals and tennis courts reducing energy and water consumption at over thirty sites within the Council area.

In response to implementing these changes, Council's overall energy consumption has decreased (see Figure 1) with further reductions predicted to be seen in the current financial year data once available. This document will focus on Council's top twenty energy using sites, which equates for 50% of energy used in all of Council's facilities (excluding street lighting).

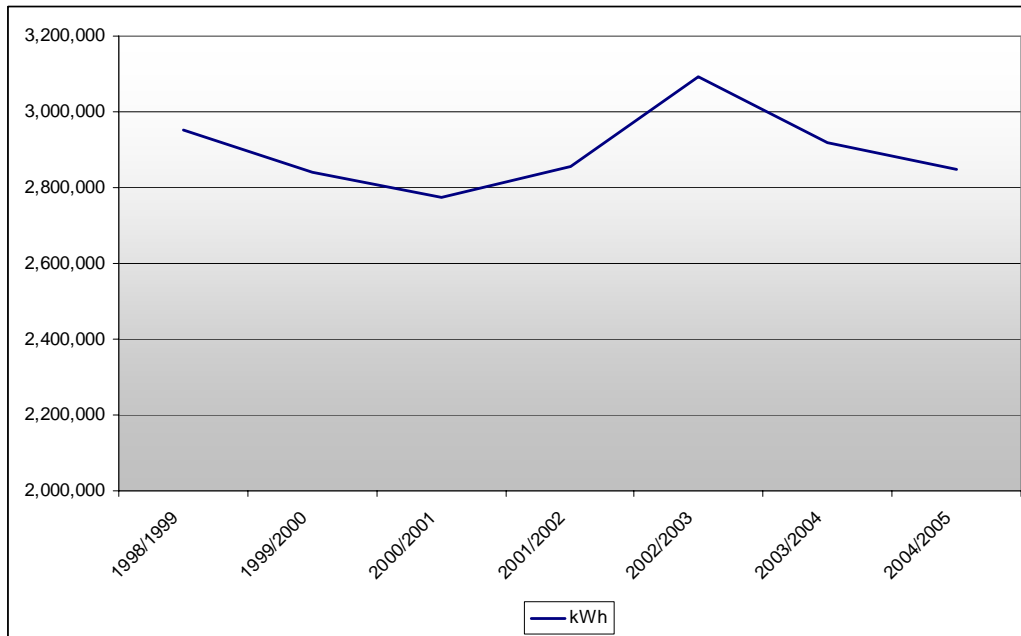


Fig 1: Councils overall energy consumption per annum

Council's use of potable water at facilities has dramatically decreased due to the water restrictions imposed as part of the current drought (See figure 2). Irrigation of sports fields and golf courses has decreased, however player usage of these facilities is still of a high level and is effecting the quality of the grounds. Council is currently seeking alternate water sources at various locations to enable irrigation to continue without impacting on the potable water supply. This has included replacing potable water with storm water for irrigation, and investigating sewer mining for Council's golf courses and sports fields.

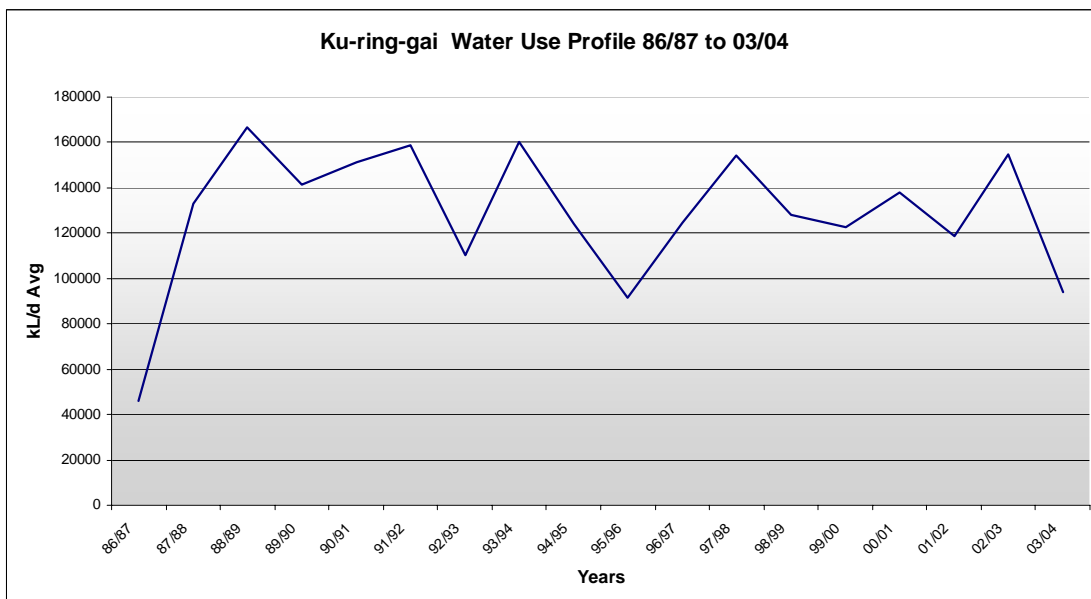


Figure 2: Council's water use profile 1986 - 2004

Council has the opportunity to incorporate energy and water reduction projects into the existing asset maintenance program, allowing the implementation of such programs to be undertaken in conjunction with the standard maintenance of facilities.

Management review

A management review was undertaken to ensure that water and energy efficiency is incorporated into existing management practices of an organisation and accountabilities are identified for priority actions. The review is a structured assessment of the systems the organisation has in place for managing water and energy. Appendix A shows the results from a survey of management representatives from each department of Council.

The results show that Council achieved a moderate or minimum sustainable level in most areas of water and energy management. As an organisation, Council has determined to achieve industry leader for environmental management, therefore the results of the review demonstrate that Council is required to improve the management practices to achieve a higher level of water and energy management. Appendix B lists actions to be undertaken to address the deficiencies identified in the survey results.

Goals

This action plan aims to achieve an average of 20% of water and energy savings across the organisation by 2010 in accordance with the guidelines prepared by DEUS.

Financing

Currently any works on reducing energy and water consumption at Council facilities has been financed from existing maintenance budgets. In some areas this has been paid by the leasee of Council facilities.

Council has the opportunity to supplement the existing funding through a variety of funding options. An existing Revolving Energy Fund contains limited funding to target energy conservation projects at Council facilities. The fund is supplemented by any financial savings made through the implementation of energy conservation projects. By identifying and implementing projects with a payback period of under two years, Council can accelerate the injection of energy savings into the Revolving Energy Fund for further projects.

Council has not assessed our existing energy contracts since the deregulation of the energy utilities. There may be opportunities for Council to change energy supplier and get a better rate for energy. Any financial saving through reassessing energy suppliers can be reinvested through the Revolving Energy Fund. In addition to this, financial savings may be available with an assessment of lease agreements and current payment practices for water and energy invoices. A preliminary assessment indicates that Council may be paying for water for which a leasee should be responsible.

There is the opportunity for Council to apply for grants to fund energy and water saving projects. Council has already been successful in winning grants, including funding to install photovoltaic cells at the Ku-ring-gai Wildflower Garden Visitors' Centre, and sewer mining at the Gordon Golf Course. This plan gives Council the opportunity to identify projects for future grant applications.

Council's Section 94 Development Contributions Plan enables Council to place a charge or levy on new developments for the purpose of providing additional services which will be required as a result of the new development. As part of the plan, contributions can be used for creating new or upgrading existing community facilities. Council can use this opportunity to create more energy and water efficient facilities for public use.

Under the Environmental Levy program, funding is available for sustainability initiatives associated with the upgrade of the town centres. While not earmarked for any specific project or site, it does provide a more flexible funding source for the many buildings and facilities to be redeveloped.

Council also has the opportunity to enter into an Energy Performance Contract (EPC) to fund energy and water saving projects. By using an EPC, energy efficiency projects can be

financed through guaranteed savings, removing the need for Council to provide upfront capital funding and removing any technical and financial risks. An EPC can be implemented at one or many Council facilities depending on Council's requirements and the projected savings available at Council facilities.

Any of the above funding options can be combined to provide sufficient funding to implement energy and water efficiency projects.

Baseline Data 2002/2003

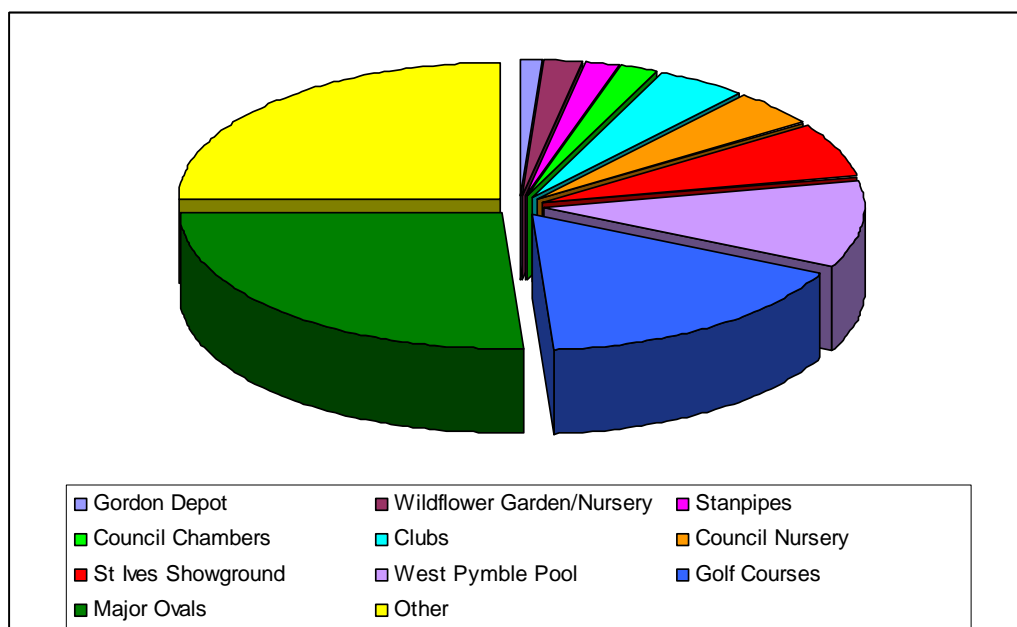
Baseline data

Council's baseline data is based on the 2002/2003 financial year. Data has been collected from Sydney Water for water data and Energy Australia for electricity consumption data.

Water:

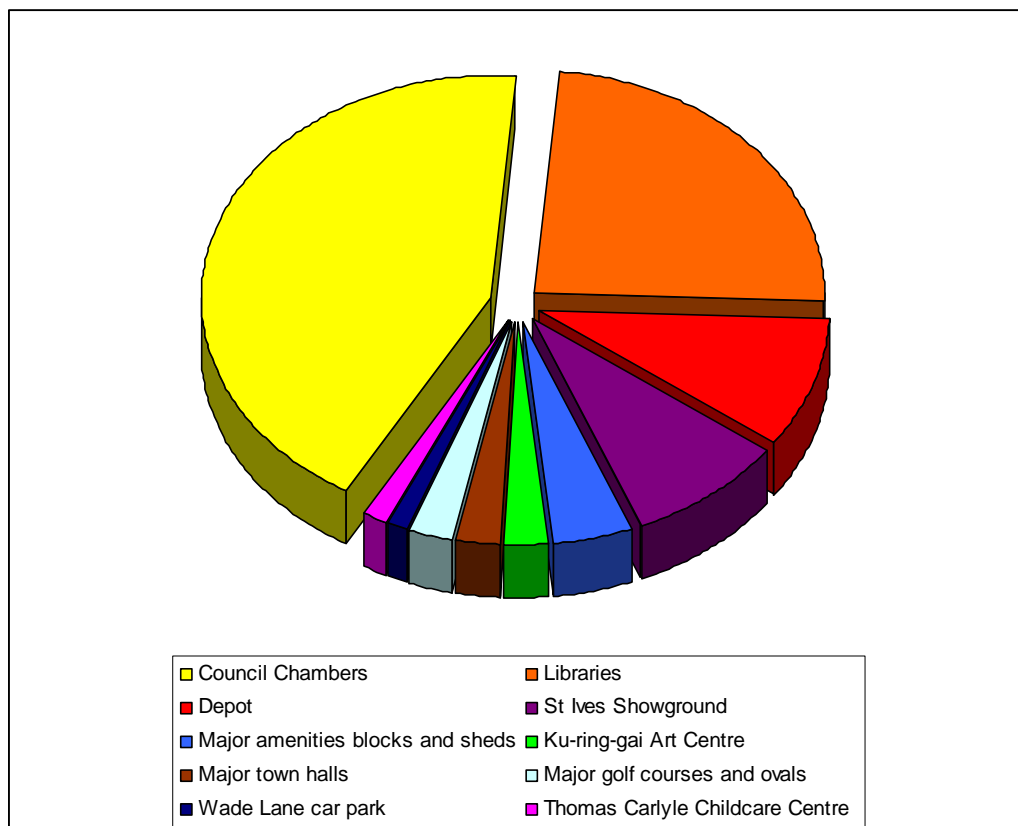
Council's total combined water use for all Council owned sites for the baseline year is 151,932 KL. Below lists the twenty one sites which use the most water within Ku-ring-gai. These sites use 67% of all of Council's water use throughout the council area. The top twenty one water users within the organisation include:

North Turramurra golf course	16928 kL
West Pymble pool	15740 kL
St Ives showground	9748 kL
Gordon golf course	9072 kL
Cliff oval, Wahroonga	7976 kL
Auluba oval, South Turramurra	6870 kL
Ku-ring-gai nursery, St Ives	6865 kL
Swain gardens, Killara	5532 kL
Warrimoo oval, St Ives	4009 kL
Bicentennial park, West Pymble	3552 kL
Soldiers Memorial park, East Lindfield	3481 kL
Roseville park, Roseville	3193 kL
Council chambers, Gordon	3165 kL
Ku-ring-gai Wildflower Garden, St Ives	2788 kL
West Lindfield bowling club	2164 kL
Acron oval, St Ives	1890 kL
Council depot, Pymble	1759 kL
The Glade, Wahroonga	1309 kL
Commenara Playing Fields, West Pymble	272 kL
Edenborough park, Lindfield	101 kL
Allan Small park, East Killara	139 kL
Kent oval, Turramurra	178 kL
Wahroonga park	283 kL
Turramurra Memorial park	149 kL



Energy:

In the 2002/2003 financial year Council used 7.2million kWh of energy for both street lighting and the operation of the numerous buildings and amenities within the council area. Street lighting equated to 4.6million kWh and buildings comprised of 2.6million kWh over the baseline year. This equates to 6,898 tonnes of CO₂ created.



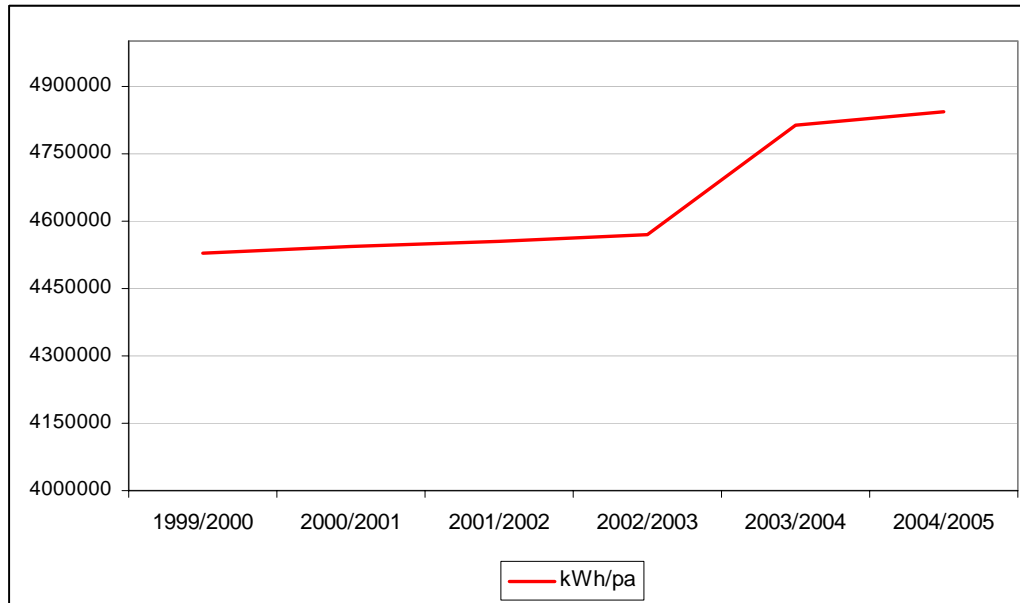
The top twenty energy users within the organisation include:

Street lights	4,569,102kWh/pa
Council chambers, Gordon	1,171,237 kWh/pa
Ku-ring-gai library, Gordon	492,724 kWh/pa
Council depot, Pymble	258,907 kWh/pa
St Ives showground	237,083 kWh/pa
Turramurra library	77,186 kWh/pa
Ku-ring-gai art centre, Roseville	62,320 kWh/pa
St Ives library	51,240 kWh/pa
William Cowan oval, St Ives	45,330 kWh/pa
Thomas Carlyle childcare centre, East Lindfield	38,222 kWh/pa
Ku-ring-gai town hall, Pymble	36,684 kWh/pa
St Ives community hall	33,398 kWh/pa
Lindfield library	32,756 kWh/pa
Wade lane car park, Gordon	32,273 kWh/pa
SES headquarters, Wahroonga	29,514 kWh/pa
North Turramurra golf course	26,518 kWh/pa
Bushfire shed, Wahroonga	25,969 kWh/pa
Gordon golf course	24,410 kWh/pa
Roseville community centre	21,957 kWh/pa
Soldiers Memorial oval, East Lindfield	19,234 kWh/pa

Savings Measures

Streetlights

Council used 4,569,102kWh in the baseline year to operate the street lights within the Council area. This has increased to 4843285kWh in the 2004/2005 financial year as Council strives to improve street lighting. The street lights are operated under a contract with EnergyAustralia which limits what Council can do to reduce the energy consumption of this sector. Council is however, working in partnership with the Northern Sydney Regional Organisation of Councils to find ways to reduce the energy consumption of the street light system.



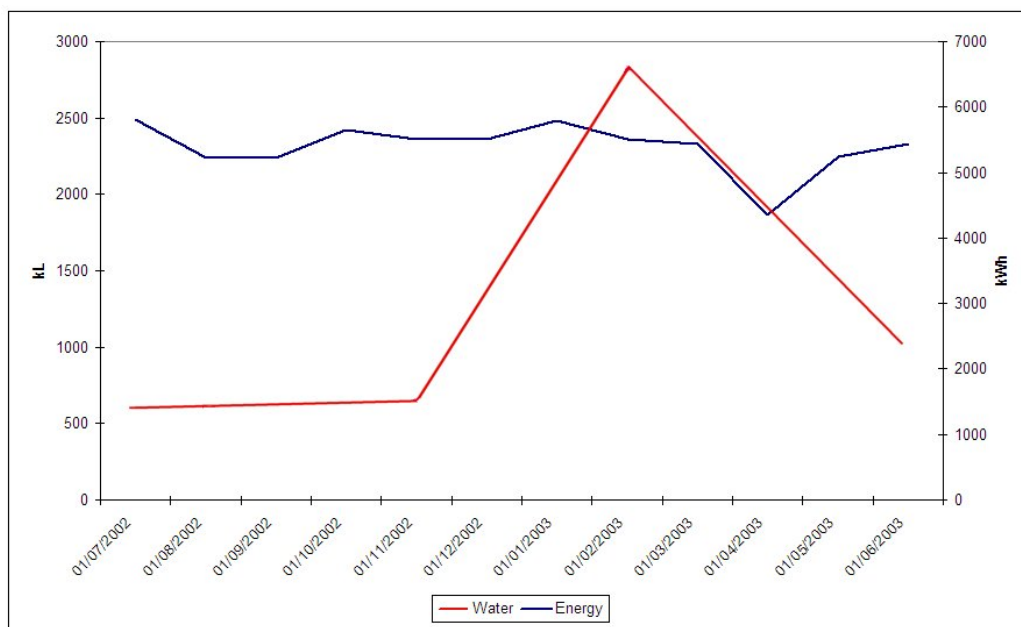
Energy	
Site Number	916-771-757
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	4,569,102
Greenhouse emissions	4,398 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	4,569,102

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	NSROC to negotiate with EnergyAustralia replacement of ageing lamps with higher efficiency lamps	Technical Services	<i>unknown</i>	<i>unknown</i>	<i>unknown</i>	<i>unknown</i>	<i>unknown</i>	<i>Unknown</i>
Total savings for site 1				Total savings as a percentage of total site use (%)				

Council Chambers

The Council Chambers is based at 818 Pacific Highway, Gordon. The building houses the main administration functions of Council with around 350 staff. The building is heritage listed with two additions to the building in the past three decades. The air conditioning, lighting and internal layout reflect the changing uses of varying sections of the building throughout its use as an administrative building, leading to a high level of inefficiency and complexity with equipment. In the 2002-2003 financial year the Council Chambers consumed 1,171,237kWh of energy and 3,100kL of water costing Council \$23,240 and \$2,913 respectively.

The following chart is based on the monthly electricity data and quarterly water data for the 2002/2003 financial year. The spike in water consumption for February is due to the billing period for that quarter being greater than a standard quarterly period, and does not truly reflect the water consumption for that quarter.



Note: The action table below is based on a building audit undertaken in 1997 and has been indexed to reflect inflation.

Water	
Site description	Council Chambers
Address	818 Pacific Highway, Gordon
Sydney Water Account	4757 688
Baseline Start Date	July 2002
Baseline End Date	June 2003
A – baseline water use per annum (kL)	3,165kL
Business Activity Indicator	People/day
B - Quantity of Site Business Activity Indicator per annum	350*
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	N/A
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	5,100kL
E = D/B baseline water use key performance indicator (KPI)	1
Baseline KPI units	kL/people/day

** Based on Sydney Water benchmark for Civic/Admin buildings with >200 people using 40L/patron/day*

Energy	
Site Number	807 836 737
Baseline Start Date	July 2002
Baseline End Date	June 2003
A = baseline energy use per annum (kWh)	1,171,237kWh/pa
Greenhouse emissions	1234 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	NA
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	1,171,237
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	4800
E = C/D baseline energy use key performance indicator (KPI)	244
Baseline KPI units	kWh/m ²

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Power Factor Correction installation	Technical Services	\$14,248	98,000kWh	\$8,500	1.8 years	3 months	November 1999
	25% Green Power purchase	Finance & Business Development	\$12,223	nil	\$12,223	nil	1 month	Ongoing
	Waterless urinal trial	Open Space	\$240	\$100 (estimated)	\$101.30 (estimated)	2.3 years (estimated)	Instant (retrofit)	July 2006 (with possibility of extension)
Cost effective Opportunities								
	Sydney Water Retrofit	Technical Services/ Finance & Business	\$88	<i>Unknown</i>	<i>unknown</i>	<i>Unknown</i>	2 months	Oct 06
	Improve A/C controls (DDC)	Technical Services/ Finance & Business	\$65,000	~150,000kWh	\$30,000*	2 years	3 months	Jan 07
	Install fresh air cycles on A/C units	Technical Services/ Finance & Business	\$40,000*	~75,000kWh	\$15,000	2.5 years	4 months	Jun 07
	Insulate windows	Technical Services/ Finance & Business	\$20,000	<i>Unknown</i>	\$2,000	10 years	4 months	Jun 07
	Replace 2x36W fluorescent units with 1x 36W triphosphor (~300 units)	Technical Services/ Finance & Business	\$33,000	~30,000kWh	\$7,000	4.5 years	2 months	Jan 08
	Replace 4x18W Fluorescent units with 1x36W Triphosphor (~20 units)	Technical Services/ Finance & Business	\$500	~1,000kWh	\$1,000	0.5 years	2 months	Jan 08
	2x36W Halophosphor units with 1x36W triphosphor units (~200 units)	Technical Services/ Finance & Business	\$20,000	~2,000kWh	\$5,700	3.5 years	2months	Jan 08
	Retrofit 19 single flush toilet cisterns with dual flush option	Technical Services/ Finance & Business	\$3,800	2,200kL	\$950	4 years	2 months	Jan 08
Potential Cost Effective Opportunities								
	Correct air balance and distribution	Technical Services/ Finance & Business	\$20,000	~1,500kWh	\$4,000*	5 years	3 months	Jun 07
	Replace 3x36W fluorescent units with 1x36W triphosphor (~40 units)	Technical Services/ Finance & Business	\$6,000	~1,000kWh	\$1,500	5 years	2 months	Jan 08

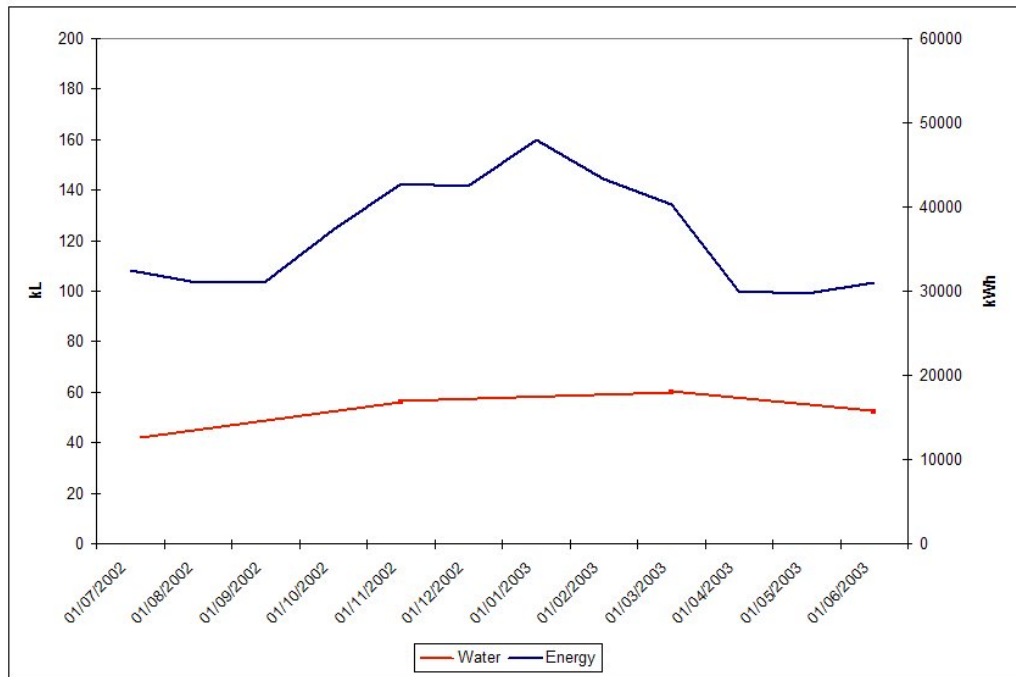
Total savings for site 2	Total savings as a percentage of total site use (%)
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** estimate*

Ku-ring-gai Library

The Ku-ring-gai Library is based at Park Avenue, Gordon. The building houses the main Ku-ring-gai Library, community rooms (Old School Building) and staff areas. Part of the building is heritage listed. In the 2002-2003 financial year the Ku-ring-gai Library consumed 492,724kWh of energy and 210kL of water costing Council \$45,284 and \$350 respectively.

The following chart is based on the monthly electricity data and quarterly water data for the 2002/2003 financial year. The water consumption is fairly constant throughout the year, however the energy consumption shows a seasonal increase over the summer periods. This reflects the increased use of the air conditioning system of the building which may demonstrate poor air conditioning or building insulation. The action recommendations have targeted the building heating and cooling.



Water	
Site description	Ku-ring-gai Library
Address	Park Avenue, Gordon
Sydney Water Account	3219 871
Baseline Start Date	July 2002
Baseline End Date	June 2003
A – baseline water use per annum (kL)	210kL
Business Activity Indicator	m ²
B - Quantity of Site Business Activity Indicator per annum	2037m ²
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	N/A
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	210kL
E = D/B baseline water use key performance indicator (KPI)	0.1
Baseline KPI units	kL/m ² /annum

Energy	
Site Number	914 576 248
Baseline Start Date	July 2002
Baseline End Date	June 2003
A = baseline energy use per annum (kWh)	439,456kWh
Greenhouse emissions	423 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	NA
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	439,456kWh
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	2037m ²
E = C/D baseline energy use key performance indicator (KPI)	215
Baseline KPI units	kWh/m ²

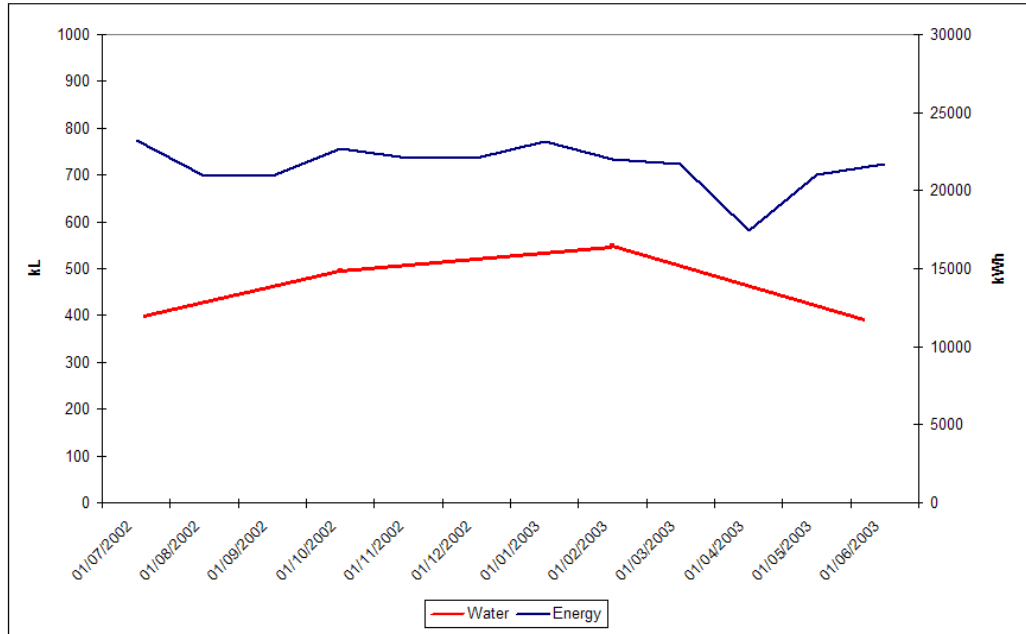
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	25% Green Power purchase	Finance	\$4,497	nil	\$4,497	NA	ongoing	ongoing
Cost effective Opportunities								
	Light conservation system (Light Eco)*	Technical Services & Community Services	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	Jan 07
	Sydney Water Retrofit	Technical Services & Community Services	\$44	20kL	\$40	1.2 years	2 months	Oct 06
	Lighting retrofit*	Technical Services & Community Services	\$30,000	30,000kWh	\$7,000	4.5 years	4 months	Jun 07
	Review and upgrade of air conditioning system	Technical Services & Community Services	\$80,000	100kWh	\$30,000	2.5 years	5 months	Jun 07
Potential Cost Effective Opportunities								
	Rainwater tanks installed for garden irrigation	Technical Services & Community Services	\$10,000	50kL	\$100	>10 years	2 months	Jun 08
	Rainwater tanks installed for toilets	Technical Services & Community Services	\$15,000	70kL	\$100	>10 years	3 months	Jun 08
Total savings for site 3				Total savings as a percentage of total site use (%)				

*subject to AS for lux levels in libraries

Council Depot

Limited works will be undertaken at the depot site in preparation for the decommissioning of the site within the next 18 months. The new depot site is being developed to a set of stringent sustainable energy and water conditions. It is envisioned that the new site will use less water and energy than the existing depot site.

The following chart is based on the monthly electricity data and quarterly water data for the 2002/2003 financial year.



Water	
Site description	Council Depot
Address	1 Mona Vale Road, Pymble
Sydney Water Account	321 5063
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	1759
Business Activity Indicator	L/pp/d
B - Quantity of Site Business Activity Indicator per annum	90
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	Nil
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	1823
E = D/B baseline water use key performance indicator (KPI)	20.2
Baseline KPI units	L/pp/d

Energy	
Site Number	905-805-703
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	258,907
Greenhouse emissions	249 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	258,907
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	15592
E = C/D baseline energy use key performance indicator (KPI)	17
Baseline KPI units	kWh/m ²

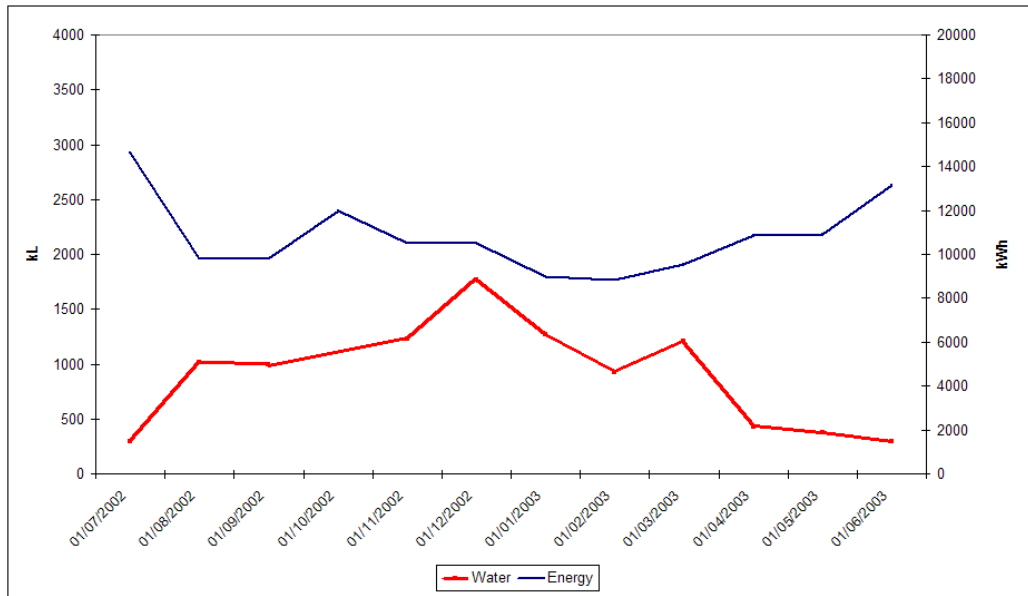
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	25% Green Power purchase	Finance	\$2,699	Nil	\$2,699	NA	Ongoing	Ongoing
Total savings for site 1				Total savings as a percentage of total site use (%)				

St Ives Showground

St Ives Showground is a large bushland facility with a main arena for large events and specialist areas for equestrian events, model flying, mini motor bikes, model cars and dog training. In addition the site has seven picnic areas and pavilion facilities suitable for agriculture events, cultural and social events such as firework displays and markets.

No significant changes are proposed for the site, however there is community pressure to upgrade the toilets and amenities. In addition to this, the sports fields lighting require upgrading to be in accordance with the Australian Standard.

The following chart is based on the monthly electricity data and quarterly water data for the 2002/2003 financial year. The chart shows summer peak in water consumption due to an increase in irrigation needs over the summer months, and winter peaks in electricity consumption due to the increased usage of oval floodlighting through the winter months for night training. Since the baseline year, Council has implemented the *Cloudmaster* automated lighting system for the Showground which is expected to reduce energy consumption at the site.



Water	
Site description	St Ives Showground
Address	Lot 18 Mona Vale Road, St Ives
Sydney Water Account	3215 334
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	9748
Business Activity Indicator	m ²
B - Quantity of Site Business Activity Indicator per annum	252,202
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	9748
E = D/B baseline water use key performance indicator (KPI)	0.01
Baseline KPI units	kL/m2

Energy	
Site Number	905-538-869
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	237,083
Greenhouse emissions	228 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	237,083
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	252,202
E = C/D baseline energy use key performance indicator (KPI)	0.9
Baseline KPI units	kWh/m2

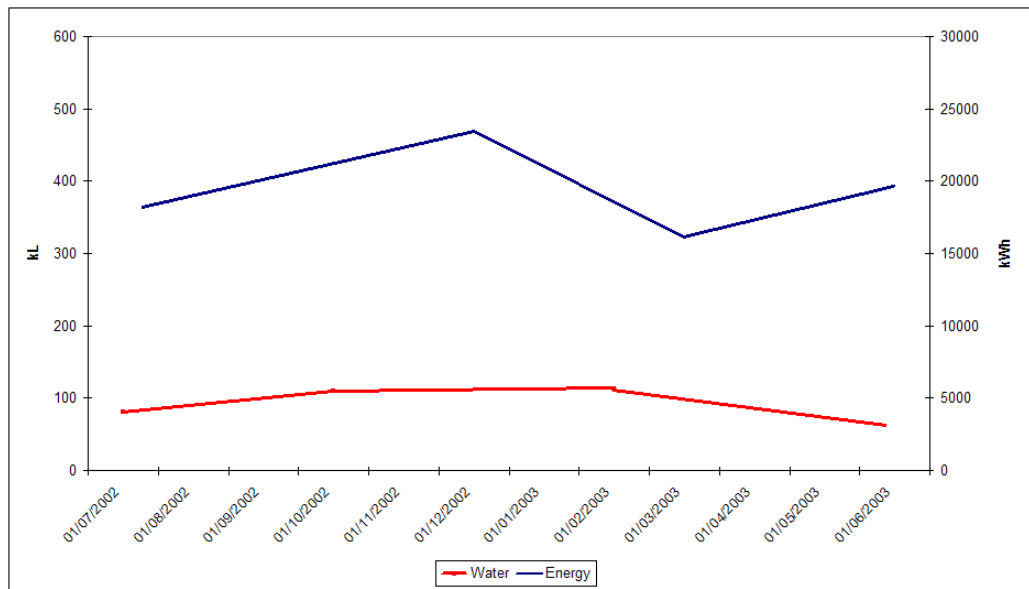
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Lighting automation	Open Space	\$3,200	Unknown	Unknown	Unknown	Unknown	2005
	25% Green Power purchase	Open Space/Finance	\$1,329	Nil	\$1,329	NA	ongoing	Ongoing
Cost effective Opportunities								
	Sydney Water retrofit	Technical Services & Open Space	\$100	50kL	\$50	2 years	1 month	Aug 06
	Rainwater tanks for amenities blocks	Technical Services & Open Space	\$15,000	unknown	unknown	unknown	unknown	Unknown
	Sports fields lighting upgrade	Open Space	\$90,000	unknown	unknown	unknown	unknown	2009
	Undertake energy and water audit of site	Technical Services & Open Space	\$10,000	unknown	unknown	unknown	unknown	Unknown
Potential Cost Effective Opportunities								
	Stormwater harvesting	Technical Services & Open Space	\$180,000	unknown	unknown	unknown	unknown	Unknown
Total savings for site 1				Total savings as a percentage of total site use (%)				

Turramurra Library

The Turramurra branch is at 5 Ray Street, Turramurra and was completed in 1968. It is built on a sloping site with a public entrance from the street at the upper level and goods entrance (and entrance to a programme area) from the car park at the lower level. At approximately 700 sq m it is the largest of the three branches. It is open for 45 hours per week, the longest opening hours of the branches.

The Turramurra library lies within the Turramurra Town Centre study area and will be subject to change as part of the revitalisation of this area within the next five years. Current recommendations include the expansion of the site to 1,500sqm to address the growing requirements of the community. The expansion of the library gives Council the opportunity to address the water and energy consumption of the site. Due to the significant amount of change predicted for the Turramurra library, any projects undertaken in the short term must have a pay back period of under 4 years.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Both water and electricity consumption show limited seasonal variation.



Water	
Site description	Turrumurra Library
Address	Cnr William and Ray Street, Turrumurra
Sydney Water Account	3221 156
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	362
Business Activity Indicator	m ²
B - Quantity of Site Business Activity Indicator per annum	700
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	362
E = D/B baseline water use key performance indicator (KPI)	0.5
Baseline KPI units	kL/m2

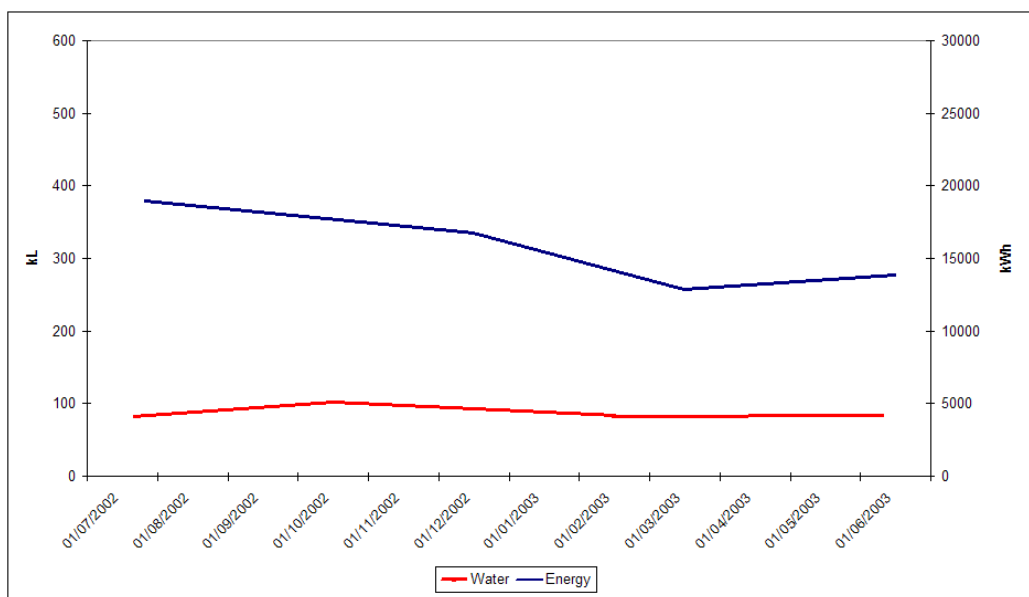
Energy	
Site Number	905-449-882
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	77,186
Greenhouse emissions	74 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	77,186
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	700
E = C/D baseline energy use key performance indicator (KPI)	110
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Light conservation system (Light Eco)	Technical Services & Community Services	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	2007
	Sydney Water retrofit	Community Services	\$66	unknown	unknown	unknown	3 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Ku-ring-gai Art Centre

The Ku-ring-gai Art Centre is used on a daily basis for a variety of art classes and displays. Although the use of the centre itself is subject to future change, the building itself, will remain in its current form.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The site presents limited seasonal change in both energy and water consumption.



Water	
Site description	Ku-ring-gai Arts Centre
Address	3 Recreation Avenue, Roseville or 45 Bancroft Ave
Sydney Water Account	3221 255
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	345
Business Activity Indicator	m ²
B - Quantity of Site Business Activity Indicator per annum	972
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	345
E = D/B baseline water use key performance indicator (KPI)	0.4
Baseline KPI units	kL/m2

Energy	
Site Number	906-711-002
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	62,320
Greenhouse emissions	60 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	62,320
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	972
E = C/D baseline energy use key performance indicator (KPI)	64
Baseline KPI units	kWh/m2

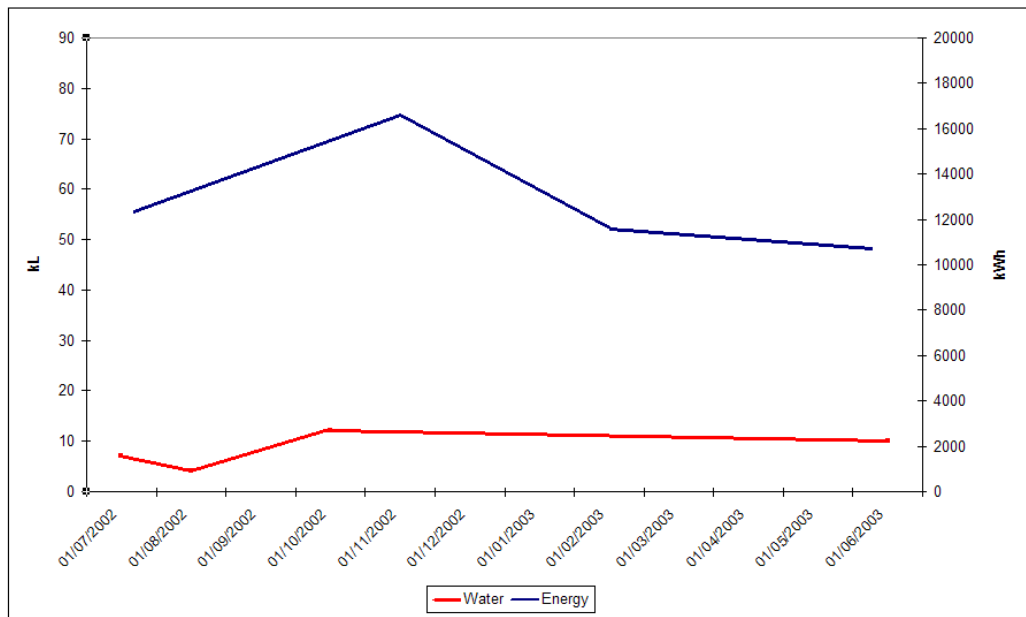
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Light conservation system (Light Eco)	Technical Services & Community Services	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	2007
	Sydney Water retrofit	Community Services	\$66	unknown	unknown	unknown	3months	2007
	Solar hot water system installation	Community Services	\$1500	unknown	unknown	unknown	3 months	2007
	Lighting retrofit	Technical Services & Community Services	\$5,500	unknown	unknown	unknown	3 months	2008
Potential Cost Effective Opportunities								
	Rainwater tank installation	Community Services & Technical Services	\$1200	unknown	unknown	unknown	3 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

St Ives Library

The St Ives branch is within the St Ives Shopping Village which is at 166 Mona Vale Road, St Ives. The 312 sq m which it occupies is at the edge of the retail area but in a prominent location adjacent to McDonalds. The Library shares a meeting room with the adjacent Early Childhood Centre operated by Council. It is open for 37 hours per week. Part of the Shopping Village car park is immediately adjacent to the Library.

This site is subject to significant expansion and possible relocation in around two years time. Because of the extent of the expansion, Council is limited in the number of projects which can be undertaken at the site until expansions have been completed. The expansion of the library site will be subject to stringent sustainable energy and water conditions.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows a seasonal summer peak in energy consumption more than likely caused by air conditioning demands in the hotter months.



Water	
Site description	St Ives Library
Address	St Ives Shopping Centre, Memorial Ave, St Ives
Sydney Water Account	3201 545
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	33
Business Activity Indicator	m ²
B - Quantity of Site Business Activity Indicator per annum	377
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	33
E = D/B baseline water use key performance indicator (KPI)	0.1
Baseline KPI units	kL/m2

Energy	
Site Number	921-829-959
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	51,240
Greenhouse emissions	49 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	51,240
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	377
E = C/D baseline energy use key performance indicator (KPI)	136
Baseline KPI units	kWh/m2

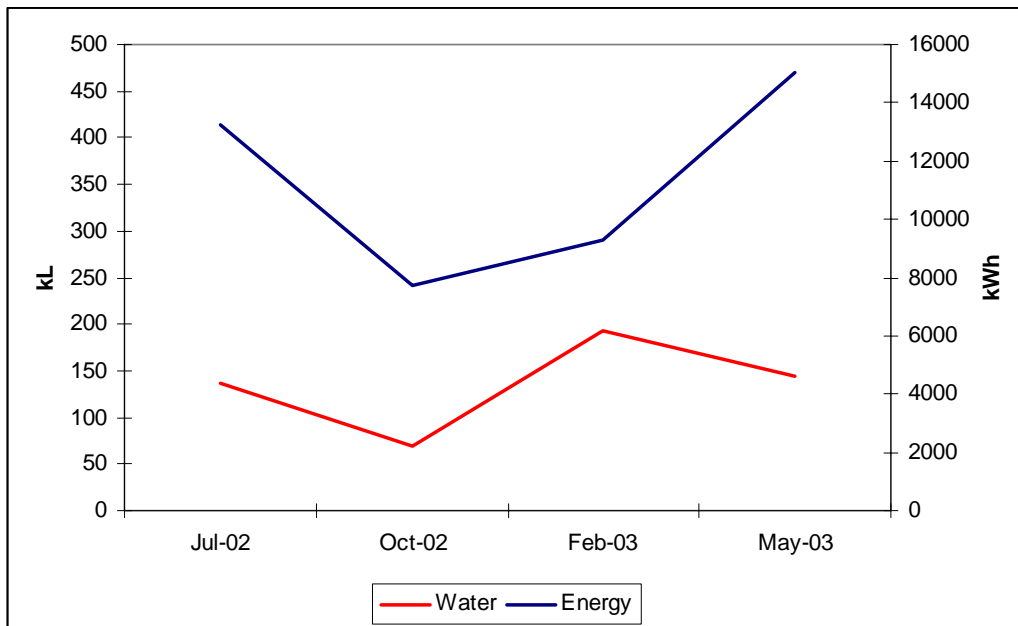
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Nil							
Cost effective Opportunities								
	Light conservation system (Light Eco)	Technical Services & Community Services	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	2007
	Sydney Water Retrofit program	Technical Services & Community Services	\$44	unknown	unknown	unknown	3 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

St Ives Village Green and William Cowan Oval

St Ives Village Green and William Cowan Oval are located at St Ives opposite the St Ives shopping village and is used for both day and night sports and training, and casual recreational use. The oval is flood lit with 2 – 4 oval floodlights for evening sports training. The Cloudmaster automated lighting control has been installed at this park within the last year and there is an expectation that this will decrease the energy consumption at this site.

There will be stormwater harvesting works for the greater park area which will be used to irrigate the oval and amenities block. This will decrease the potable water consumption on the oval.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows a marked increase in energy consumption throughout the winter months due to shorter days and increased night training. Water consumption is fairly stable throughout the year.



Water	
Site description	Oval with floodlighting and tennis courts
Address	Cowan road, St Ives
Sydney Water Account	321 4256
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	544
Business Activity Indicator	m ²
B - Quantity of Site Business Activity Indicator per annum	58198
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	544
E = D/B baseline water use key performance indicator (KPI)	0.01
Baseline KPI units	kL/m2

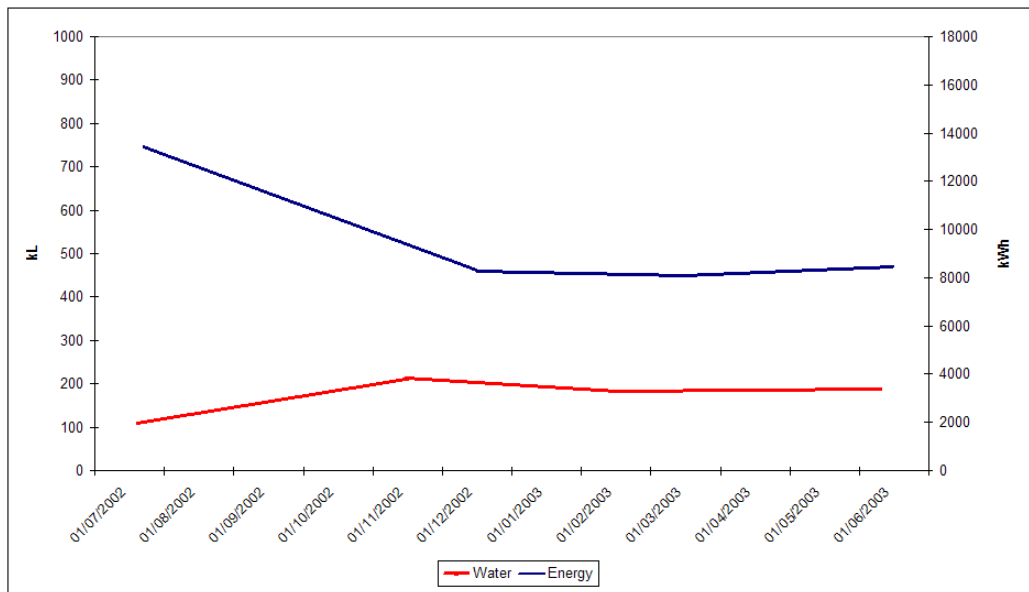
Energy	
Site Number	905-514-958
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	45,330
Greenhouse emissions	44 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	45,330
Business activity indicators	m ²
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	58198
E = C/D baseline energy use key performance indicator (KPI)	0.8
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Cloudmaster lighting control system installed	Open Space	MORVEN	unknown	Unknown	unknown	MORVEN	MORVEN
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$250,000	Unknown	Unknown	Unknown	Unknown	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

Thomas Carlyle Childcare Centre

Thomas Carlyle Children's Centre is a Council managed long day care and occasional care service providing care and education for children 6 weeks to 5 years of age. The service offers 53 care places daily comprising of 50 long day care places and 3 occasional care places. Located at 2c Carlyle Road, East Lindfield the centre is open Monday to Friday 7.30am – 6.00pm for 51 weeks of the year. The site has had limited works undertaken to reduce energy and water consumption.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Energy consumption is higher in the summer months due to an increased usage in air conditioning units at the site.



Water	
Site description	Thomas Carlyle Childcare Centre
Address	2c Carlyle Road, East Lindfield
Sydney Water Account	3226 197
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	702
Business Activity Indicator	L/person/day
B - Quantity of Site Business Activity Indicator per annum	1022kL/pa
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	702
E = D/B baseline water use key performance indicator (KPI)	0.7
Baseline KPI units	L/person/day

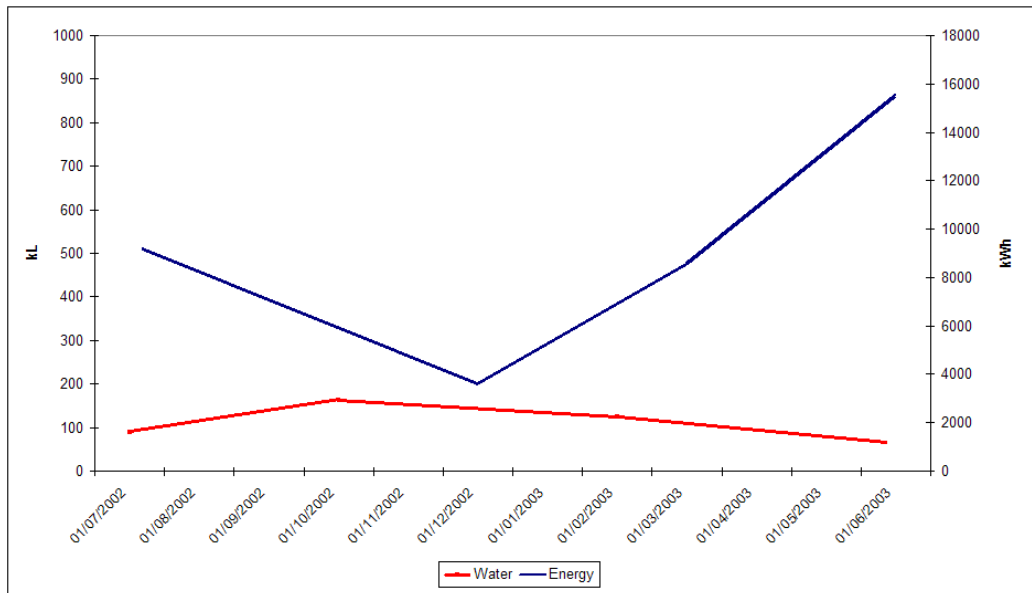
Energy	
Site Number	906-693-747
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	38,222
Greenhouse emissions	37 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	38,222
Business activity indicators	M2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	1718
E = C/D baseline energy use key performance indicator (KPI)	22
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Nil							
Cost effective Opportunities								
	Light conservation system (Light Eco)	Technical Services & Community Services	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	2007
	Sydney Water Retrofit program	Technical Services & Community Services	\$44	Unknown	Unknown	Unknown	3 months	2007
	Rainwater tanks for amenities blocks and landscape irrigation	Technical Services & Community Services	\$6,500	Unknown	Unknown	Unknown	4 months	2007
	Lighting retrofit	Technical Services & Community Services	\$4,500	Unknown	Unknown	Unknown	5 months	2008
Potential Cost Effective Opportunities								
	Improved glass insulation	Technical Services & Community Services	\$2,500	Unknown	Unknown	Unknown	3 months	2007
	Improved roof insulation	Technical Services & Community Services	\$4,000	Unknown	Unknown	Unknown	4 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

Ku-ring-gai Town Hall

The Ku-ring-gai Town Hall is located at 1186 Pacific Highway, Pymble and is heritage listed. Council hires the building to the community for a variety of community and commercial purposes. This site operates under the Generic Community Halls and Meeting Rooms Plan of Management adopted on 17 October 2000. There is a covenant on the site that restricts the use of the building to community or Municipal Council purposes with community purposes including public health, recreation, enjoyment or any public purpose of the like nature. To date, limited works have been undertaken at this site to reduce energy and water consumption.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows a significant spike in energy consumption during the winter months caused mainly by heating appliances within the hall.



Water	
Site description	Ku-ring-gai Town Hall
Address	1188 Pacific Highway, Pymble
Sydney Water Account	3218 655
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	445
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	445
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	445
E = D/B baseline water use key performance indicator (KPI)	1
Baseline KPI units	kL/m2

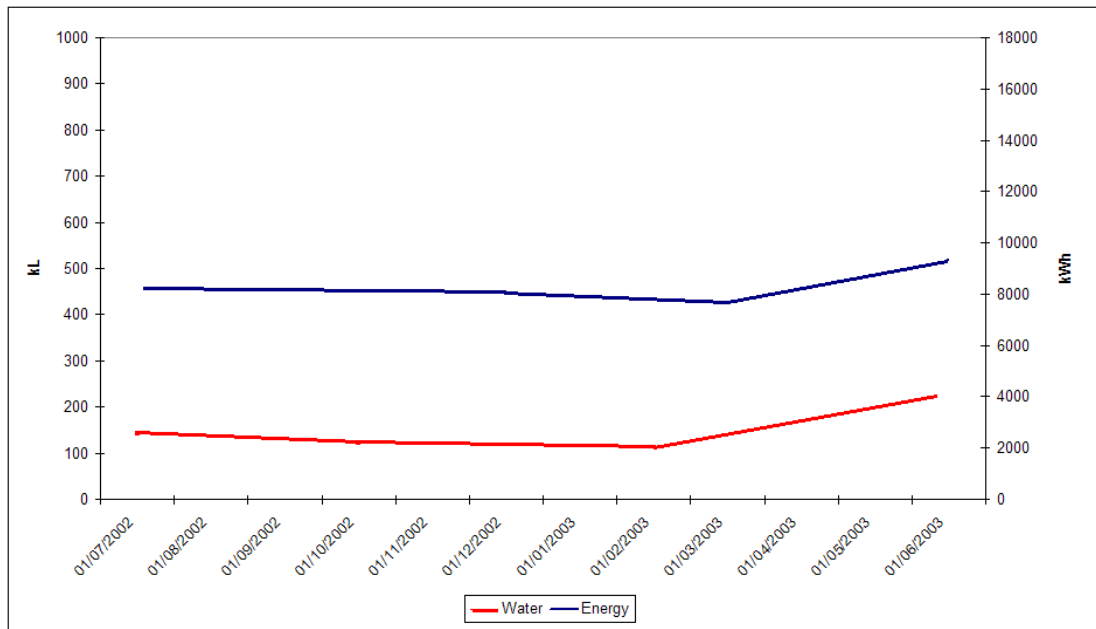
Energy	
Site Number	924-607-405
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	36,684
Greenhouse emissions	35 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	36,684
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	445
E = C/D baseline energy use key performance indicator (KPI)	82
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Nil							
Cost effective Opportunities								
	Light conservation system (Light Eco)	Technical Services & Community Services	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	2008
	Sydney Water Retrofit program	Technical Services & Community Services	\$44	Unknown	Unknown	Unknown	2 months	2007
	Rainwater tanks for external irrigation	Technical Services & Community Services	\$3,000	Unknown	Unknown	Unknown	4 months	2007
	Improved hall heating	Technical Services & Community Services	\$6,400	Unknown	Unknown	Unknown	6 months	2008
Potential Cost Effective Opportunities								
	Improved hall insulation	Technical Services & Community Services	\$4,500	Unknown	Unknown	Unknown	4 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

St Ives Community Hall

The building is located within the St.Ives Village Green and is used as a community centre. Council hires the building to the community for a variety of community and commercial purposes and also operates the St.Ives Youth Centre, Fitz Café, from the premises. This site operates under the Generic Community Halls and Meeting Rooms Plan of Management adopted on 17 October 2000. Under the Town Centre redevelopments, this site has been recommended for demolition, therefore limited works will be undertaken to reduce water and energy consumption.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year.



Water	
Site description	St Ives Community Hall
Address	4 Memorial Avenue
Sydney Water Account	3214 258
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	596
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	682
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	596
E = D/B baseline water use key performance indicator (KPI)	0.9
Baseline KPI units	kL/m2

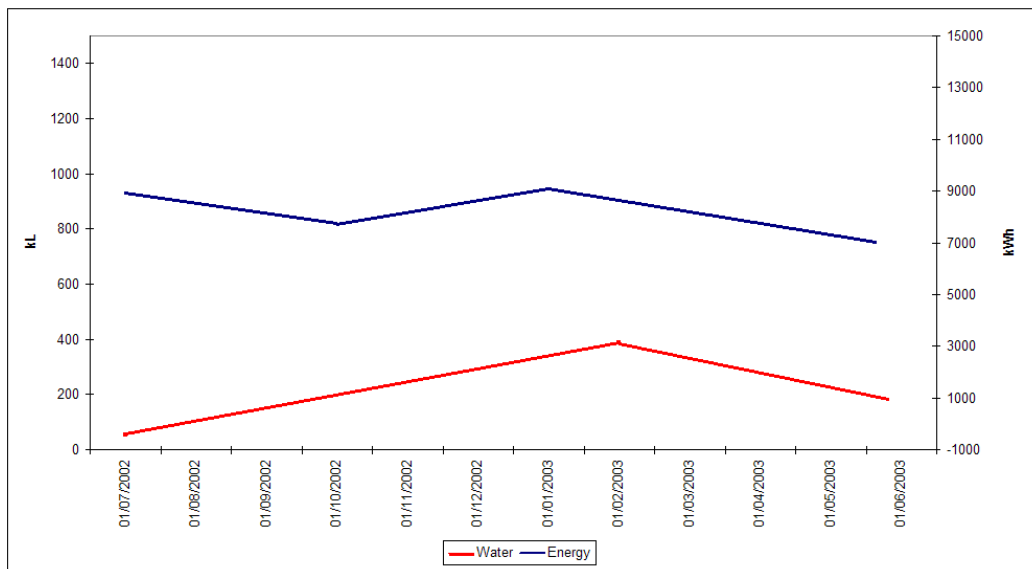
Energy	
Site Number	905-532-318
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	33,398
Greenhouse emissions	32 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	33,398
Business activity indicators	M2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	682
E = C/D baseline energy use key performance indicator (KPI)	49
Baseline KPI units	kWh/m2

Lindfield Library

The Lindfield branch is at 265 Pacific Highway, Lindfield and is the oldest of Ku-ring-gai's public libraries, having opened in 1954. It occupies the entrance level of a building on a sloping site, the rear and lower level of which are currently disused. It shares its site with tennis courts, a senior citizens' resource centre in a small building at the rear, a block of residential apartments and a senior citizens' centre. Some public parking is available onsite. This branch is open for 33 hours per week, the shortest opening hours of all branches. At about 300sqm this is the smallest of the branches.

The Lindfield library is less than a third of the recommended size, requiring additional floorspace of between 700 and 900 sq m. The Ku-ring-gai Council Library Facilities Study (2004) recommends construction on the current site or the Woodford Lane car park of a new community facilities building which could include a branch library, youth space, senior citizens' space, multipurpose areas and a residential component. Due to the recommendation for significant alterations or demolition of the building, limited Energy and Water conservation projects will be undertaken at the site.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year.



Water	
Site description	Lindfield Library
Address	265-281 Pacific highway, Lindfield
Sydney Water Account	3217 637
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	617
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	961
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	617
E = D/B baseline water use key performance indicator (KPI)	0.6
Baseline KPI units	kL/m2

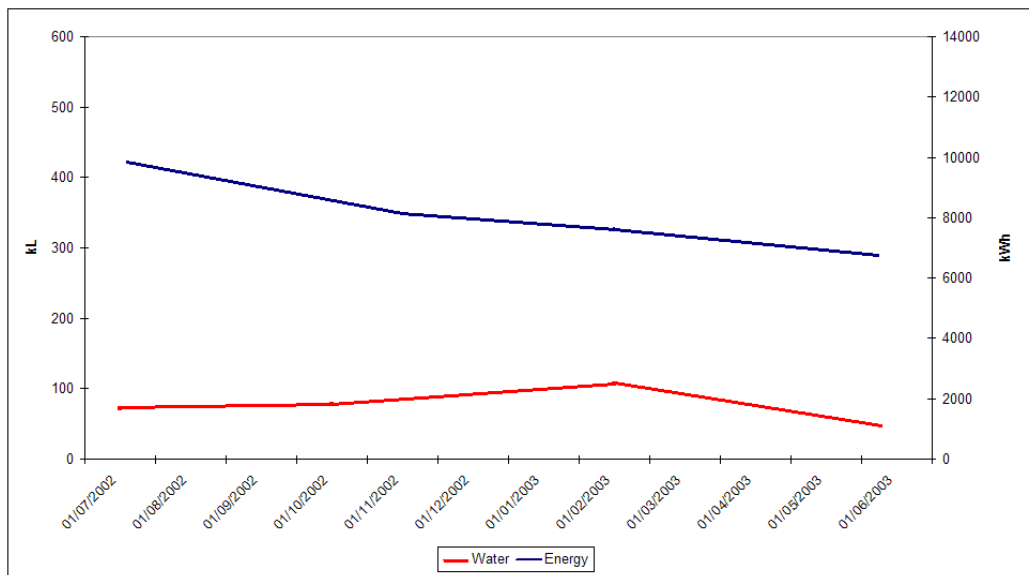
Energy	
Site Number	906-657-765
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	32,756
Greenhouse emissions	32 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	32,756
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	961
E = C/D baseline energy use key performance indicator (KPI)	34
Baseline KPI units	kWh/m2

Wade Lane car park

Wade lane car park is located adjacent to Gordon railway station. The facility is a three story car park open 24hours a day with after dark lighting. The extensive works undertaken at the Wade Lane car park since the baseline year reflects over a 50% decrease in energy consumption at the site. Due to the extensive amount of energy efficient projects undertaken at the site, there is limited scope to undertake further works.

The site may be subject to redevelopment as part of the Gordon Town Centre redevelopment.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year.



Water	
Site description	Wade Lane Car park
Address	Wade Lane, Gordon
Sydney Water Account	3224 253 and 3229 995
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	303
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	5288
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	303
E = D/B baseline water use key performance indicator (KPI)	0.6
Baseline KPI units	kL/m2

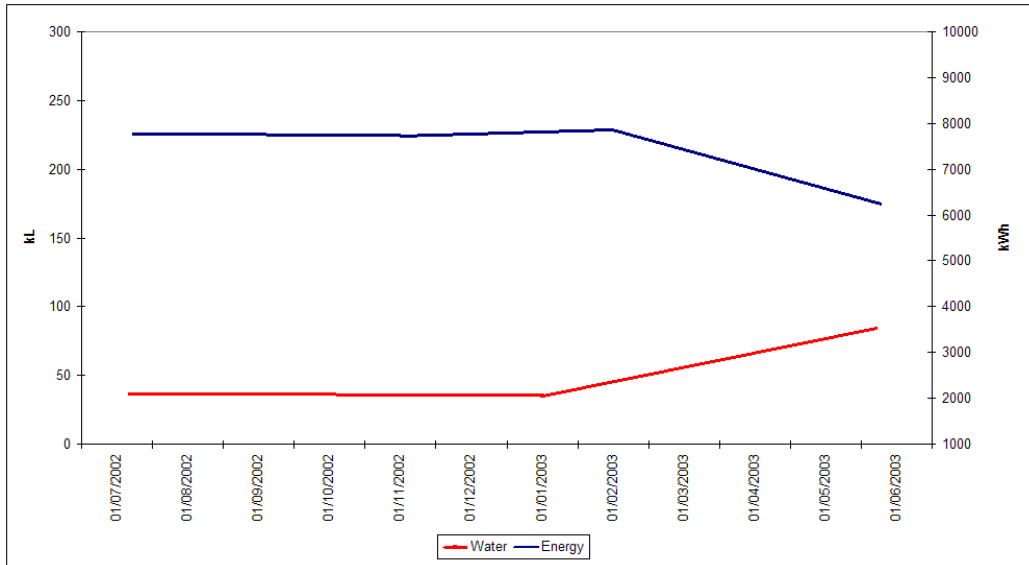
Energy	
Site Number	905-811-346
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	32,273
Greenhouse emissions	31 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	32,273
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	5288
E = C/D baseline energy use key performance indicator (KPI)	6
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Reduction in light fixtures and replacement with tri phosphor globes	Technical Services	Unknown	7,000kWh	\$500	Unknown	2 months	2004
	Installation of photo-sensitive light activators	Technical Services	Unknown	6,500kWh	\$450	Unknown	2 weeks	2004
	Light conservation system (Light Eco)	Technical Services	Unknown	6,000kWh	\$400	Unknown	1 month	2003
Potential Cost Effective Opportunities								
	Dual flush toilets in amenities block	Technical Services	\$2200	Unknown	Unknown	Unknown	2 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

SES headquarters

Located in the grounds of Golden Jubilee Field North Wahroonga, the State Emergency Services (SES) headquarters contains all the equipment and vehicles for the Ku-ring-gai SES. The site contains six large vehicle bays and equipment storage areas, training room, kitchen, bunk room, operations centre, toilets and laundry. The training room is the most used room in the entire headquarters, used weekly for general meetings and weekly training activities. It is also used by other units and Divisions to run training courses on weekends

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year.



Water	
Site description	SES Headquarters
Address	Esk Street, Wahroonga
Sydney Water Account	4702 936
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	152
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	1229
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	152
E = D/B baseline water use key performance indicator (KPI)	0.1
Baseline KPI units	kL/m2

Energy	
Site Number	905-457-427
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	29,514
Greenhouse emissions	28 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	29,514
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	1229
E = C/D baseline energy use key performance indicator (KPI)	24
Baseline KPI units	kWh/m2

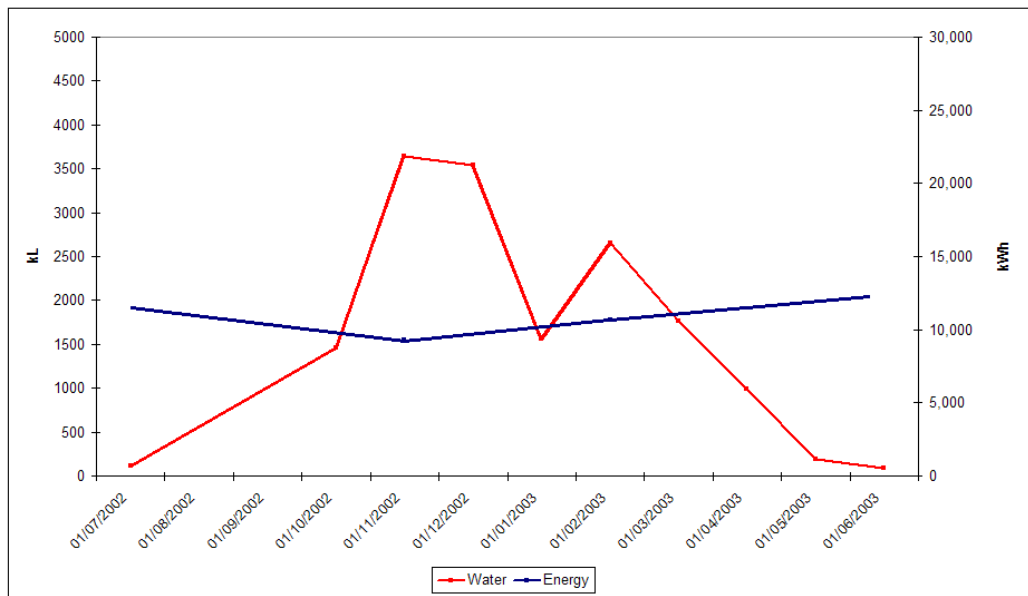
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
	Nil							
Cost effective Opportunities								
	Lighting upgrade	Technical Services	Unknown	Unknown	Unknown	Unknown	4 months	2008
	Sydney Water retrofit	Technical Services	\$110	Unknown	Unknown	Unknown	4 months	2006
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities blocks	Technical Services	\$6,500	Unknown	Unknown	Unknown	5 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

North Turramurra Golf Course

North Turramurra golf course is an 18 hole public golf course which interfaces with bushland and a former tip site. Extensive changes to the site in the medium to long term, linked to the North Turramurra Recreation Area project, which proposes to relocate sections of the golf course onto the former tip site and construct sports fields on the existing golf course. This project will examine water re-use options including sewer mining and reuse of leachate water from the tip site. Since the benchmark year, water restrictions have been imposed and Council now only water greens and tees within restrictions. This has considerably reduced Council's water consumption at the site.

There is no clubhouse on the site, however the energy consumption is more than likely linked to the leachate pump to the former tip and the North Turramurra depot located at the northern end of the site. All buildings may well be relocated under the new plans for the site creating a great opportunity to build sustainable buildings.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. There is a significant spike in water use through the summer season directly related to an increase in greens irrigation.



Water	
Site description	North Turramurra Golf Course
Address	Bobbin Head Road, North Turramurra
Sydney Water Account	3196 507
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	16928
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	390,535
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	16018
E = D/B baseline water use key performance indicator (KPI)	0.04
Baseline KPI units	kL/m2

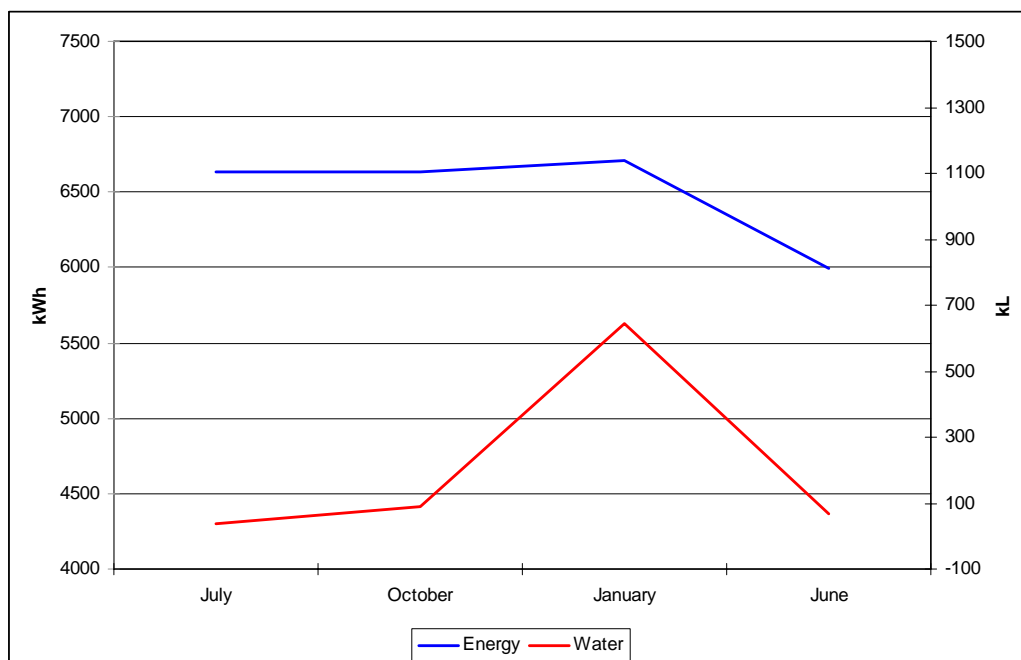
Energy	
Site Number	905-479-297
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	26,518
Greenhouse emissions	26 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	26,518
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	390,535
E = C/D baseline energy use key performance indicator (KPI)	671
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Reduced irrigation	Open Space	Nil	Unknown	Unknown	Unknown	immediate	2003
Cost effective Opportunities								
	Sydney Water retrofit	Open Space	\$88	Unknown	Unknown	Unknown	4 months	2006
	Rainwater tanks for amenities blocks	Open Space	\$6,500	Unknown	Unknown	Unknown	4 months	2009
Potential Cost Effective Opportunities								
	Lighting upgrade	Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2009
Total savings for site 1				Total savings as a percentage of total site use (%)				

Ku-ring-gai Bushfire Brigade and Amenities Block

The Ku-ring-gai Bushfire Brigade and amenities block are located within Golden Jubilee Oval, North Wahroonga. The Bushfire Brigade site is used for training and for any hazard reduction burns or fire situations. The amenities blocks are open daily for users of the Golden Jubilee ovals. The ovals are not irrigated.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. There is a spike in water consumption in summer which is unusual for the site. Based on Sydney Water data, the baseline year is 500kL higher than comparison years, therefore the spike is considered an unaccounted for anomaly and not a standard seasonal variation to water consumption.



Water	
Site description	Ku-ring-gai Bushfire Brigade and Amenities Block
Address	Golden jubilee Oval, Esk Street, North Wahroonga
Sydney Water Account	320 4139
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	838kL
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	1229
Is baseline representative of normal water use YES/NO	No
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	Undefined spike in water consumption in June
C – Impact of variation on water use (ie. Variation from normal) kL per annum	There is an additional 500kL above average used in the baseline year
D = A-C baseline water use corrected for variation (kL)	338
E = D/B baseline water use key performance indicator (KPI)	0.3
Baseline KPI units	kL/m2

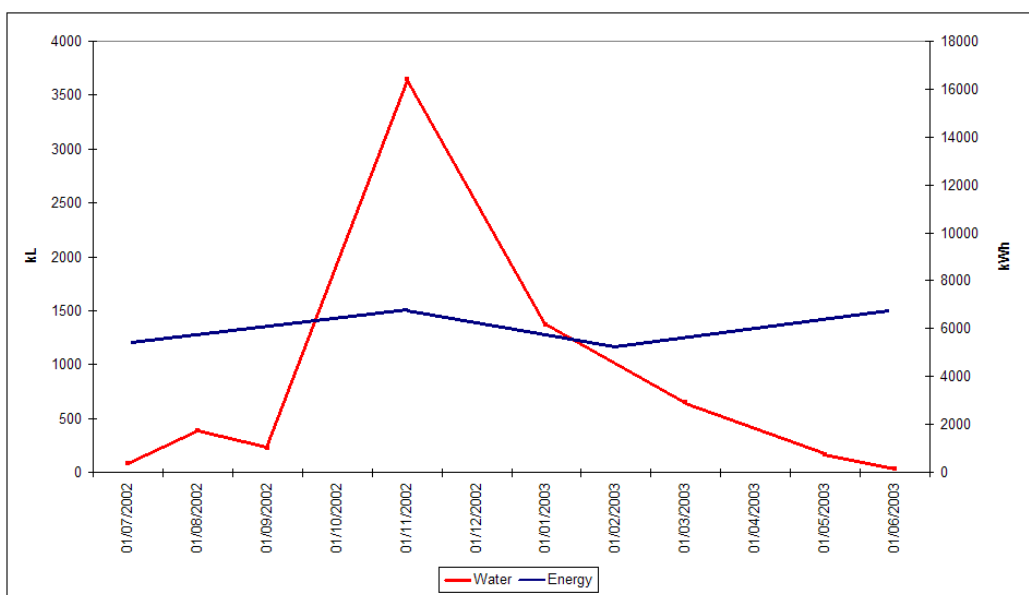
Energy	
Site description	Amenities Block, Bushfire Shed
Address	Westbrook Avenue, North Turramurra
Site Number	905-456-489
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	25,969
Greenhouse emissions	25 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	25,696
Business activity indicators	M2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	1229
E = C/D baseline energy use key performance indicator (KPI)	21
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Light conservation system (Light Eco)	Technical Services & Open Space	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	2007
	Sydney Water retrofit	Technical Services & Open Space	\$66	Unknown	Unknown	Unknown	2 months	2006
	Lighting upgrade	Technical Services & Open Space	\$4,000	Unknown	Unknown	Unknown	4 months	2007
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities block	Technical Services & Open Space	\$2500	Unknown	Unknown	Unknown	4 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Gordon Golf Course

The Gordon Golf Course, located in Lynn Ridge Avenue, Gordon, is a Par 65 public course owned and managed by Ku-ring-gai Council. Teetop Pty Ltd., are subcontracted by Ku-ring-gai Council to provide professional golf services for the golf course. The site includes a clubhouse precinct which has an amenities/storage building, "Meals on Wheels" building which includes a commercial kitchen and small dining room, golf pro shop and clubhouse. There is also a groundsman's shed located on the site.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows a summer peak in water consumption caused by increased watering through the hotter, drier months. Since the baseline year, Council has decreased watering of the course in line with water restrictions which is demonstrated through lower water bills for the site. Council is currently undertaking works for sewer mining at the site in partnership with the neighbouring Killara Golf Course which will provide Council with approximately 98% of water required for the site.



Water	
Site description	Gordon Golf Course
Address	Cnr Bushlands & Lynn Ridge Ave, Gordon
Sydney Water Account	3198 589
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	6552
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	248,457
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	6552
E = D/B baseline water use key performance indicator (KPI)	0.03
Baseline KPI units	kL/m2

Energy	
Site Number	905-814-776
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	24,410
Greenhouse emissions	23 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	24,410
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	248,457
E = C/D baseline energy use key performance indicator (KPI)	0.1
Baseline KPI units	kWh/m2

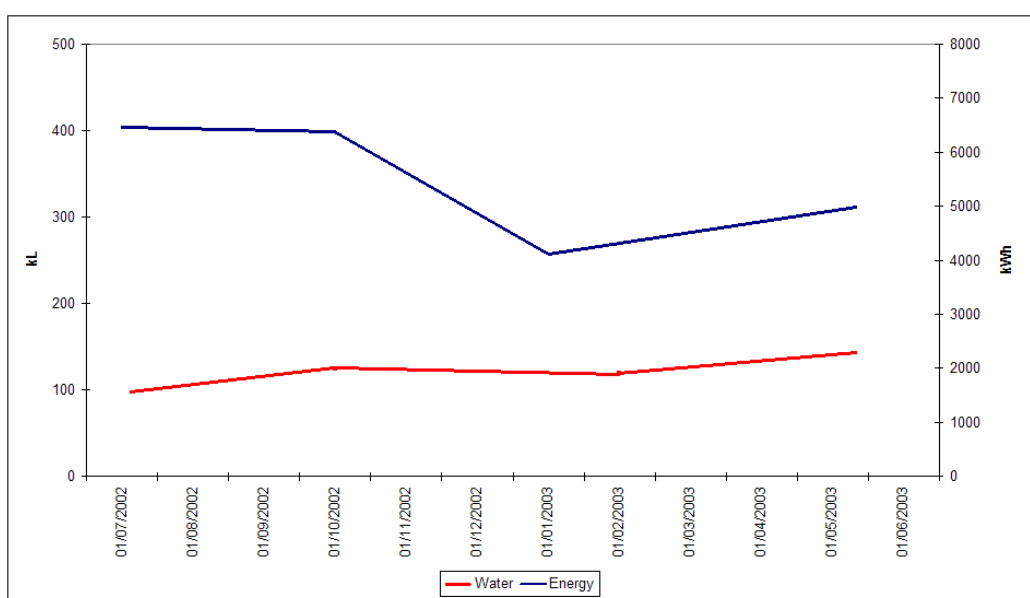
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Reduced course irrigation	Open Space	Nil	Unknown	Unknown	Unknown	immediate	Ongoing
Cost effective Opportunities								
	Sydney Water retrofit	Open Space & Technical Services	\$88	Unknown	Unknown	Unknown	3 months	2006
	Lighting upgrade	Open Space & Technical Services	\$20,000	Unknown	Unknown	Unknown	6 months	2007
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities blocks	Open Space & Technical Services	\$2,500	Unknown	Unknown	Unknown	4 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Roseville Community Centre

The building is located at Lot 21, 6-12 Babbage Road, Roseville and used as a community centre. Council hires the building to the community for a variety of community and commercial purposes. The building is comprised of three parts, being the former Roseville Library, Roseville Baby Health Centre and the main hall.

This site operates under the Generic Community Halls and Meeting Rooms Plan of Management adopted on 17 October 2000. The Chase Kindergarten operates from the main hall from Monday to Friday during school terms, Roseville P&C Kids Care operate from the former Library room and The Cavalcade of History and Fashion lease the former Baby Health Centre area. Limited energy and water conservation works have been undertaken at the site.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Energy consumption is slightly higher in winter indicating an higher use of heating appliances in the colder months.



Water	
Site description	Roseville Community Centre
Address	Lot 21 (No.10) Babbage Rd
Sydney Water Account	3194273
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	482
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	1403
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	482
E = D/B baseline water use key performance indicator (KPI)	0.3
Baseline KPI units	kL/m2

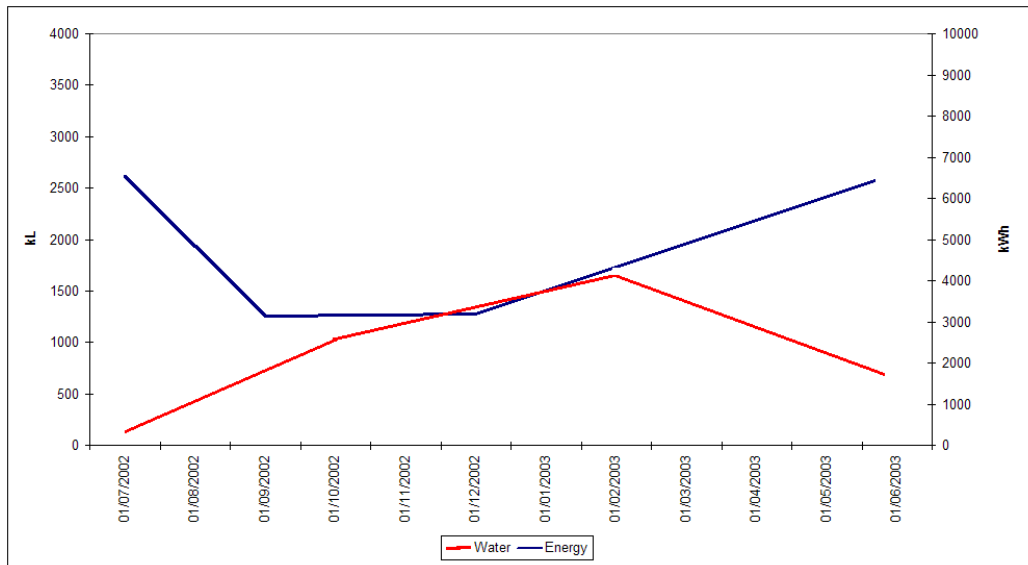
Energy	
Site Number	906-715-315
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	21,957
Greenhouse emissions	21 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	21,957
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	1403
E = C/D baseline energy use key performance indicator (KPI)	16
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Light conservation system (Light Eco)	Technical Services & Community Services	\$9,000	70,000kWh	\$5,000	1.8 years	4 months	2008
	Building insulation	Technical Services & Community Services	\$7,000	Unknown	Unknown	Unknown	4 months	2008
	Lighting upgrade	Technical Services & Community Services	\$4,500	Unknown	Unknown	Unknown	5 months	2007
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities blocks and external irrigation	Technical Services & Community Services	\$2,500	Unknown	Unknown	Unknown	4 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Soldiers Memorial Oval

The Soldiers memorial oval consists of two flood lit ovals, floodlit tennis courts, and two amenities blocks. The grounds are used for a variety of organised sports throughout the year. The lighting system is now automated through the Cloudmaster system and stormwater harvesting works are to be undertaken to reduce the reliance on potable water for oval irrigation.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The winter peak in lighting reflects the increase in night training on the floodlit ovals and evening tennis. The summer peak in water consumption reflects the maintenance of the turf wickets which require additional watering.



Water	
Site description	Soldiers Memorial Park
Address	Lot 156 Tryon Road, East Lindfield
Sydney Water Account	3226 258
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	3481
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	40,842
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	3457
E = D/B baseline water use key performance indicator (KPI)	0.08
Baseline KPI units	kL/m2

Energy	
Site Number	906-684-758
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	19,234
Greenhouse emissions	19 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	19,234
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	40,842
E = C/D baseline energy use key performance indicator (KPI)	0.5
Baseline KPI units	kWh/m2

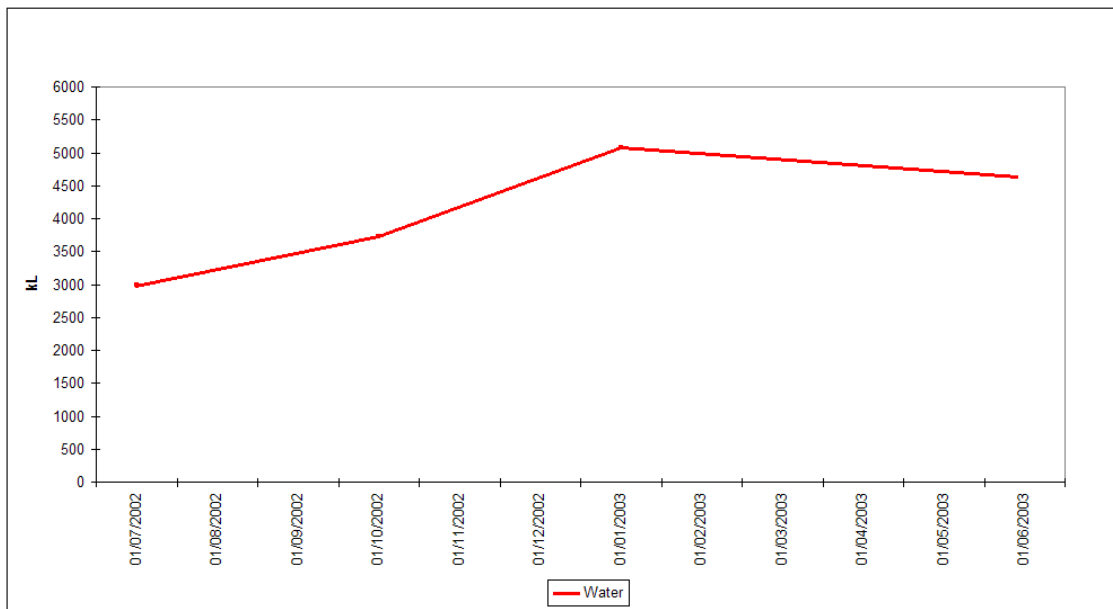
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Amenities block lighting upgrade	Open Space	\$2,500	70,000kWh	\$5,000	1.8 years	4 months	2007
	Sydney Water retrofit	Open Space	\$88	Unknown	Unknown	Unknown	3 months	2006
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$250,000	Unknown	Unknown	Unknown	12 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

West Pymble Pool

West Pymble Pool is a heated Olympic pool complex located at Prince of Wales Drive (off Lofberg Road), West Pymble. The Pool is leased to private operators and includes a café and amenities building, a 50 metre six-lane pool, learners' pool, toddlers' pool and wading pool which are all heated to 26 degrees Celsius. Some pools are covered to give protection from the sun and seating areas are also shaded. The pool closes for the season at the end of April and re-opens for summer in early September.

Over the last three years there have been several upgrades to the facility as part of a five year program to ensure compliance with Health Regulations. Future developments at the pool are currently under review, significant changes to the water space are unlikely. Future developments are more likely to be aesthetic and social improvements.

The following chart is based on the quarterly water data for the 2002/2003 financial year. Due to the lease arrangements of the site, Council does not have access to the electricity data.



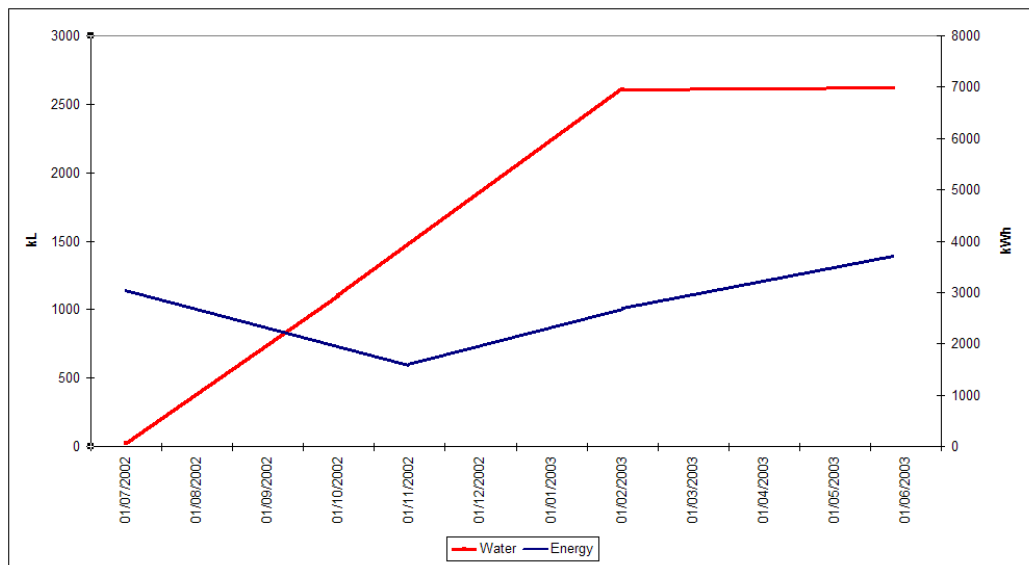
Water	
Site description	West Pymble Pool
Address	Lofberg Road, West Pymble
Sydney Water Account	3212 341
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	15,740
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	8531
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	15,740
E = D/B baseline water use key performance indicator (KPI)	2
Baseline KPI units	kL/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Lighting upgrade	Open Space & Technical Services	\$7,000	Unknown	Unknown	Unknown	4 months	2009
	Sydney Water retrofit	Open Space & Technical Services	\$220	Unknown	Unknown	Unknown	3 months	2007
Potential Cost Effective Opportunities								
	Stormwater harvesting – Iofberg oval	Open Space & Technical Services	\$270,000	Unknown	Unknown	Unknown	18 months	2010
Total savings for site 1				Total savings as a percentage of total site use (%)				

Cliff Oval - Wahroonga

Cliff Oval is located in Wahroonga and is a local sportsground with two rugby fields in winter and one cricket pitch and 2 baseball diamonds in summer. The site also has a small clubhouse, floodlights on both ovals, and irrigation on one. Wahroonga Rugby Club is preparing plans to build a new clubhouse which will provide Council with the opportunity to develop a more sustainable clubhouse.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows an increase in energy consumption through the winter months reflecting more night training and floodlight use on the site. Water use increased within the summer months reflecting the maintenance and irrigation required for the turf wickets in the hotter months.



Water	
Site description	Cliff Oval
Address	Cliff Avenue, Wahroonga
Sydney Water Account	3200 607
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	7967
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	29,557
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	6369
E = D/B baseline water use key performance indicator (KPI)	0.2
Baseline KPI units	kL/m2

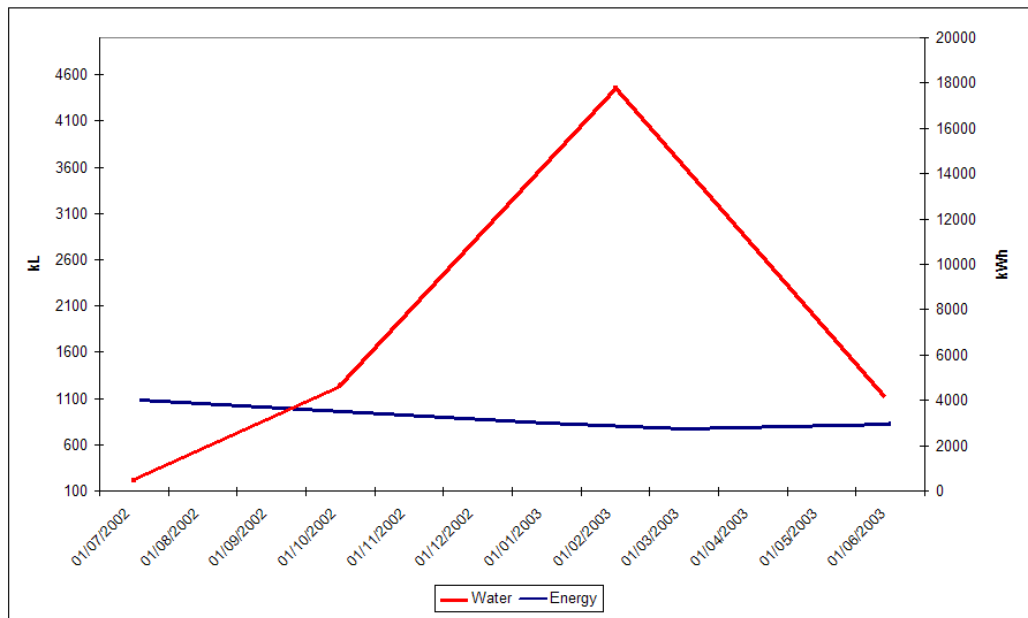
Energy	
Site Number	905-435-712 and 905-439-067
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	11090
Greenhouse emissions	11 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	11090
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	29,557
E = C/D baseline energy use key performance indicator (KPI)	0.4
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Lighting upgrade	Open Space & Technical Services	Unknown	Unknown	Unknown	Unknown	4 months	2008
	Sydney Water retrofit	Open Space & Technical Services	\$66	Unknown	Unknown	Unknown	4 months	2007
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space & Technical Services	\$180,000	Unknown	Unknown	Unknown	18 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

Auluba Oval

Auluba Oval, located in South Turramurra is a district park and sportsground with baseball field, soccer fields, cricket wicket and nets, playground, off leash area and clubhouse. This site is the next location on the capital works program with will involve the reconstruction of the soccer field, upgrade of floodlights, irrigation and drainage. This will also include a water capture/reuse project funded by the Environmental Levy. A district park master plan is being prepared for the site which will identify future opportunities. The site now has automated irrigation and lighting through the Cloudmaster system which will show a decrease in both water and energy consumption.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Water consumption peaks in the summer season indicative of increased oval and turf wicket irrigation.



Water	
Site description	Auluba Oval
Address	Auluba Road, South Turramurra
Sydney Water Account	3194 034
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	6870
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	25,459
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	6995
E = D/B baseline water use key performance indicator (KPI)	0.3
Baseline KPI units	kL/m2

Energy	
Site Number	905-876-360
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	12,625
Greenhouse emissions	12 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	12,625
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	25,459
E = C/D baseline energy use key performance indicator (KPI)	0.5
Baseline KPI units	kWh/m2

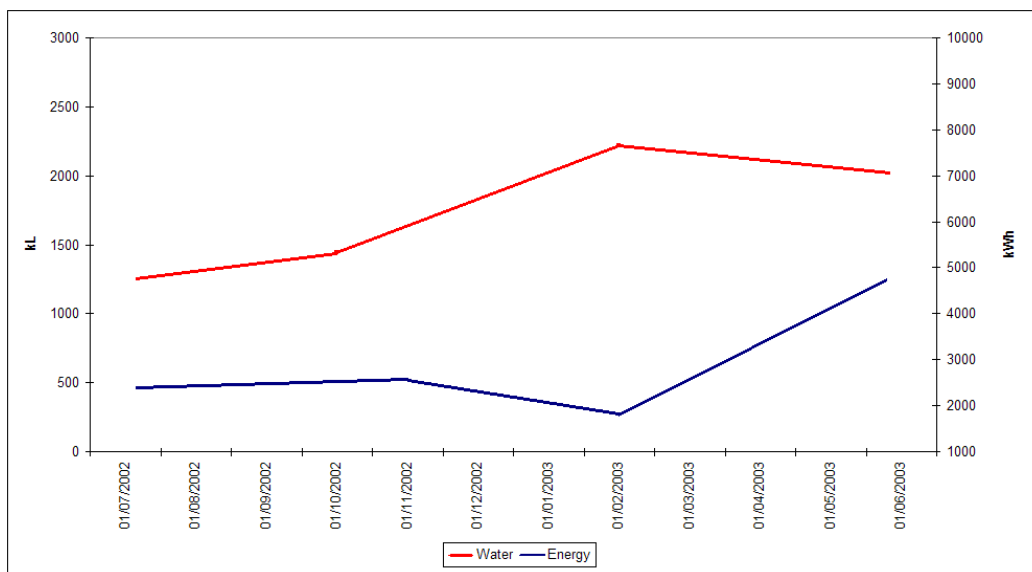
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Automated irrigation and lighting system implemented	Open Space	\$5,000	Unknown	Unknown	Unknown	2 months	Completed
Cost effective Opportunities								
	Lighting upgrade	Open Space	Unknown	Unknown	Unknown	Unknown	8 months	2007
	Sydney Water retrofit	Open Space	Unknown	Unknown	Unknown	Unknown	3 months	2007
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$230,000	Unknown	Unknown	Unknown		2011
Total savings for site 1				Total savings as a percentage of total site use (%)				

Council Nursery

Council runs its own nursery, specialising in local indigenous plants, propagated by Council staff using local seeds and cuttings. The nursery supplies native and exotic plants for all Council's planting and re-vegetation needs. In addition, some 40,000 plants are sold each year.

Opening hours for the public are from 9am to 3.30pm weekdays, however the site is open to Council staff for extended hours.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. There is a summer peak in water consumption due to increased irrigation in the hotter months, and a slight winter peak in energy consumption due to longer hours of lighting at the site.



Water	
Site description	Council Nursery
Address	430 Mona Vale Road, St Ives
Sydney Water Account	3215 337
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	6865
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	42,424
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	6865
E = D/B baseline water use key performance indicator (KPI)	0.2
Baseline KPI units	kL/m2

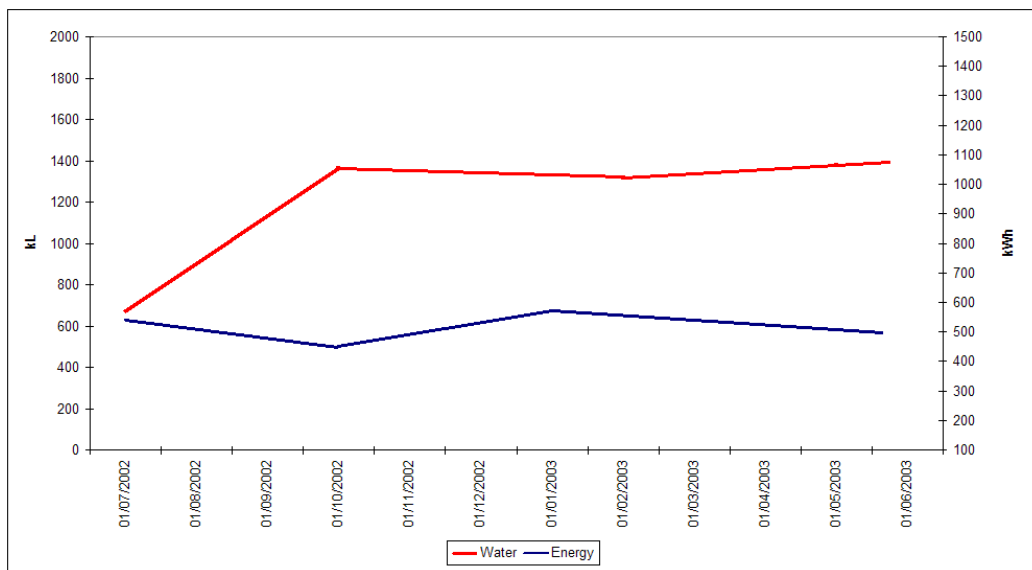
Energy	
Site Number	905-538-924 and 905-538-932
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	11429
Greenhouse emissions	11 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	11,429
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	42,424
E = C/D baseline energy use key performance indicator (KPI)	0.3
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Lighting upgrade	Open Space & Technical Service	\$9,000	Unknown	Unknown	Unknown	4 months	2008
	Sydney Water retrofit	Open Space & Technical Service	\$44	Unknown	Unknown	Unknown	2 months	2006
Potential Cost Effective Opportunities								
	Rainwater tanks installation	Open Space & Technical Service	\$2,500	Unknown	Unknown	Unknown	3 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Swain Gardens

Swain Gardens is situated behind 77 Stanhope Road, Killara, and were the private gardens built by Mr Mick Swain from the 1940s to the 1960s. The gardens are representative of a garden style popular with attitudes and tastes of the 1950s and reflects a vision of the "English Garden" within a bushland setting. Mr Swain bequeathed the gardens to the National Trust in the early 1970s who transferred it to Council in 1980. The site contains a BBQ area, gazebo, toilets and gardeners shed. The gardens are used for weddings, functions and meetings. Limited works have been undertaken on the site to reduce water and energy consumption, however there is currently a study being undertaken to reduce water consumption at the site funded by the environmental levy.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year.



Water	
Site description	Swain Gardens
Address	77 Stanhope Road, Killara
Sydney Water Account	3224 022
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	5532
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	18,038
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	5,532
E = D/B baseline water use key performance indicator (KPI)	0.3
Baseline KPI units	kL/m2

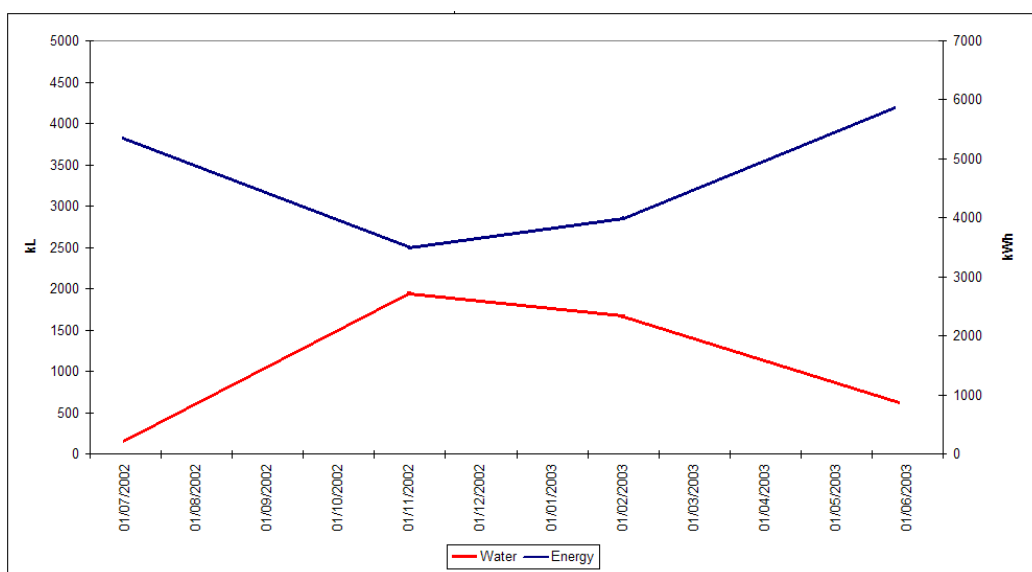
Energy	
Site Number	906-626-485
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	2054
Greenhouse emissions	2 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	2054
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	18,038
E = C/D baseline energy use key performance indicator (KPI)	0.1
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Lighting upgrade	Open Space & Technical Services	Unknown	Unknown	Unknown	Unknown	4 months	2007
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$75,250	Unknown	Unknown	Unknown	4 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Warrimoo Oval

Warrimoo Oval, based in Warrimoo Ave, St Ives, is a local soccer field with a cricket wicket, trial off leash area, three tennis courts, a clubhouse and a scout hall on the site. The floodlights at the oval are in need of upgrading and the tennis courts will most likely be expanded to cater for growing demand. Since the baseline year, Council has implemented the Cloudmaster automated irrigation and lighting system for the site, which will reduce both energy and water consumption.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows an increase in energy consumption through the winter months reflecting more night training and floodlight use on the site. Water use increased within the summer months reflecting the maintenance and irrigation required for the turf wickets in the hotter months.



Water	
Site description	Warrimoo Ave
Address	Lot 1 & 2 Warrimoo Ave, St Ives
Sydney Water Account	3227 666 & 3227 764
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	4009
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	18,739
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	4,009
E = D/B baseline water use key performance indicator (KPI)	0.2
Baseline KPI units	kL/m2

Energy	
Site Number	905-524-812
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	18,707
Greenhouse emissions	18 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	18,707
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	18,739
E = C/D baseline energy use key performance indicator (KPI)	1
Baseline KPI units	kWh/m2

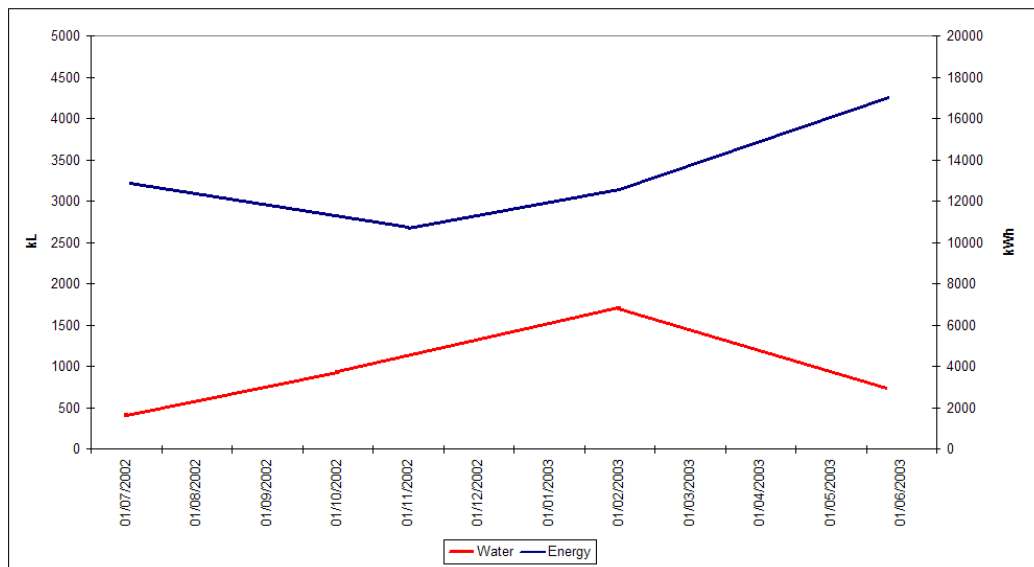
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Automated irrigation and lighting system implemented	Open Space	MORVEN	Unknown	Unknown	Unknown	2 months	Completed
Cost effective Opportunities								
	Lighting upgrade	Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2008
	Sydney Water retrofit	Open Space	\$44	Unknown	Unknown	Unknown	2 months	2006
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities blocks	Open Space	\$6,000	Unknown	Unknown	Unknown	4 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Bicentennial park

Bicentennial Park is located on Lofberg and Yanko Roads, West Pymble with the main entrance on the corner of Ryde and Lofberg Roads. The park contains the West Pymble Pool Complex, West Pymble Bowling Club, West Pymble Community Hall, local scout and guide halls, and the West Pymble Community Kindergarten. Active recreation facilities on the site include Lofberg Oval, Norman Griffiths Oval, Lofberg Netball Courts, cricket nets, Scarborough dog-off leash area, and an exercise warm up area. The park features picnic areas with electric barbeques and toilets. The park is open every day.

Council has already installed a solar powered park light within the dog off leash area of the park and has earmarked significant funding through the environmental levy for stormwater harvesting at the site.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows an increase in energy consumption through the winter months reflecting more night training and floodlight use on the site. Water use increased within the summer months reflecting the additional maintenance and irrigation required in the hotter months.



Water	
Site description	Bicentennial park
Address	Cnr Yanko & Lofberg Roads, West Pymble
Sydney Water Account	3212 345
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	3552
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	59,552
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	3,552
E = D/B baseline water use key performance indicator (KPI)	0.06
Baseline KPI units	kL/m2

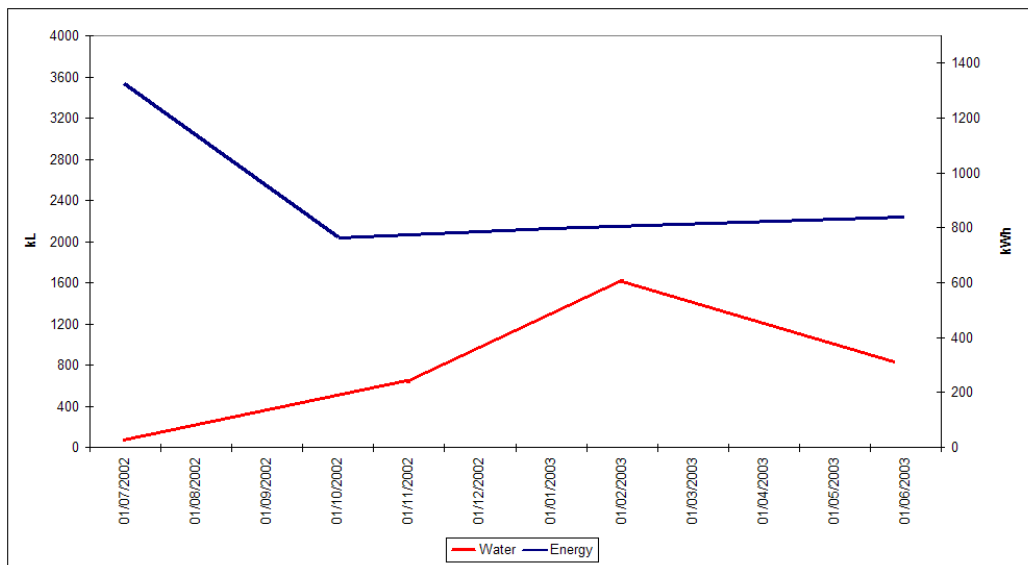
Energy	
Site Number	905-828-210, 905-828-228, 905-828-236, 905-828-511 & 905-828-529
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	9419
Greenhouse emissions	9 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	9419
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	59,552
E = C/D baseline energy use key performance indicator (KPI)	0.2
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Lighting automation	Open Space	\$1,800	Unknown	Unknown	Unknown	Unknown	
	Installation of solar park light	Open Space	\$3,500	Unknown	Unknown	Unknown	5 months	2003
Cost effective Opportunities								
	Lighting upgrade	Open Space & Technical Services	Unknown	Unknown	Unknown	Unknown	4 months	2008
	Sydney Water retrofit	Open Space	\$88	Unknown	Unknown	Unknown	3 months	2006
Potential Cost Effective Opportunities								
	Stormwater Harvesting	Open Space	\$273,000	Unknown	Unknown	Unknown	18 months	2010
	Rainwater tanks for amenities blocks	Open Space & Technical Services	\$6,500	Unknown	Unknown	Unknown	4 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Roseville park

Roseville park is a district park with cricket and hockey fields, seven tennis courts, a heritage cottage and a dog off leash area. The grounds are not floodlit, however there is an irrigation system which has recently been automated through the Cloudmaster system.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Energy use is slightly higher within the winter months due to park lighting being activated for longer hours during the longer nights. Water consumption increases in summer to maintain cricket grounds and parks through the hotter weather.



Water	
Site description	Roseville park
Address	Clanville Road, Roseville
Sydney Water Account	3200 481
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	3193
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	14,390
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	3193
E = D/B baseline water use key performance indicator (KPI)	0.2
Baseline KPI units	kL/m2

Energy	
Site Number	906-702-461 & 913-893-194
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	3726
Greenhouse emissions	4 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	3726
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	14,390
E = C/D baseline energy use key performance indicator (KPI)	0.3
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Automated irrigation system	Open Space	\$3,200	Unknown	Unknown	Unknown	2 months	2005
Cost effective Opportunities								
	Lighting upgrade	Open Space	Unknown	Unknown	Unknown	Unknown	8 months	2008
	Sydney Water retrofit	Open Space	\$88	Unknown	Unknown	Unknown	2 months	2006
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities block	Open Space	\$6,500	Unknown	Unknown	Unknown	6 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

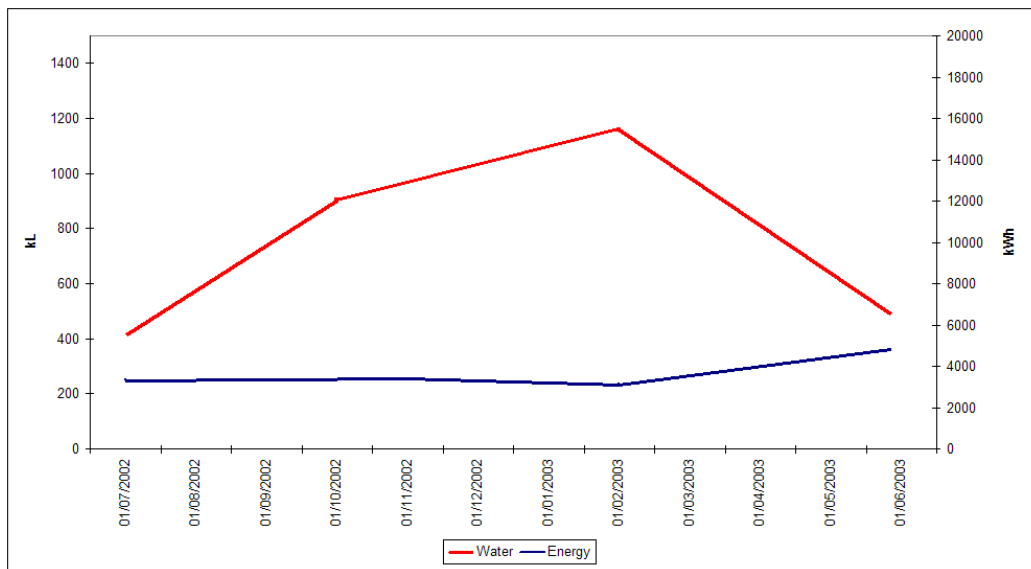
Wildflower Garden

The Ku-ring-gai Wildflower Garden, located at 420 Mona Vale Road, St Ives, covers 123 hectares of urban bushland on the northern edge of Sydney's North Shore. Facilities include display areas, ponds, boardwalks, a fernhouse, open air and undercover picnic areas, gas and electric barbecues, as well as plenty of on-site parking. A Visitor Centre is available for hire for weddings, christenings, birthdays. The Garden also incorporates the Bushland Education Centre, providing a range of environmental education programs for the community such as Bush Birthday Parties, Playground, Pre-School and School Programs, People in Parks & Nature for the Very Young activities. The site also houses an administration building for the garden staff and shade houses for the Australian Plant Society.

The Wildflower Garden is open every day from 8.00am to 4.00pm except Christmas Day and Water Good Friday.

In 2005, solar panels were installed on the roof of the visitors centre which is envisaged to reduce non renewable power consumption by 30%.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. consumption increases in the summer months as irrigation around the visitors centre and in the Australian Plant Society shade houses increases to maintain the plants. There is no seasonal variation in energy consumption throughout the year due to the site being closed before dark year-round.



Water	
Site description	Council Wildflower Garden
Address	Lot 575 Mona Vale Road, St Ives
Sydney Water Account	3215 335
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	2788
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	41,510
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	2,788
E = D/B baseline water use key performance indicator (KPI)	0.1
Baseline KPI units	kL/m2

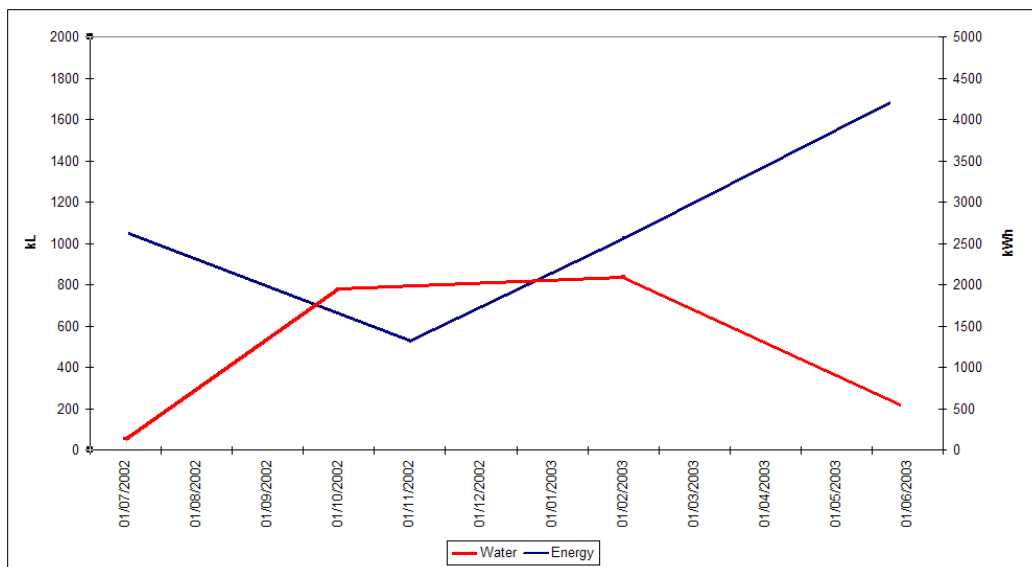
Energy	
Site Number	905-538-885 and 905-538-893
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	14604
Greenhouse emissions	14 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	14,604
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	41,510
E = C/D baseline energy use key performance indicator (KPI)	0.4
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Solar panel installation	Open Space	\$10,780	967kWh/pa	\$109	99 years	4 months	2005
Cost effective Opportunities								
	Light conservation system (Light Eco)	Open Space	\$3,500	Unknown	Unknown	Unknown	4 months	2007
	Sydney Water retrofit	Open Space	\$88	Unknown	Unknown	Unknown	2 months	2006
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities blocks	Open Space	\$6,000	Unknown	Unknown	Unknown	6 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

Acron Oval

Acron oval is a local sports field situated in St Ives and used for AFL in winter and cricket in summer. This site is irrigated, contains a small clubhouse and floodlighting. Since the benchmark year, the lighting has been automated under the CloudMaster system. No proposed changes for the site have been considered for the next seven years.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Energy use is higher over the winter months due to park lighting being activated for longer hours during the longer nights. Water consumption increases in summer to maintain cricket grounds and parks through the hotter weather.



Water	
Site description	Acron Oval
Address	Cnr Acron Road & Douglas Street, St Ives
Sydney Water Account	3202 670
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	1890
Business Activity Indicator	M2
B - Quantity of Site Business Activity Indicator per annum	30,860
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	1890
E = D/B baseline water use key performance indicator (KPI)	0.1
Baseline KPI units	kL/m2

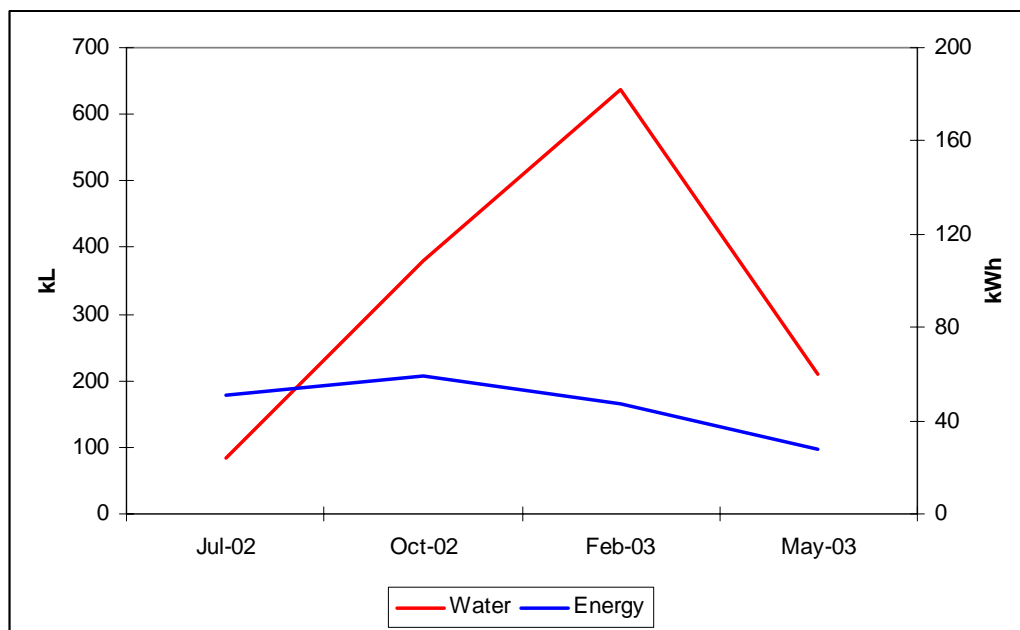
Energy	
Site Number	905-550-312
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	10726
Greenhouse emissions	10 Tonnes CO ₂
Is baseline representative of normal energy use YES/NO	YES
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	10,726
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	30,860
E = C/D baseline energy use key performance indicator (KPI)	0.3
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Automated irrigation system	Open Space	\$3,200	Unknown	Unknown	Unknown	2 months	completed
Cost effective Opportunities								
	Lighting upgrade	Open Space	Unknown	Unknown	Unknown	Unknown	8 months	2008
	Sydney Water retrofit	Open Space	\$88	Unknown	Unknown	Unknown	2 months	2006
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities block	Open Space	\$6,500	Unknown	Unknown	Unknown	6 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

The Glade

The Glade oval at Wahroonga is a local oval containing a turf wicket, tennis courts, play ground, two amenities blocks and a gardener's shed. The site has no formal irrigation system or oval flood lighting. There is currently a study to undertake stormwater harvesting at the site.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Energy use is higher over the winter months due to park lighting being activated for longer hours during the longer nights. Water consumption increases in summer to maintain cricket grounds and parks through the hotter weather.



Water

Site description	Oval
Address	Cnr The Glade & Koora Ave, Wahroonga
Sydney Water Account	3211070
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	1309
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	31,513
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	1309
E = D/B baseline water use key performance indicator (KPI)	0.04
Baseline KPI units	kL/m2

Energy

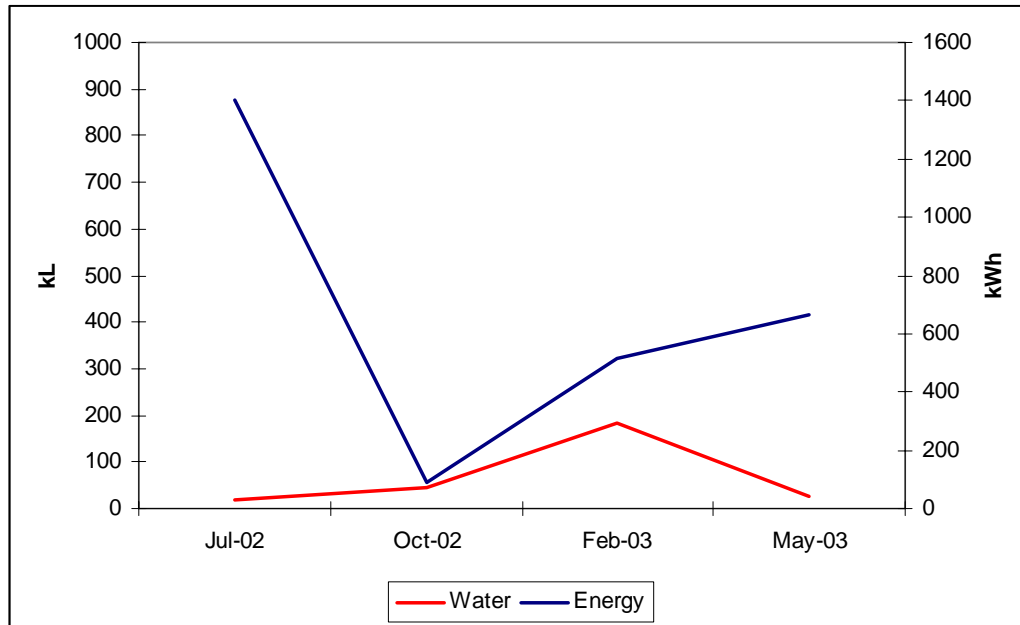
Site Number	905-902-032
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	185
Greenhouse emissions	1 ton CO ₂
Is baseline representative of normal energy use YES/NO	Yes
If NO, description of variation (eg. Shutdowns, restrictions)	NA
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	185
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	31,513
E = C/D baseline energy use key performance indicator (KPI)	0.006
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Lighting upgrade of amenities blocks	Technical Services & Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2008
	Sydney Water retrofit		Unknown	Unknown	Unknown	Unknown	5 months	2007
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$200,000	Unknown	Unknown	Unknown	18 months	2008/2009
Total savings for site 1				Total savings as a percentage of total site use (%)				

Commenara Playing Fields

The Commenara Playing Fields, based at West Pymble contains an oval, cricket nets and an amenities block. The oval has lighting which, since the baseline year, are now automated through the CloudMaster system and a drop in energy consumption in winter is expected. Council will be undertaking stormwater harvesting at the site as part of the Environmental Levy program to irrigate the oval and for water use at the amenities block.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. The chart shows a spike in energy consumption during the winter months which reflects higher usage of the field after dark.



Water	
Site description	Oval
Address	Opp end Forwood Ave, Commenara Pkwy, West Pymble
Sydney Water Account	322 5348
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	272kL
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	18,546
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	NA
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	272
E = D/B baseline water use key performance indicator (KPI)	0.01
Baseline KPI units	kL/m2

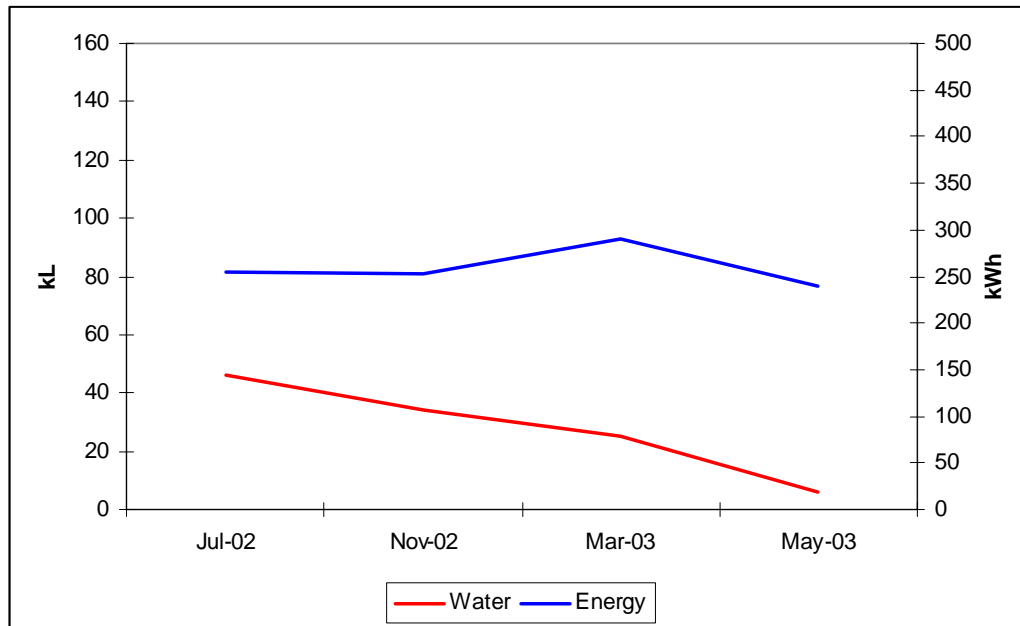
Energy	
Site Number	806-233-477
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	2676
Greenhouse emissions	3 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	Yes
If NO, description of variation (eg. Shutdowns, restrictions)	NA
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	2676
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	18,546
E = C/D baseline energy use key performance indicator (KPI)	0.14
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Lighting automation	Open Space	\$2,500	Unknown	Unknown	Unknown	Unknown	completed
Cost effective Opportunities								
	Light upgrade	Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2009
	Sydney Water retrofit	Open Space	\$88	Unknown	Unknown	Unknown	4 months	2007
Potential Cost Effective Opportunities								
	Stormwater Harvesting	Open Space	\$217,000	Unknown	Unknown	Unknown	18 months	2010
Total savings for site 1				Total savings as a percentage of total site use (%)				

Edenborough Park

Edenborough park, located in Lindfield contains an oval, dog off-leash area and an amenities block. The site is currently listed for stormwater harvesting works in the near future. The site is not currently irrigated, however the stormwater harvesting will allow the irrigation of the oval with no net increase in potable water use.

The following chart is based on the quarterly electricity and water data for the 2002/2003 financial year. Both water and electricity consumption are fairly consistent throughout the year.



Water	
Site description	Local oval
Address	End of Edenborough Road, Lindfield
Sydney Water Account	3206647
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	101
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	14,149
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	N/A
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	101
E = D/B baseline water use key performance indicator (KPI)	0.01
Baseline KPI units	kL/m2

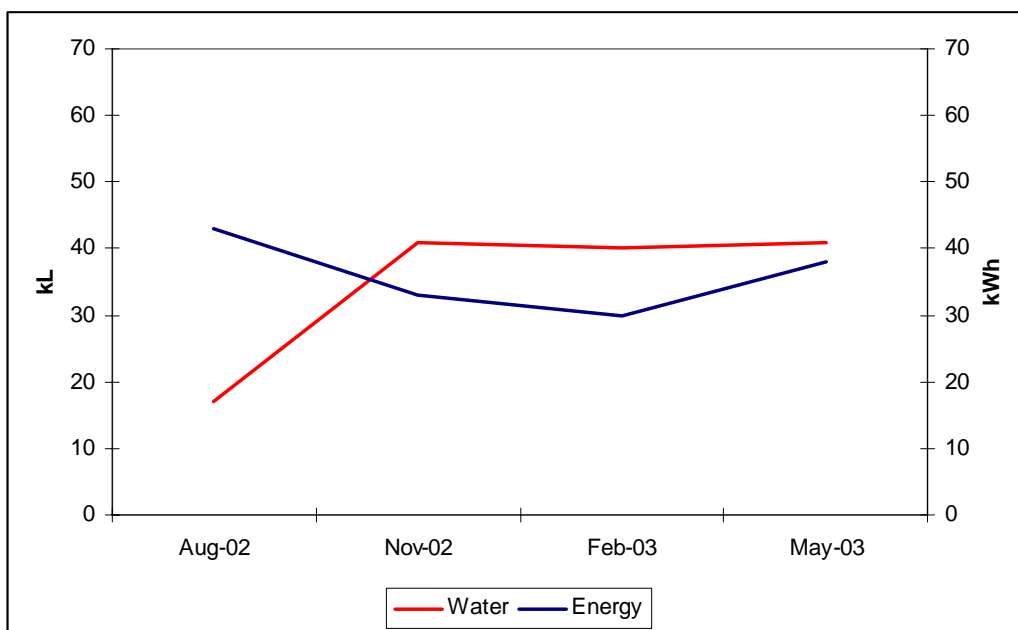
Energy	
Site Number	906-665-080
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	1037
Greenhouse emissions	1 ton CO ₂
Is baseline representative of normal energy use YES/NO	Yes
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	1037
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	14,149
E = C/D baseline energy use key performance indicator (KPI)	0.7
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Amenities block lighting upgrade	Technical Services & Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2007
	Sydney Water retrofit	Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2007
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$230,000	Unknown	Unknown	Unknown	18 months	2007
Total savings for site 1				Total savings as a percentage of total site use (%)				

Allan Small Park

Allan Small park in East Killara contains tennis courts, oval and amenities block. The lighting is now automated through the Cloudmaster system. The site has been identified as an area for stormwater harvesting under Council's Environmental levy.

The following chart is based on the quarterly energy and water data for the 2002/2003 financial year. There is little variation throughout the year with both electricity and water consumption.



Water	
Site description	Tennis courts and cricket oval
Address	Saiala Road, opp No.s 33-41
Sydney Water Account	3222 949
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	139
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	12,561
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	N/A
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	139
E = D/B baseline water use key performance indicator (KPI)	0.01
Baseline KPI units	kL/m2

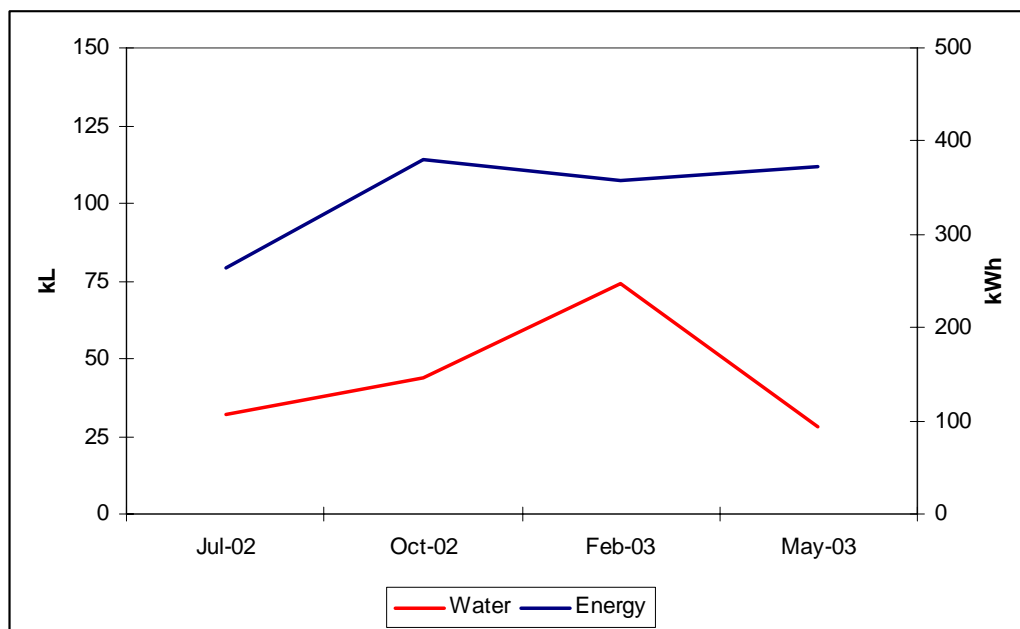
Energy	
Site Number	906-616-513
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	144
Greenhouse emissions	1 ton CO ₂
Is baseline representative of normal energy use YES/NO	Yes
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	144
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	12,561
E = C/D baseline energy use key performance indicator (KPI)	0.01
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Lighting upgrade and automation	Open Space	Morven	Unknown	Unknown	Unknown	Unknown	
Cost effective Opportunities								
	Light upgrade of tennis shelter	Technical Services & Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2007
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$150,000	Unknown	Unknown	Unknown	18 months	2009
Total savings for site 1				Total savings as a percentage of total site use (%)				

Kent Oval

Kent oval in Turramurra contains tennis courts, oval and amenities block. There is no oval lighting, however the amenities blocks has lighting. The site has been identified as an area for stormwater harvesting under Council's Environmental levy.

The following chart is based on the quarterly energy and water data for the 2002/2003 financial year. There is little variation throughout the year with both electricity and water consumption, however water use peaks slightly in the summer months.



Water	
Site description	Oval with tennis courts
Address	South end of Kent Road, Turramurra
Sydney Water Account	3209 375
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	178
Business Activity Indicator	M2
B - Quantity of Site Business Activity Indicator per annum	27,517
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	N/A
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	178
E = D/B baseline water use key performance indicator (KPI)	0.01
Baseline KPI units	kL/m2

Energy	
Site Number	905-489-258
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	1374
Greenhouse emissions	1 ton CO ₂
Is baseline representative of normal energy use YES/NO	Yes
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	1374
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	27,517
E = C/D baseline energy use key performance indicator (KPI)	0.05
Baseline KPI units	kWh/m2

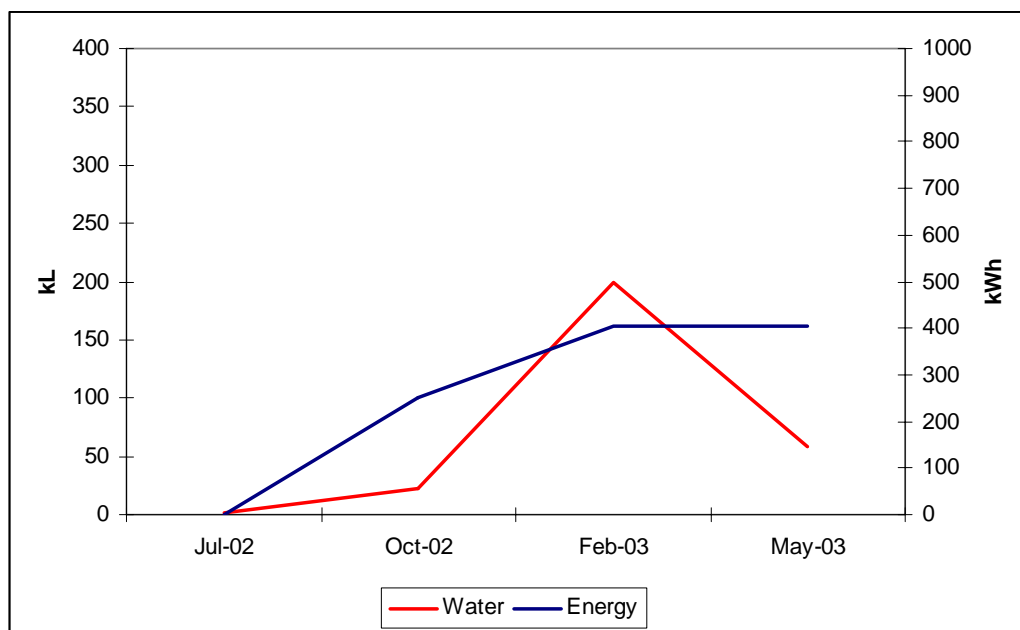
Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Cost effective Opportunities								
	Automate and upgrade amenities block lighting	Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2008
Potential Cost Effective Opportunities								
	Stormwater harvesting	Open Space	\$250,000	Unknown	Unknown	Unknown	18 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

Wahroonga Park

Wahroonga Park, located on Coonabarra road, Wahroonga is an ornamental park with rotunda, playground and amenities block. The Wahroonga Rehabilitation service is located in a building within the park. The park has path lighting with one solar park light in the centre and the rotunda contains lights.

Wahroonga Park has been earmarked for stormwater harvesting as part of the Environmental Levy program.

The following chart is based on the quarterly energy and water data for the 2002/2003 financial year. Energy consumption has increased over the year slightly which may be due to shorter daylight hours in the winter requiring longer times for lighting the amenities block and rotunda. Water consumption peaks in the summer months due to greater irrigation of the gardens.



Water	
Site description	Park
Address	Coonabarra Road, Wahroonga
Sydney Water Account	320 1151
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	283
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	18,449
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	N/A
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	283
E = D/B baseline water use key performance indicator (KPI)	0.02
Baseline KPI units	kL/m2

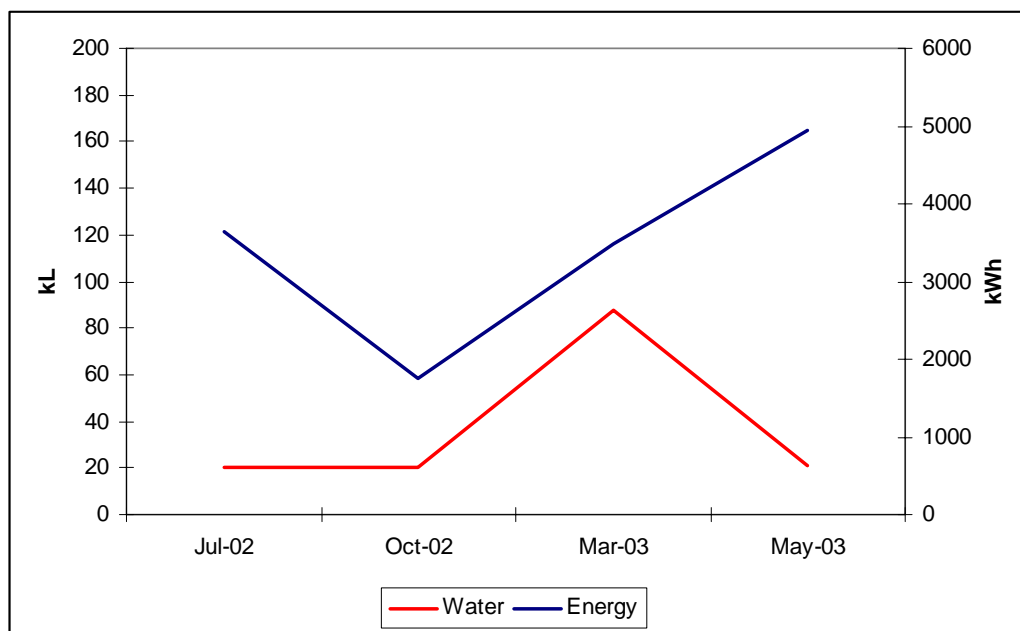
Energy	
Site Number	809-107-473
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	1059
Greenhouse emissions	1 ton CO ₂
Is baseline representative of normal energy use YES/NO	Yes
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	1059
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	18,449
E = C/D baseline energy use key performance indicator (KPI)	0.06
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Installation of solar park light	Open Space	\$3,600	Unknown	Unknown	Unknown	3 months	2004
Potential Cost Effective Opportunities								
	Stormwater Harvesting	Open Space	\$170,000	Unknown	Unknown	unknown	18 months	2011
Total savings for site 1				Total savings as a percentage of total site use (%)				

Turramurra Memorial Park

Turramurra Memorial Park is located on the corner of Eastern and Karuah roads, Turramurra. The park contains a tennis court, exercise area, flood lit oval, turf wicket and amenities block and clubhouse. Since the baseline year, Council has automated the oval floodlights through the Cloudmaster system. It is expected that this will decrease the energy consumption at the site.

The following chart is based on the quarterly energy and water data for the 2002/2003 financial year. Energy consumption increases in the winter months due to increased night training and shorter daylight hours, and water consumption peaks in the summer months as irrigation on the turf wicket is increased during the warmer seasons.



Water	
Site description	Oval
Address	Cnr Karuah Rd & Eastern Rd, Turrumurra
Sydney Water Account	320 9062
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A – baseline water use per annum (kL)	149
Business Activity Indicator	m2
B - Quantity of Site Business Activity Indicator per annum	569
Is baseline representative of normal water use YES/NO	Yes
If NO, description of variation (eg. Restrictions, shutdown, refurbishment)	N/A
C – Impact of variation on water use (ie. Variation from normal) kL per annum	Nil
D = A-C baseline water use corrected for variation (kL)	149
E = D/B baseline water use key performance indicator (KPI)	0.3
Baseline KPI units	kL/m2

Energy	
Site Number	905-470-015 and 905-470-023
Baseline Start Date	1 July 2002
Baseline End Date	30 June 2003
A = baseline energy use per annum (kWh)	13,798
Greenhouse emissions	13 tonnes CO ₂
Is baseline representative of normal energy use YES/NO	Yes
If NO, description of variation (eg. Shutdowns, restrictions)	N/A
B = Impact of variation on energy use kWh per annum	Nil
C = A-B baseline energy use corrected for variation (kWh)	13,798
Business activity indicators	m2
D = Quantity of Site Business Activity Indicator per annum (corrected for variations)	569
E = C/D baseline energy use key performance indicator (KPI)	0.04
Baseline KPI units	kWh/m2

Project number	Measure Description	Responsibility	Cost to implement	Savings (kWh/kL)	Total cost savings (\$pa)	Internal Rate of Return	Time required to implement	Planned Completion Date
Previous actions Over Last Five Years								
	Lighting automation	Open Space	\$2,500	Unknown	Unknown	Unknown	Unknown	2005
Cost effective Opportunities								
	Lighting upgrade of amenities blocks	Technical Services & Open Space	Unknown	Unknown	Unknown	Unknown	4 months	2008
Potential Cost Effective Opportunities								
	Rainwater tanks for amenities blocks		\$6,000	Unknown	Unknown	Unknown	4 months	2008
Total savings for site 1				Total savings as a percentage of total site use (%)				

Appendix A

Review Area	Rating				
	Low	Moderate	Minimum Sustainable	Industry Leader	Best Practice
Senior management Commitment					
Understanding of water/energy savings potential					
Water/energy targets and key performance indicators					
Water/energy metering and monitoring					
Water/energy management Reporting					
Water/energy supply management					
Operating and maintenance procedures					
Accountabilities for Water/energy management					
Training and awareness procedures					
Compliance with legal and/or regulatory requirements					

Management review of water and energy

Management Actions

Review Area	Management Action	Operational Action	Planned Responsibility	Planned Completion Date	Actual Completion date
Senior management commitment	Savings plan is linked with management plan and financial plan	Savings plan linked to ten year financial model	Manager Sustainability, Manager Finance		
		Pay back periods of key projects determined	Sustainability Officer		
	Active involvement of management in developing the Plan	Identification of sites and projects	Manager Sustainability		
		Review of Building Maintenance budget	Director Technical Services		
		Management sign-off on savings plan	Director Technical Services, Director Open Space, Director Community Services		
	Management actively committed to improving behaviour change of occupants and users of Council sites	Management work closely with Sustainability Officer to improve implementation of the plan	Director Technical Services, Director Open Space, Director Community Services		
Understanding of water/energy savings potential	Active participation of management in developing savings plan	Development and implementation of education/awareness campaign for Council staff and users of Council facilities	Sustainability Officer		
	Development of detailed water and energy savings plan	Savings plan contains data on costs, savings, pay back periods of projects, alternatives and options	Sustainability Officer		
	Provision of audit and monitoring data to key property managers	Audit report provided twice a year to property managers of each Council site	Sustainability Officer		
		Provision of reminders and follow up of further action in relation to audit reports	Sustainability Officer		

Review Area	Management Action	Operational Action	Planned Responsibility	Planned Completion Date	Actual Completion date
	Energy and water savings considered at lease/licence renewals	Opportunities to lease/licence changes to include conditions and water and energy savings considered at times of renewal	Sustainability Officer Commercial Services Co-ordinator Commercial Facilities Coordinator Manager Parks, Sports & Recreation		
	Continuous education and information flow to facility managers	Information on energy and water projects throughout Council and other Councils provided to facilities managers with the half yearly audits.	Sustainability Officer		
Energy/water targets and key performance indicators	Targets clear to all relevant staff and linked to key strategic and operational documents	Actions within the savings plan to be included on an annual basis into the management plan at review	Manager Sustainability		
		Continual reinforcement of targets articulated to all facilities managers through half yearly review of sites	Sustainability Officer		
		Action plan reviewed every two years and amended actions included in management plan	Sustainability Officer		
Water and energy metering and monitoring	Audits conducted annually for sites	Detailed records of facility energy and water consumption recorded	Sustainability Officer		
	Water and energy data/bills used to graph consumption patterns	Data recorded and presented to relevant facilities managers for action	Sustainability Officer		

Review Area	Management Action	Operational Action	Planned Responsibility	Planned Completion Date	Actual Completion date
	Funding provided to implement detailed audits at larger and more complicated site	Continual application for funding where available to implement audits	Sustainability Officer		
Water and energy management reporting	Inclusion of information in Council's main strategic and reporting documents	Detailed data of specific sites and overall progress towards reaching the consumption goal to be presented annually in Council's State of the Environment and annual report	Sustainability Officer Sustainability Research Assistant		
		Half yearly reports presented to facilities managers for specific sites	Sustainability Officer		
		Annual presentation to senior management on projects undertaken and progress towards reaching consumption goal	Sustainability Officer		
Water and energy supply management	Formalised process for reviewing energy and water procurement developed	Water and energy procurement reviewed every two years to determine most cost effective supplier	Sustainability Officer, Director Finance & Business		
		Metering of sites is reviewed every two years to ensure accuracy	Sustainability officer		
	Life cycle energy and water use considerations are actively considered in all significant capital works projects and maintenance upgrades	All tender documents for capital works or asset maintenance shall include provisions to use energy and water efficient programs.			
		Sustainability team will be notified of projects requiring additional funding to implement energy/water efficient "things" to enable additional sources of funding to be located prior to project inception	Director Open Space Director Technical Services Director Community Services		

Review Area	Management Action	Operational Action	Planned Responsibility	Planned Completion Date	Actual Completion date
Operating and maintenance procedures	Energy and water efficiency upgrades are implemented as part of regular maintenance programs	Building maintenance program and plan links to energy and water audit results	Depot Manager		
		Sustainability team involved in any update or review of the building maintenance program	Manager Sustainability Sustainability Officer		
		Sustainability Team to be notified of any maintenance which may require additional funding above the cost of standard repair/replacement of equipment so that additional funding can be located for the works	Depot manager Director Open Space Director Technical Services Director Community Services		
Accountabilities for water and energy management	Managers accountable for water and energy consumption at specific Council facilities are clearly identified	All sites shall be clearly assigned to a department with annual reporting undertaken on how that department's water and energy consumption has fared compared to other years and other departments.	Sustainability Officer		
	Managers are aware of their accountabilities in regards to this savings plan	Reports are regularly provided to key managers responsible for energy and water consumption at key sites	Sustainability Officer		
Training and awareness procedures	Conduct appropriate staff training	Develop information to be distributed to staff and building users on water and energy use at Council facilities	Sustainability Officer Environmental Education Officer		
		Develop web based information on sustainable water and energy use for developers and home owners within the LGA	Sustainability Officer Communications Officer		

Review Area	Management Action	Operational Action	Planned Responsibility	Planned Completion Date	Actual Completion date
		Include water and energy reduction education into Council's Education Strategy	Environmental Education Officer Sustainability Officer		
	Provide appropriate information to responsible facilities managers	Develop half yearly reports for facilities managers for specific facilities	Sustainability Officer		
	Develop relevant SOPs	Develop specific and generic SOPs for Council facilities where specific behaviours are required to reduce water and energy consumption	Sustainability Officer		
Compliance with legal and/or regulatory requirements	Council staff to be kept up to date with any legislative changes to water and energy use	Education of Council staff and contractors where required on any changes to legislation	Sustainability Officer		

Attachment 2 - Energy Performance Contract

What is Energy Performance Contracting?

Energy Performance Contracting is an innovative form of contracting developed to overcome the major barriers to delivering cost-effective energy efficiency. Energy Performance Contracting can be used in any facility in which energy is used, including all types of buildings and industrial processes.

Energy Performance Contracting is when an energy service company (ESCO) is engaged to improve the energy efficiency of a facility, with the guaranteed energy savings paying for the capital investment required to implement improvements. Under a performance contract for energy saving, the ESCO examines a facility, evaluates the level of energy savings that could be achieved, and then offers to implement the project and guarantee those savings over an agreed term.

Energy Performance Contracting allows facility owners and managers to upgrade ageing and inefficient assets while recovering capital required for the upgrade directly from the energy savings guaranteed by the ESCO. The ESCO takes the technical risk and guarantees the savings. The ESCO is usually paid a management fee out of these savings (if there are no savings, there is no payment) and is usually obligated to repay savings shortfalls over the life of the contract. At the end of the specific contract period the full benefits of the cost savings revert to the facility owner.

The methodology of Energy Performance Contracting differs from traditional contracting, which is invariably price-driven. Performance contracting is results-driven: ensuring quality of performance. ESCOs search for efficiencies and performance reliability to deliver contractual guarantees.

An ESCO's services typically include:

1. performing an energy audit, known as a Detailed Facility Study (DFS);
2. establishing baseline energy use for specific equipment, systems, or the facility as a whole;
3. designing the project in consultation with the Customer;
4. undertaking turnkey supply, installation and commissioning of equipment;
5. training or briefing Customer personnel;
6. operating and maintaining the equipment for the life of the contract;
7. conducting measurement and verification (M&V) to determine the actual savings; and
8. providing savings and equipment performance guarantees.

Typical contract terms are between four and 10 years

Advantages of Energy Performance Contracting

There are five principal reasons for considering an Energy Performance Contract:

Improved infrastructure and facilities

As part of the contract to reduce energy and water costs, Council can expect new technology and equipment to replace ageing infrastructure. This may include new lighting addressing poor lighting standards which do not meet AS requirements; new air conditioning systems, improved automation of systems and building insulation improving internal environment amenity at Council facilities. An EPC will provide Council with the opportunity to upgrade ailing infrastructure in advance of the existing maintenance plan.

Reduced technical risk

An ESCO's main job is managing technical risk—the EPC shifts that risk from Council (where it would normally lie in a traditional tendering approach) to the ESCO. The ESCO assumes the risk that:

- the project will perform as designed;
- the project will remain within budget regardless of technical difficulties; and
- the equipment will not be maintained or operate properly after installation.

Guaranteed savings

EPCs involve a guarantee by the ESCO that the savings will be achieved by reducing operating and maintenance costs. Energy and water costs are reduced due to the lowered rate of consumption, and maintenance costs will reduce due to the replacement of older, unreliable equipment with new equipment. This is normally structured so the loan repayment is less than, or equal to, the savings guarantee amount. In this way, Council is assured of being able to meet the loan or lease payment obligations from the savings generated by the project.

Expertise

Since energy efficiency is its core business, the ESCO brings expertise to a project. While consulting engineers can offer similar expertise, and indeed are frequently employed by ESCOs, using a performance contracting arrangement enables Council to streamline and deal with only one company. Also, because the ESCO is interested in a partnership with Council and is always looking to improve the performance of the project, it can bring a level of continuous improvement that would ordinarily not happen.

Environment

Environmental benefits achieved by reduced energy consumption include a reduction in greenhouse gas emissions (either directly from burning fossil fuels on-site or indirectly from electricity that is generated from fossil fuel power stations), reduced water consumption, reduced chemical use and reduced solid waste. With performance contracting, these benefits can be easily measured and reported in your annual reports, as important corporate contributions to global environmental needs.

Attachment 3 - Energy Performance Contract Case Study

Hornsby Council:

Hornsby has implemented a comprehensive local government Energy Performance Contract (EPC) involving approximately 250 council maintained building and park sites, including the council chambers, aquatic centres, community centres, libraries, administration buildings, and major sporting fields and parks. The EPC involved a variety of energy and water conservation measures including:

- modifying air conditioning systems for optimum performance,
- upgrading light fixtures to more efficient luminaires,
- installing lighting controls,
- installing power factor correction equipment to reduce demand charges,
- adopting photovoltaic systems for renewable energy generation,
- using solar and high efficiency gas boiler systems for efficient water heating at aquatic centres,
- implementing water conservation systems for buildings and parks,
- collecting and storing rainwater to reduce the use of potable water for park irrigation.

The EPC has led to considerable savings in energy, water, and other operating costs, and served to update and improve Hornsby Shire's infrastructure.

The implementation of the EPC has reduced Hornsby's energy usage by approximately 20% per year, saving 34,200 kiloliters of water per year (a reduction of 19%) and reducing carbon dioxide emissions by approximately 780 tonnes per year (an 18% reduction in emissions).

The implementation of the measures included in the EPC has already achieved several social benefits including improvements in municipal occupational health and safety (i.e., increased comfort levels), and raising awareness of environmental issues and management.

The expected economic benefits of the EPC for the municipality include total cost savings of approximately \$178,000 per year, an internal rate of return of 16.4%, and an opportunity to channel a portion of future operational savings into a Revolving Energy Fund for similar projects.

The total cost of the EPC was approximately \$1,134,000. Hornsby Shire funded the EPC through an internal loan to cover the initial capital cost of the project and is repaying the loan over seven years from the resulting savings in energy and water bills. Predicted savings are allocated to a Revolving Energy Fund that serves as a storehouse for the funds in order to repay the loan and implement future measures.

**POTENTIAL HERITAGE ITEM REVIEW
SUMMARY OF CONSULTANTS STUDY OF PROPERTIES
REVIEWED**

SUBURB - PYMBLE	Consultant's Recommendation	
	For future Listing	Not for Listing
Address		
21 Grandview Street		X
11 King Edward Street	X	
25 King Edward Street		X
31 King Edward Street	X	
18 Park Crescent	X	
20 Park Crescent		X
22 Park Crescent	X	
24 Park Crescent	X	
40 Park Crescent		X
5 Taunton Street	X	
7 Taunton Street	X	

SUBURB - KILLARA		Consultant's Recommendation	
Address	For future Listing	Not for Listing	
7 Arnold Street	X		
11 Arnold Street	X		
22 Buckingham Road	X		
10 Culworth Avenue	X		
12 Culworth Avenue	X		
30 Elva Avenue		X	
31 Elva Avenue	X		
14 Forsyth Street	X		
44 Greengate Road	X		
51 Greengate Road	X		
28 Karranga Avenue	X		
38 Karranga Avenue		X	
6 Lorne Avenue	X		
9 Lynwood Avenue	X		
21 Lynwood Avenue	X		
21A Lynwood Avenue		X	
23 Lynwood Avenue	X		
28 Lynwood Avenue	X		
3 Maples Avenue		X	
5 Maples Avenue		X	
24 Marian Street	X		
27 Marian Street	X		
29 Marian Street	X		
16 Northcote Avenue		X	
5 Powell Street	X		
2 Spencer Road	X		
8 Springdale Road	X		
24 Springdale Road	X		
12 Stanhope Road	X		
16 Stanhope Road	X		
25 Stanhope Road	X		
3 Warwick Street	X		

SUBURB - GORDON		Consultant's Recommendation	
Address		For future Listing	Not for Listing
1 Bushlands Avenue			X
3 Bushlands Avenue			X
5 Bushlands Avenue			X
22 Highlands Avenue		X	
7 Robert Street		X	
18 Rosedale Road		X	

SUBURB - WAHROONGA		Consultant's Recommendation	
Address	For future Listing	Not for Listing	
12 Billyard Avenue	X		
4 Burns Road		X	
6 Burns Road	X		
11 Burns Road	X		
16 Burns Road		X	
17 Burns Road	X		
18 Burns Road		X	
25 Burns Road	X		
15 Cleveland Street	X		
89 Coonanbarra Road		X	
92 Coonanbarra Road		X	
2 Fox Valley Road		X	
3 Gilda Avenue	X		
18 Gilda Avenue	X		
33 Illoura Avenue	X		
6 Munderah Street	X		
10 Munderah Street	X		
1564 Pacific Highway	X		
1566 Pacific Highway	X		
1 Water Street	X		
61 Water Street	X		

SUBURB - WARRAWEE		Consultant's Recommendation	
Address	For future Listing	Not for Listing	
42 Bangalla Street	X		
8 Brentwood Avenue	X		
15 Brentwood Avenue		X	
42 Hastings Road	X		
2 Heydon Avenue	X		
17 Heydon Avenue	X		
9 Pibrac Avenue		X	
18 Warrawee Avenue	X		
1 Yosefa Avenue		X	
2 Yosefa Avenue	X		
3 Yosefa Avenue	X		
4 Yosefa Avenue	X		
5 Yosefa Avenue	X		
6 Yosefa Avenue		X	
7 Yosefa Avenue	X		
8 Yosefa Avenue	X		
9 Yosefa Avenue	X		
11 Yosefa Avenue	X		
Yosefa Avenue Group	X		

SUBURB - TURRAMURRA		Consultant's Recommendation	
Address		For future Listing	Not for Listing
34 Eastern Road		X	
14 Warrangi Street		X	

SUBURB – LINDFIELD		Consultant's Recommendation	
Address	For future Listing	Not for Listing	
28 BENT Street	X		
11 Blenheim Road	X		
12 Blenheim Road	X		
15 Blenheim Road	X		
19 Blenheim Road	X		
17 Eton Road		X	
21 Frances Street	X		
22 Kenilworth Road	X		
2 Mackenzie Street	X		
1 Middle Harbour Road		X	
9 Middle Harbour Road	X		
31 Middle Harbour Road	X		
9 Nelson Road	X		
20 Nelson Road	X		
44 Nelson Road	X		
50 Nelson Road	X		
1 Ortona Road	X		
19 Russell Avenue	X		
22 Russell Avenue	X		
23 Treatts Road	X		
45 Treatts Road	X		
47 Treatts Road	X		
17 Waimea Road	X		
2 Westbourne Road	X		

SUBURB - ROSEVILLE		Consultant's Recommendation	
Address	For future Listing	Not for Listing	
15 Alexander Parade	X		
26 Alexander Parade		X	
3 Bancroft Avenue	X		
6 Bancroft Avenue	X		
8 Bancroft Avenue	X		
9 Bancroft Avenue	X		
10 Bancroft Avenue	X		
19 Bancroft Avenue	X		
9 Belgium Avenue	X		
15 Belgium Avenue	X		
57 Boundary Street		X	
14 Clanville Road	X		
31 Clanville Road	X		
18 Gerald Avenue	X		
16 Kelburn Road	X		
19 Lord Street	X		
7 Oliver Road		X	
9 Oliver Road	X		
35 Oliver Road	X		
37 Oliver Road	X		
10 Roseville Avenue	X		
12 Roseville Avenue	X		
14 Roseville Avenue		X	
16 Roseville Avenue		X	
22 Roseville Avenue	X		
29 Roseville Avenue	X		
31 Roseville Avenue	X		
32 Roseville Avenue	X		
45 Roseville Avenue	X		
12 Shirley Road		X	
16 Shirley Road	X		
33 Shirley Road	X		
5 The Grove	X		
11 The Grove	X		
21 The Grove	X		
14 Trafalgar Avenue		X	
18 Trafalgar Avenue	X		
14 Victoria Street		X	
16 Victoria Street	X		
49 Victoria Street	X		
57 Victoria Street		X	

POTENTIAL HERITAGE ITEM REVIEW

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

For Council to consider the report and recommendations prepared by independent consultants Perumal Murphy Alessi on the review of 154 potential heritage items across the Ku-ring-gai Local Government Area and place the report on non-statutory public exhibition to seek comments from the public on the review.

BACKGROUND:

In July 2005 PMA commenced a comprehensive assessment of the 154 potential heritage properties to determine each properties potential as a heritage listed property with the appropriate conservation controls under the Ku-ring-gai Planning Scheme Ordinance (KPSO). Owners of properties included in the review were notified of the review.

COMMENTS:

This report discusses the consultant's potential heritage item review findings and it is recommended placing the Consultant's report on non-statutory public exhibition for a period of 28 days to provide all affected owners/residents and other interested persons the opportunity to make written submissions on the draft report.

RECOMMENDATION:

That the Consultant's report be put on non-statutory public exhibition for a period of 28 days seeking written submissions.

PURPOSE OF REPORT

For Council to consider the report and recommendations prepared by independent consultants Perumal Murphy Alessi on the review of 154 potential heritage items across the Ku-ring-gai Local Government Area and place the report on non-statutory public exhibition to seek comments from the public on the review.

BACKGROUND

In 2001, Ku-ring-gai Council prepared a study ('Potential Heritage Items Study') which identified a total of 464 properties in the local government area (LGA) of potential heritage significance. Following the gazettal of Local Environmental Plan 194 – Ku-ring-gai Residential Development Strategy and LEP 200 in 2004, Council re-examined the 464 potential heritage items in light of the gazetted LEP Amendments and a criteria was developed for prioritising the review of selected properties. From the original 464 properties, properties were selected for immediate review or deletion as potential heritage items. A total of 154 properties were identified for review by PMA (**Attachment 1**) which are mainly residential dwellings. The potential heritage item review is consistent with Council's Management Plan 2005-2009. It identifies the following key performance indicator, continue to review potential heritage items including pre War and inter War development, heritage inventory sheets and report as required.

In June 2005 Council prepared a brief for the provision of consultancy for the review of potential heritage items in the Ku-ring-gai LGA. The brief was sent to nine heritage consultants from which Perumal Murphy Wu (now Perumal Murphy Alessi (PMA)) were selected as the successful consultants. In July 2005 PMA commenced a comprehensive assessment of the identified potential heritage properties to determine each properties suitability as a heritage listed property. The Brief requested that PMA prepare inventory sheets with statements of heritage significance and other relevant heritage information for each of the identified properties.

All affected residents and property owners were notified of the project at its commencement and again half way through the projects duration as an update on the reviews progress. Over the period from July 2005 until completion of the review in May 2006 PMA undertook field inspections of each identified property and relevant detailed historical searches. Following field inspections, PMA prepared inventory sheets with statements of heritage significance for each property. The consultants assessed and analysed each item identified using the 'Burra Charter' and the associated 'Guidelines' and the NSW Heritage Office 'Heritage Manual'.

The project was due for completion in January 2006, however unexpected additional historical research was required to be undertaken by the Consultants to ensure accurate and thorough historical information was acquired for each property. Consequently the project completion date was revised. No additional cost was incurred due to the revised time schedule.

Over the projects duration a total of 16 letters and 27 phone calls were received in relation to the review of potential heritage items – this information was then passed on to the consultants to assist in their review.

COMMENTS

In May 2006 PMA provided Council with a report consisting of the completed 154 inventory sheets. Each inventory sheet includes a statement of the properties heritage significance and other relevant heritage information for the identified property. A substantial amount of historical research has been conducted into each property providing a thorough historical assessment. PMA have prepared a recommendation for each property which determines whether it should or should not be heritage listed. **Attachment 1** provides a summary by suburb of each properties recommendation, while **Attachment 2** provides a summary of the consultants study and reasoning for recommendations as prepared by PMA.

Of the 154 properties reviewed, PMA recommend that 122 be considered for heritage listing as items of local heritage significance. The reasons for recommending listing vary between properties. Several commonly cited reasons for recommending listing include a properties representativeness of a particular style of dwelling or as an intact example of a particular type of residence and/or the property makes a positive contribution to the streetscape. Often the significance of the properties established garden setting was noted as important.

For those properties not recommended for listing the most common reason given for this recommendation was that the property had been substantially altered to the extent where any possible heritage significance no longer exists.

Non-Statutory Public Exhibition

To inform the community and in particular affected property owners about the outcome of the review of potential heritage items, it is recommended to put the Consultant's report on non-statutory public exhibition for a period of 28 days. During this period interested persons will have the opportunity to review the inventory sheets and Consultant recommendations and made written submissions to Council on the draft report. Any submissions received will be reviewed by Council and forwarded to PMA for their consideration and if necessary amendments will be made to inventory sheets/recommendations. Following the exhibition period a further report will be made outlining submissions received and changes made to the consultants report and recommendations.

Post Public Exhibition and the Comprehensive LEP

At present Ku-ring-gai Council operates under the Ku-ring-gai Planning Scheme Ordinance (KPSO). The NSW Department of Planning (DOP) have notified all Councils in NSW that they are to replace their existing Planning Scheme Ordinances and Local Environmental Plans in accordance with the DOP's prescribed Comprehensive Local Environmental Plan. A five year time frame has been set for Council's Comprehensive LEP's to be prepared.

Given the anticipated redundancy of the KPSO and its replacement with a comprehensive LEP in the near future it is recommended that the properties identified for listing by PMA be considered for heritage listing during the preparation of the Comprehensive LEP. This is opposed to preparing a Draft (Heritage Conservation) Local Environmental Plan to heritage list those properties recommended by PMA under the KPSO and then again in the Comprehensive LEP. The perceived advantages of listing the properties as part of the Comprehensive LEP include:

Item 9

S04325
2 June 2006

1. Holistic Approach to Planning: The listing process can be undertaken as part of Council's overall preparation of the comprehensive LEP including the urban conservation areas information, and detailed local urban neighbourhood analysis.
2. The State Government have indicated that they are not in favour of gazetting new LEPs under the KPSO given that Council is to focus on preparing a comprehensive LEP – commencing with the six town centres.

Interface Study

In relation to the proposed DLEP 209 for the interface study, Council has been advised by the Department of Planning that this proposed draft plan should not proceed and the main interface issues to be dealt with in a strategic manner under the comprehensive LEP or under the new town centre plans (where appropriate).

A review of the potential heritage items has been undertaken to check consistency with the interface study and the following issues have been identified:

10 & 12 Culworth, Killara – Currently zoned 2(c2) under the KPSO

In relation to 10 & 12 Culworth Ave, Killara- Council resolved on 18 October 2005 as part of the interface project to rezone these sites to residential 2(d3). These sites were also part of the original potential heritage items review, which has now recommended that these properties be listed as potential heritage items.

In August 2005, a development application was approved for 6-8 Culworth Avenue, Killara for the demolition of 2 residential dwelling houses and construction of 3 x 5 storey residential flat buildings comprising 54 units and basement car parking.

Due to the nature of the local subdivision pattern this development is located to the rear of 10 & 12 Culworth Ave, Killara.

The heritage consultants were advised of the adjoining 2 (d3) zoned land and the potential impact of the proposed development at 6-8 Culworth Ave. The Heritage consultants have reviewed the information and advised

“It is recommended 10-12 Culworth Ave be retained in the study and that during the exhibition period, Council seek further submissions from the public and that a further review of the potential impacts of the adjoining residential apartment developments be undertaken and reported back to Council.”

24 Marian Street, Killara, Currently zoned 2(c2) under the KPSO

As part of the original interface study on 18 October 2005 Council resolved that any rezoning of 20 and 24 Marian Street and 1 Caithness Street, Killara be deferred pending the heritage review of 1 Caithness Street, Killara. The 154 potential heritage items study has recommend that No 24 Marian Street, Killara be included as a heritage item.

Item 9

S04325
2 June 2006

At this stage it is recommended that 24 Marian Street be retained in the study and that during the exhibition period, Council seek further submissions from the public and that further information be brought back on the status of 20 Marian Street and 1 Caithness Street, Killara.

Town Centres Planning

A review of the potential heritage items has been undertaken to check consistency with the town centres planning program. A summary of the centres is provided below:

Pymble

- 21 Grandview Street– not affected
- 5 & 7 Taunton Street– not affected
- 18,20,22,24 & 40 Park Crescent – not affected

Gordon

- 1, 3, 5 Bushlands Avenue – are identified within the Gordon town centre zoning as proposed R4 residential high density, however the potential heritage review study has recommended that the properties **not be listed**.
- 7 Robert Street – not directly affected

Turramurra

- 34 Eastern Road- not directly affected
- 14 Warrangi Street- not affected

Lindfield

- 28 Bent Street — not directly affected
- 20 Nelson Road – is located within a proposed R3 medium density zone
- 22 Russell Avenue – not directly affected as located within proposed R2 zone- low density zone.

Roseville

- 7 Oliver Road – adjoins a proposed town centre R3- Residential zone
- 9 Oliver Road – not directly affected
- 10 Roseville Avenue – not directly affected
- 12 Roseville Avenue – not directly affected
- 14 Roseville Avenue – not directly affected
- 16 Roseville Avenue – not directly affected
- 14 Victoria Street – adjacent to a town centre R3 – residential zone
- 16 Victoria Street – not directly affected

Item 9

S04325
2 June 2006

In summary, the only inconsistency with the town centres planning project is in the case of No 20 Nelson Road, Lindfield that has been identified by PMA consultants as potential heritage item located within a proposed R3 medium density zone (i.e. that would permit apartments buildings up to 3 storeys).

No 20 Nelson Road, Lindfield, is described as a single storey Late Federation bungalow constructed of face brick on a sandstone base with gable and hip roof clad in slates with terracotta ridge capping and finials.

Council's heritage consultant for the town centres review has listed No 20 Nelson Road as an item not required to be listed. However, the consultant has noted *should historical information come to light which has the potential to redefine the significance of a particular item, then the assessment should be re-evaluated in consideration of the relevant information.*

Given the inconsistency between the Lindfield town centres project and the PMA consultants review – it is recommended that No 20 Nelson Road be further investigated as part of the Lindfield Town Centre Study, including an urban design assessment taking into account the potential heritage significance of the property, the potential impact of future development within the proposed R3 zone, options for adaptive reuse prior to any further decision being made on this suitability of the site as a potential heritage item.

CONSULTATION

All Councillors have been provided with a CD- Rom of the PMA Consultants Heritage Report, including the 154 individual heritage inventory sheets.

All affected residents and owners were notified of the project at its commencement and asked for any information that they may have of assistance to the Consultant's review. A second letter was sent to each property owner midway through the project in November 2005 to provide residents/owners with an update of the reviews progress. Again owners/residents were asked to provide any additional information that may assist in the research of their properties history. Over the projects duration a total of 16 letters and 27 phone enquiries were received in relation to the review. The issues raised varied with some residents keen to offer information for the Consultants knowledge while others expressed concern over the possible heritage listing of their properties. All information received was forwarded to PMA for their consideration during the review of properties. The list of properties considered as part of the review of potential heritage items was available on Council's website along with a description of the project.

Throughout the project Council's Heritage Advisory Committee (HAC) were kept informed of the potential heritage item reviews progress.

All affected property owners have been notified of this report going to Council and provided a copy of the draft heritage inventory sheet for their property.

FINANCIAL CONSIDERATIONS

Project costs for the potential heritage item review are covered by the Planning Department Capital Projects Budget.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Consultation has been undertaken with Council's Heritage Advisor, Department of Development & Regulatory Services in consideration of the potential heritage item review and the Heritage Advisory Committee throughout the entire project.

SUMMARY

Council engaged an independent consultant to professionally assess 154 properties identified in the Ku-ring-gai LGA to determine each properties suitability as a heritage listed property. All affected residents and owners were notified of the project at its commencement and again half way through the projects duration as an update of the reviews progress. A total of 16 letters and 27 phone calls were received in relation to the review of potential heritage items. The issues raised by owners varied with some residents offering information for the Consultants knowledge and others expressing concern over the possible heritage listing of their properties. All information received was passed onto PMA for their consideration during the review of properties. Of the 154 properties reviewed, PMA have recommended that 122 be considered for heritage listing as items of local heritage significance, refer to Attachment 1 and 2.

To inform the community about the outcome of the review of potential heritage items, the Consultant's report should be put on non-statutory public exhibition. During this period people can review the report and make written submissions to Council. This would be followed by another report to Council summarising any submissions received and changes made to the Report by the Consultants.

Given the anticipated redundancy of the KPSO and its replacement with a comprehensive LEP, it is most appropriate to consider heritage listing those properties finally resolved for listing as part of the Comprehensive LEP preparation process.

It is recommended that Council place the Consultant's Report on non-statutory exhibition for a period of 28 days and that Council consider listing the properties recommended by the PMA for listing as heritage items during the Comprehensive LEP preparation process.

RECOMMENDATION

- A. That Council place the Potential Heritage Item Review Report on non-statutory public exhibition for a period of 28 days.

Item 9

S04325
2 June 2006

- B. That No 20 Nelson Road, Lindfield be subject to further heritage and urban design analysis and review as part of the Lindfield town centre program and that the matter be brought back to Council as part of the Lindfield centre planning process.
- C. That Council notifies all affected residents of its decision, including dates for the exhibition period and seeking comment.
- D. That a report be brought back to Council at the end of the non-statutory exhibition period with final recommendations as to the inclusion of heritage properties in the Comprehensive Local Environmental Plan.

Louise O'Flynn
Heritage Planner

Antony Fabbro
Manager
Urban Planning

Steven Head
Director
Open Space and Planning

Attachments: **Attachment 1 - Summary of each property by suburb and recommendation - 627749**
 Attachment 2 - Consultant's Study Report Summary and Recommendation - 627941 (pages 4 to 48)

VOLUME ONE

PART A

1.0 Introduction

1.1 Background

In June 2005, Ku-ring-gai Municipal Council commissioned Perumal Murphy Wu Pty Ltd (now trading as Perumal Murphy Alessi Pty Ltd) and Glen Cowell Heritage Services Pty Ltd, to undertake the assessment of 154 potential heritage items within the Ku-ring-gai local government area in the suburbs of Roseville, Lindfield, Killara, Gordon, Pymble, Turramurra, Warrawee and Wahroonga. These items were chosen by Council for immediate review, out of a possible 464 items within the local government area which were identified in a study prepared by Council in 2001 (Potential Heritage Item Study) as of potential heritage significance.

Following Gazettal of Local Environmental Plan 194 – Ku-ring-gai Residential Development Strategy and LEP 200 in 2004, Council re-examined the 464 potential items and developed a strategy for prioritizing the review of selected properties. The 154 properties which are the subject of this review are those that Council selected for immediate review.

1.2 Outline of the Project

The project included the site inspection of each of the selected properties which required site identification of the property; a physical examination of the style, fabric, current use, and condition of each property as assessed from a public street or place; search of Council's records to identify original fabric and design from later modifications; Sands Directory and Land Title search for each property to identify owners and occupants; historical research at Ku-ring-gai Library to identify significant items or local identities associated with the properties and assessment of the Heritage and Neighbourhood Character Study (2000) and Potential Heritage Items Study (2001) and other relevant historical material in the assessment of the significance of each of the potential items.

1.3 Potential Heritage Items

The list of potential heritage items under review is identified in the Project List added in the Appendices.

1.4 Recommendations

A summary of individual recommendations for each of the potential heritage items has been compiled outlining the recommendation for “inclusion” / “exclusion” and including justification statements for each decision based on the assessments provided by the study team. (**See Part C Section 1.12**)

1.5 Study Team

The review brought together the specialist skills of two separate firms, Perumal Murphy Alessi (PMA, formerly Perumal Murphy Wu) Heritage Consultants and Glen Cowell Heritage Services (GCHS), Conservation Architect & Heritage Consultants to undertake the research and assessment of the potential heritage items.

Luisa Alessi and Glen Cowell both took responsibility for site inspections and photography while PMA took responsibility for historical, Sands and Land Title research and assessment of the fabric and GCHS the responsibility of images, assessing significance, recommendations and reports.

1.6 Limitations

A six month deadline was imposed by the brief which began with the engagement of the Project Team on 12th July 2005. The completed Inventory Sheets and Draft Report were to be submitted to Council by 9th January 2006, however this date was extended by Council due to Christmas holiday period. A subsequent meeting on Monday 6th February was arranged.

Due to the quantity of material to be assessed, the study Team will request an additional 6 week period in order to fully assess the items under review.

The assessment of quality and condition of each of the buildings has been undertaken from the public domain. It is therefore not possible to fully assess the condition of interiors or areas which are not visible from the street. As entry to each of the properties was not part of this review, recommendations have therefore had to be made on the visual condition and significance as identified from the public domain.

In the case of two properties which were not visible from the public domain, permission was gained by Council staff for the research team to enter the property for the inspection. The inspection of these properties was restricted to the exterior of the buildings and interiors have not been assessed as part of this review

Council's database was used to determine modifications and alterations to the properties. As the database only starts from early 1980s, no record of works, that is DA and BAs before that date are recorded. It is possible to search Council's hand written registers for information prior to the 1980s but this would take more time to go through than is possible within the budget limitations of this project.

1.7 Report Format

The report contains two parts which are presented in four volumes. Volume One contains the Final Report (Part A), Recommendations (Part B) and Appendices (Part C). Volumes two, Three and Four contain the hard copies of the State Heritage Inventory Data Sheets for each of the potential heritage Items

1.8 Acknowledgements

The study team wished to acknowledge the assistance of the following organizations and individuals.

Ku-ring-gai Council:

- Mr Antony Fabbro
- Ms Louise O'Flynn
- Ku-ring-gai Historical Society and Library staff.

Also property owners and interested members of the public who provided information and written submissions for individual properties.

1.9 Terminology

This report adopts the terminology accepted by the Burra Charter of Australia, ICOMOS and the Guidelines of the Heritage Office of NSW.

The terminology used to describe building styles follows the stylistic identification as set out by *A Pictorial Guide to Identifying Australian Architecture* by Apperly, Irving & Reynolds 1989.

1.10 Conclusion

Of the 154 potential items reviewed in this study, 125 have been recommended for listing and 29 have been rejected as not fulfilling the required criteria.

The criteria for inclusion follows the Guidelines set out by the Heritage Office of New South Wales. In the assessment of these items, they had to impart a measure of cultural significance in one or more of the criteria set down within the "Guidelines". These criteria include Historic, Associational, Aesthetic, Social and Technical significance. It is not necessary to fulfill all criteria, however the item should show a measure of significance within one or more of the criteria. The item could be a "rare" or "representative" example and the integrity of the building should be of a level that the form, fabric and style of the item was "substantially intact". In other words, still retaining the majority of its fabric or having undergone alterations and additions which do not visually impact on the item or able to be reversed at a later time.

Many of the identified potential items within this study are aged between 80 and 100 years old. Buildings of this age are rarely completely intact in their original form, fabric and style. Modifications are often necessary to allow the continued use of the building in a modern age. Consideration has been given to this requirement for change and the potential items have been assessed with the consideration that these items can be modified but that the changes do not impact to any great degree on the visual character of the item when viewed from a public place. Alterations to the interiors of these items was not a consideration within this review.

Modifications such as intrusive colour schemes or cosmetic changes to detailing on a building have been treated as a minor intrusion as these changes are usually largely, if not fully reversible. Modifications where substantial changes, such as roof additions or façade remodelling, have altered the style or character of the building when viewed from the street are largely irreversible and these changes are considered as reasons for rejection. Where buildings are of a style or character which is common within the LGA and which better examples can be identified elsewhere within the suburb or LGA, this has been considered a legitimate reason for rejection.

The 125 recommended items provide a fairly wide range of stylistic variations in both Federation and Inter-War period buildings. Many of the items are modest scale residences which reflect the changing economic situation throughout the 20th Century and the ever changing attitudes to housing and architectural styles within the community.

PART B

1.11 Brief Outline of The Stylistic Variations

“The prevailing pattern of residential development in the Ku-ring-gai Local Government Area is characterized by single dwelling houses addressing the street across an open front garden, and providing a private rear garden. This pattern has enabled the landscape to flourish and provide the most significant characteristic of Ku-ring-gai – its tree cover. The consistency of this pattern, the abundant landscape and the relative cohesiveness of housing scale, form and style within the [suburbs] of Ku-ring-gai make the neighbourhood special.”¹

The eight suburbs which make up the LGA, Roseville, Lindfield, Killara, Gordon, Pymble, Turramurra, Warrawee and Wahroonga are located along the spine of the Railway and Highway. These spine areas contain the majority of heritage items identified in the 1987 Heritage Study. A substantial group of relatively intact Federation and Inter-War Period dwellings have recently been identified as potential heritage items and the 154 buildings which make up this Review have been selected from the identified items.

ROSEVILLE

Four land grants make up the neighbourhood area of Roseville: to the east Mathew’s 400 acre grant, *Clanville*, developed by Richard Archbold after 1830, to the west, the holdings of John Jenkins, William Henry and Michael Fitzgerald. From 1840 to 1880 the land to the east of Lane Cove Road was developed as orchards and market gardens. Major subdivisions did not occur until after the railway was established in 1890. East of the railway, the subdivisions were well underway by the 1900s and to the west, the greater part of the suburb was developed by the 1920s. Several shops were established before World War 1, together with churches and schools.

There are 41 items within this review which are located within the suburb of Roseville. Their construction dates range from c1893 (Federation Bungalow) in Victoria Street to c.1938 (Inter-War Functionalist) in Trafalgar Avenue. The majority of the items (19) are identified as Federation Bungalows dated between c.1901 and c.1919, with Inter-War Bungalows (11) dated between c.1917 and c.1935. of the remaining buildings, six (6) are Federation Queen Anne and Arts and Crafts style, while only three (3) fall within the popular Inter-War styles with one of these being a rare Inter-War Stripped classical style and another being the Inter-War Functionalist style which appeared most often towards the late 1930s. The last building is a Scout Hall dated c.1931 which is an Inter-War building which does not fit within the residential styles.

Of the 41 potential items located in Roseville, 34 are recommended for listing and 7 are rejected.

LINDFIELD

“The early land grants in the Lindfield ... area were Daniel McNally, Alexander Munroe and DD Mathew to the east of the Lane Cove Road, and Joseph Fidden, Thomas Wilson and Henry Robey & Timothy Surr to the west. From 1815 to 1840 timber was removed from the land grants in the area.

¹ Godden Mackay Logan, Ku-ring-gai Neighbourhood Character Study, Prepared for Ku-ring-gai Municipal Council, 2000, p. 1

The earliest subdivision, in 1884, was to the west of the Lane Cove Road and was named Gordon Park.”² Further subdivision of this area had occurred by 1905 and an established community of shops, schools, churches and clubs had developed, although major commercial development did not occur until the 1930s. .

There are 24 items within this review which are located within the suburb of Lindfield. Their construction dates all fall after the turn of the century with Federation Queen Anne (3) and Federation Arts and Crafts (3) dating between c.1908 to c.1920 and Federation Bungalows (11) between c.1911 and c.1921. The Inter-War styles are fairly sparse in Lindfield with Inter-War Bungalows (3) between c.1916 and c.1924, Inter-War Old English (1) c.1914, Inter-War Mediterranean (1) c.1938, Inter-War Georgian Revival (1) c.1939 and a rare example of Inter-War Stripped Classical in Eton Road dated c.1935.

Of the 24 potential items located in Lindfield, 22 are recommended for listing and 2 are rejected.

KILLARA

“In the Killara area, land was granted along the Lane Cove Road between 1821 and 1834”. These grants were held by “William Foster, Edwin Booker, Jane McGillivray and Henry Oliver to the east and John Griffiths and Samuel Midgely to the west. Development began between 1879 and 1900 when estates were subdivided between Fiddens Wharf and south of Highfields Road to the west and between Powell Street and Stanhope Road to the east. In central Killara, development was dominated by James George Edwards’ promotion of Jane McGillivray’s 160 acres, Springdale Estate.” Edwards worked to prevent commercial development and to promote the development of recreational and cultural facilities. “Substantial homes were constructed in the Springdale Estate and surrounding estates” on the eastern side of the main road. “Less pretentious bungalows were built to the west in the Great Northern Township... between 1905 and 1910.”

“In the Inter-War years, Killara’s architectural heritage was reinforced by the building of many significant homes... as large holdings were subdivided to provide for groups of homes in similar style.”³

There are 32 items within this review which are located within the suburb of Killara. Their construction dates all fall after the turn of the century with the greatest number of houses dating from the 1930s period. The Federation styles only account for 8 items with Federation Bungalows (5) between c.1900 and c.1924, Federation Queen Anne (1) c.1907 and Federation Arts and Crafts (2) c.1905 and c.1913.

The Inter-War styles are located all around the suburb with Inter-War Georgian Revival (7) constructed from c.1923 to c.1941 and Inter-War Old English (7) constructed between c.1936 to c.1939 being the most popular styles, particularly for the large scale mansions. Inter-War Mediterranean (4) constructed between c.1931 and c.1936 has some popularity as medium scale residences while the modest scale dwellings were usually Inter-War Bungalows (2) constructed in the early 1930s. One large Inter-War Functionalist style mansion was constructed in c.1940 and a medium scale Post-War International style residence built in c.1938. One Inter-War period “English Cottage” style residence was constructed for the daughter of James George Edwards in Marian Street in c.1934.

Of the 32 potential items located in Killara, 26 are recommended for listing and 6 are rejected.

² *Ibid*, p.469

³ *Ibid*. p.443

GORDON

The suburb of Gordon is located within the land grants of DD Mathews, Benjamin Clayton and Michael Ansell to the east of Lane Cove Road, and to the grants of Henry Henry & Joseph Smith, and the holding of John Bean to the west of the main road.

“From the beginning of settlement in Ku-ring-gai, Gordon was the centre of the early timbergetting / orcharding community. Prior to 1880, as Lane Cove, it was also home to the community’s first schools, churches, store and post office.”⁴

In preparation for the new railway line, the name “Lane Cove” was changed to “Gordon” for the school and post office by 1885. As a direct result of the establishment of the railway line, land to the east and west of the Lane Cove Road was subdivided between 1879 and 1900. By 1891 Gordon had the highest population in the parish: 360 out of a total population of 921. By 1903 a significant number of businesses were operating in the present day commercial area. The residential development of the suburb occurs in two distinct sections with large brick houses in spacious gardens built to the east of the main road for well-to-do owners with more modest scale houses on smaller allotments built for the working man to the west.

There are only 6 items within this review which are located within the suburb of Gordon. Three of them are Inter-War Bungalows of similar style and scale constructed between 1928 and 1932 in a fairly bushland setting to the western side of the main road. The other three are a Victorian Italianate style residence c.1905 to the east of the railway line, a Federation Bungalow c.1914 and a medium scale Inter-War Functionalist residence dating from c.1938. Of these six potential items, three are recommended for listing and three are rejected.

PYMBLE

The suburb of Pymble is located within the land grants of Robert Pymble and DD Mathews to the east of the Lane Cove Road and the grants of Archibald McCole, William Wright, Richard Wall and William Lysett to the west of Lane Cove Road. Timber was extracted until about 1840, when the area became a prime orcharding community. Major subdivisions of the orchards occurred between 1879 and 1900 as a result of the establishment of the north shore railway line. The estates subdivided before 1900 were to be re-offered until 1910, by which time most lots were sold. After 1910 there was re-subdivision of some of the major holdings formed after the first wave of subdivision. More homes were built as larger lots were further broken up after 1925, 1940 and 1950.

There are 11 items within this review which are located within the suburb of Pymble. Only three of these residences were constructed around the turn of the century with a c.1904 Federation Bungalow and a c.1909 Federation Queen Anne style residence, another Queen Anne style house is dated c.1924 and they are all located in King Edward Street. Of the remaining residences, all are from the Inter-War period c.1930 to c.1936 with three constructed in Inter-War Old English, one Inter-war Georgian Revival, one Inter-War Spanish Mission, one Inter-War Mediterranean and two Inter-War Bungalows. Of these eleven potential items, seven are recommended for listing and four are rejected.

⁴ Ibid, p.417

TURRAMURRA

“The suburb of Turramurra was located within the land grants of John Beattie, Thomas Boyd, John McMahon, Richard Gilbert and John Terry Hughes. By 1881, the central part of what is now Turramurra was a farming area of orchids and market gardens. Major subdivision was to occur by 1900 and by 1910 a number of significant homes had been built on lots consisting of one or more acres.”

“By 1905 a thriving shopping and small business centre had been established and further subdivision of large lots in all estates was to occur between 1910 and 1920.”⁵

There are two items within this review which are located within the suburb of Turramurra. One is a Federation Queen Anne residence constructed in c.1900, the second is a Federation Bungalow constructed in c.1930.

WARRAWEE

“Warrawee was a prime timbergetting area from c. 1815, dominated by the holdings of timber contractor, Thomas Hyndes to the east and west of Lane Cove road, where vast stands of cedar, mahogany, turpentine, ironbark and bluegum were removed from the land.

Lands to the east of the Lane Cove Road were totally contained within the 1876 subdivision of “The Big Island Estate”. The nucleus of the estate was bought, and in turn marketed, by a group of politicians – Burns, Withers and Burdett Smith – in 1878. Forty-one blocks, varying in size between one and seven acres were sold to orchardists and market gardeners who took up occupation.

“Plans for the new railway were announced in 1882, and this announcement heralded the beginnings of the Warrawee we know today. Once the residential potential of the area was realized, immediate re-subdivision occurred. The new owners were professional men, businessmen and politicians.”

“Contrary to other communities which developed along the main road from c.1870, Warrawee had no shops, no post office, no public school, no churches, and no railway station until 1899. Individual holdings of between one and four acres were largely retained from 1890 until the late twenties. By that time, the pressure of suburban consolidation meant that further subdivision was being planned.”⁶

“The Warrawee precinct retains the early subdivision pattern of large allotments, with substantial residences from each period of growth. A few weatherboard cottages remain from the orchard days (1860-1880) and several houses date back to the 1890s and early 1900s. The majority of building date from the 1920s onwards and reflect subsequent architectural tastes and life styles.”⁷

There are 18 items within this review which are located within the suburb of Warrawee. Their construction dates range from a Federation Period semi-rural weatherboard cottage c.1902 to a Federation Bungalow c.1912, and a large Federation Arts and Crafts mansion on a large site dated c.1918. The majority of the items (10) are identified as a cohesive group of buildings in the Yosefa Avenue subdivision which are mainly Inter-War style residences dated between 1927 and 1936 with two replacement buildings in modern contemporary styles.

⁵ Ibid, p. 367

⁶ Ibid, pp. 343-344

⁷ Ibid, p352

Three Inter-War Georgian Revival residences are dated between c.1923 and c.1936 with a much later use of the style in one residence dated 1952. Four Inter-War Old English are dated between c.1926 and c.1933. Three Inter-war Mediterranean and two Inter war Bungalow are dated between 1927 and c1931.

Of the 18 potential items located in Warrawee, 14 are recommended for listing plus one group listing and 4 are rejected.

WAHROONGA

Wahroonga was a prime timbergetting area from c.1815, dominated by the holdings of timber contractor, Thomas Hyndes to the east and west of Lane Cove road, where vast stands of cedar, mahogany, turpentine, ironbark and bluegum were removed from the land. The dominant section of the Wahroonga area consists of the lands to the east of the highway. This section contains a shopping centre, railway, churches and major buildings and many educational and institutional buildings. The area to the west of the highway is dominated by the Abbotsleigh School for Girls.

“Lands to the east of the Lane Cove Road were totally contained within the 1876 subdivision of “The Big Island Estate”. The nucleus of the estate was bought, and in turn marketed, by a group of politicians – Burns, Withers and Burdett Smith – in 1878. Forty-one blocks, varying in size between one and seven acres were sold to orchadists and market gardeners who took up occupation.”

“The period 1890 to 1923 defined the character of present day Wahroonga. The continued subdivision of large blocks of land within the residential estates resulted in the building of a number of significant homes. These first residences were described as palatial, often with one to three acres planted with magnificent gardens, complimented with impressive driveways and orchards. The large estates began to be divided after 1920, and pockets of twenties and thirties housing are found scattered through the early 1895-1900 estates. The pattern of large homes set in luxurious gardens has remained.”⁸

There are 21 items within this review which are located within the suburb of Wahroonga. The items include one Late Victorian semi rural style residence dated 1914, two Federation Queen Anne residences, one dated c.1894, the other 1925 and three Federation Arts and Crafts residences dating from 1905 to 1922. There are five Federation Bungalows between c.1908 and 1914 with a Post-War Bungalow dated 1959. There are seven Inter-war period residences, four are in a Georgian Revival style and dated between 1909 and 1920 and three Inter-War Old English style dated 1909, 1914, 1940 and 1951. A large school building dated 2001 has been added to the existing Knox School complex in Cleveland Street

Of the 21 potential items located in Wahroonga, 15 are recommended for listing and 6 are rejected.

⁸ Ibid, p.313

PART C

1.12 Recommendations

ROSEVILLE

15 Alexander Parade, Roseville

It is recommended that No. 15 Alexander Parade, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of an Inter-War Bungalow with Art Deco detailing dating from the years immediately before WWII; and
- the building makes a positive contribution to the streetscape and area in general.

26 Alexander Parade, Roseville

It is recommended that No. 26 Alexander Parade Roseville, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is not intact or aesthetically significant and there are better examples within the suburb.

3 Bancroft Avenue, Roseville

It is recommended that No. 3 Bancroft Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow style dwelling; and
- the building makes a positive contribution to the Belgium Avenue Group and the streetscape and area in general.

6 Bancroft Avenue, Roseville

It is recommended that No. 6 Bancroft Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow style dwelling; and
- the building makes a positive contribution to the Belgium Avenue Group and the streetscape and area in general.

8 Bancroft Avenue, Roseville

It is recommended that No. 8 Bancroft Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a two storey simplified Federation Queen Anne style dwelling; and
- the building makes a positive contribution to the Belgium Avenue Group and the streetscape and area in general.

9 Bancroft Avenue, Roseville

It is recommended that No. 9 Bancroft Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a single storey Federation Bungalow style dwelling; and
- the building makes a positive contribution to the Belgium Avenue Group and the streetscape and area in general.

10 Bancroft Avenue, Roseville

It is recommended that No. 10 Bancroft Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of an Inter-War Bungalow style dwelling which has a high degree of aesthetic significance for its unusual design; and
- the building makes a positive contribution to the Belgium Avenue Group and the streetscape and area in general.

19 Bancroft Avenue, Roseville

It is recommended that No. 19 Bancroft Avenue Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Arts and Crafts style dwelling which has a high degree of aesthetic significance; and
- the building makes a positive contribution to the Belgium Avenue Group and the streetscape and area in general.

9 Belgium Avenue, Roseville

It is recommended that No. 9 Belgium Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of an Inter-war Bungalow with Federation Period detailing; and
- the building makes a positive contribution to the streetscape and area in general.

15 Belgium Avenue, Roseville

It is recommended that No. 15 Belgium Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- As a good and largely intact example of an Inter-War Georgian Revival dwelling which, although having some modifications, remains largely intact externally and has a high degree of aesthetic significance;
- The building has a high degree of social significance as one of the earliest houses in this subdivision and being the home on one family for over 50 years; and
- The building makes a positive contribution to the streetscape and area in general.

57 Boundary Street, Roseville

It is recommended that No. 57 Boundary Street, Roseville, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 57 Boundary Street Roseville has little historic and social significance. The building is not located in an area where it contributes to the context of any other heritage item and is not of a quality or condition that requires its listing as a heritage item.

14 Clanville Road, Roseville

It is recommended that No. 14 Clanville Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Period dwelling;
- even though it has had extensive additions, the building has retained a high degree of aesthetic significance and contributes to the group of listed and potential items in the immediate area; and
- the building made a positive contribution to the streetscape for over 100 years and has historical significance as one of the earliest buildings in the area.

31 Clanville Road, Roseville

It is recommended that No. 31 Clanville Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Arts and Crafts dwelling;
- even though it has had extensive additions, the building has retained a high degree of aesthetic significance and contributes to the group of listed and potential items in the immediate area; and
- the building has been a positive contributor to the streetscape for over 100 years and has historical significance as one of the earliest buildings in the area.

18 Gerald Avenue, Roseville

It is recommended that No. 18 Gerald Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Queen Anne dwelling of substantial size;
- even with extensive additions to rear, the building has retained a high degree of aesthetic significance and makes a strong contribution to the streetscape with its prominent position;
- contributes to the group of listed and potential items in the immediate area; and
- the building has historical significance as one of the earliest buildings in the area.

5 The Grove, Roseville

It is recommended that No. 5 The Grove, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation /Inter-War Period Bungalow;
- additions to the rear are largely hidden by the original dwelling and the building has retained a high degree of aesthetic significance and contributes to the group of Federation /Inter-War Period items in the immediate area; and
- The building is a positive contributor to the streetscape in the immediate area.

11 The Grove, Roseville

It is recommended that No. 11 The Grove, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow constructed in the Inter-War Period which has retained its form and stylistic detailing intact;
- the building has retained a high degree of aesthetic significance and contributes to the group of listed and potential items in the immediate area; and
- the building was the home of Florence Pockley.

21 The Grove, Roseville

It is recommended that No. 21 The Grove, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- has aesthetic significance as a good and largely intact example (externally) of a medium scale Inter-War Stripped Classical style apartment block constructed as part of the Late Inter-War redevelopment of the area;
- the building is largely intact externally and has retained a high degree of aesthetic significance and contributes to the group of listed and potential items in the immediate area; and
- The building on its prominent corner location is a positive contributor to the streetscape in the immediate area.

16 Kelburn Road, Roseville

It is recommended that No. 16 Kelburn Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Late Federation Bungalow;
- the building is largely intact externally and has retained a high degree of aesthetic significance and contributes to the group of listed and potential items in the immediate area; and
- the building in a corner location with its mature trees and Jacaranda street plantings is a positive contributor to the streetscape in the immediate area.

19 Lord Street, Roseville

It is recommended that No. 19 Lord Street, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Inter-War Bungalow which makes a strong contribution to the streetscape character;
- the building is largely intact externally and has retained a high degree of aesthetic significance and contributes to the group of listed and potential items in the immediate area; and
- the building and its original garden is a positive contributor to the streetscape in the immediate area.

7 Oliver Road, Roseville

It is recommended that No. 7 Oliver Road, Roseville, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a Inter-war Bungalow with some alterations which impact on its presentation to the street;
- the building has a low degree of aesthetic significance; and
- there are better examples in the area.

9 Oliver Road, Roseville

It is recommended that No. 9 Oliver Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Late Federation Bungalow which has a prominent off-set presentation to the street;
- the building has had some additions and a recent garage but these do not greatly impact on the style or character of the building;
- the building remains largely intact externally when viewed from street, retained a high degree of aesthetic significance and contributes to the immediate area; and
- the building occupies a prominent location and with its mature trees and large garden is a positive contributor to the streetscape.

35 Oliver Road, Roseville

It is recommended that No. 35 Oliver Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Late Federation/Inter-War Bungalow;
- the building is largely intact externally which exhibits a high degree of aesthetic significance and contributes to the group of potential items in the immediate area; and
- the building is a positive contributor to the streetscape in the immediate area.

37 Oliver Road, Roseville

It is recommended that No. 37 Oliver Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Inter-War Bungalow;
- the building is largely intact externally with extensive rear additions which are not readily visible from the street and do not detract from the aesthetic significance of the house;
- the building retains a high degree of aesthetic significance and contributes to the group of potential items in the immediate area; and
- the building and its mature garden is a positive contributor to the streetscape in the immediate area.

10 Roseville Avenue, Roseville

It is recommended that No. 10 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a medium scale Federation Bungalow with Queen Ann timber detailing;
- the building is largely intact externally and has retained a high degree of aesthetic significance and contributes to the adjoining group of potential items and items in the immediate area; and
- the building with its Jacaranda plantings is a positive contributor to the streetscape in the immediate area.

12 Roseville Avenue, Roseville

It is recommended that No. 12 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a medium scale Inter-War Mediterranean Bungalow; and
- the building has had additions but is largely intact when viewed from the street and has retained a degree of aesthetic significance and contributes to the adjoining group of potential items in the immediate area.

14 Roseville Avenue, Roseville

It is recommended that No. 14 Roseville Avenue, Roseville, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building has undergone extensive modifications which impact on its presentation to the street; and
- retains a low degree of aesthetic significance.

16 Roseville Avenue, Roseville

It is recommended that No. 16 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Late Federation Bungalow;
- despite additions of the side roof dormers and garage, the main house generally retains original scale, form, details and fabric and makes a positive contribution to the streetscape;
- the building, with its dual hip roofline is an unusual and rare stylistic item within the LGA;
- the building retained a high degree of aesthetic significance and contributes to the adjoining group of potential items in the immediate area; and
- the building is a positive contributor to the streetscape in the immediate area.

22 Roseville Avenue, Roseville

It is recommended that No. 22 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and example of a Federation Bungalow with rear 2 storey addition and garage;
- the building is largely intact externally at the front and contributes to the group of potential items in the immediate area; and
- the building in a corner location with its mature trees and street plantings is a positive contributor to the Federation/Inter War items in the immediate area.

29 Roseville Avenue, Roseville

It is recommended that No. 29 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a Inter-War period Scout Hall;
- the building has had additions to the rear but with the small sandstone hall at the rear of the site has a high degree of aesthetic and social significance and contributes to the group of potential items in the immediate area; and
- the building in its corner location is a positive contributor to the streetscape.

31 Roseville Avenue, Roseville

It is recommended that No. 31 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a Federation Bungalow which retains its style and fabric as presents to the street; and
- the building has retained a high degree of aesthetic significance and contributes to the group of potential Federation and Inter-War period items in the immediate area.

32 Roseville Avenue, Roseville

It is recommended that No. 32 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow;
- the building has additions to rear but is largely intact in street presentation;
- contributes to the group of potential items in the immediate area; and
- the building occupies a prominent, high location with its original curtilage and makes a strong contribution to the streetscape.

45 Roseville Avenue, Roseville

It is recommended that No. 45 Roseville Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow which is largely intact externally and has retained a high degree of aesthetic significance;
- the building has had additions but these are largely hidden from view;
- the extant contributes to the context of the listed heritage items adjoining and opposite as well as the group of potential items in the immediate area; and
- the building has a strong visual location and with its mature ornamental plantings is a positive contributor to the streetscape in the immediate area.

12 Shirley Road, Roseville

It is recommended that No. 12 Shirley Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow with Arts and Crafts style detailing;
- the building is largely intact externally with some modifications which do not detract from its significance;
- the building has retained some degree of significance as one of a pair of near identical dwellings within one allotment of each other; and
- the building requires some maintenance, however as part of a pair with No.16 is a positive contributor to the streetscape in the immediate area.

16 Shirley Road, Roseville

It is recommended that No. 16 Shirley Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow with Arts and Crafts style detailing;
- the building is largely intact externally with some modifications which do not detract from its significance;
- the building has retained some degree of significance as one of a pair of near identical dwellings within one allotment of each other; and
- the building requires some maintenance, however as part of a pair with No. 12 is a positive contributor to the streetscape in the immediate area.

33 Shirley Road, Roseville

It is recommended that No. 33 Shirley Road, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a Federation Bungalow;
- the building is largely intact externally in its presentation to Shirley Road and has retained a high degree of aesthetic significance; and
- the building and its garden contributes strongly to the character of the immediate area.

14 Trafalgar Avenue, Roseville

It is recommended that No. 14 Trafalgar Avenue, Roseville, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building has undergone extensive modifications to the roof which impact on its presentation to the street; and
- retains little significance.

18 Trafalgar Avenue, Roseville

It is recommended that No. 18 Trafalgar Avenue, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a medium to large scale Inter-War Functionalist residence which has retained its simple style and form intact;
- the building is largely intact externally with a high degree of aesthetic significance gained from the strong visual appearance of the red brickwork and functionalist detailing; and
- the building is located on a raised allotment with a very open garden and is a positive contributor to the character of the immediate area.

14 Victoria Street, Roseville

It is recommended that No. 14 Victoria Street, Roseville, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building has undergone extensive modifications with a full upper level added to the single storey building and rendering of the external walls which impact on its presentation to the street; and
- retains little original fabric or significance.

16 Victoria Street, Roseville

It is recommended that No. 16 Victoria Street, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow;
- the building has high historical significance as one of the earliest remaining residences in the immediate area;
- the additions to the roof, side and rear of the house are sympathetic, are not highly visible and do not detract from the original character and scale of the building and presentation to the streetscape. The reduction of the original curtilage has not reduced the significance of the building; and
- the building is a positive contributor to the streetscape in the immediate area.

49 Victoria Street, Roseville

It is recommended that No. 49 Victoria Street, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow;
- although the house has undergone recent modifications, these additions are sympathetic and not readily visible from the street;
- the building is largely intact externally and has retained a high degree of aesthetic significance; and
- The building is a prominent item in the street and strong contributor to the character of the immediate area.

57 Victoria Street, Roseville

It is recommended that No. 57 Victoria Street, Roseville, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- any aesthetic significance of the original single storey Federation Bungalow has been severely diminished by the uncharacteristic first floor additions to the original building.

LINDFIELD

28 Bent Street, Lindfield

It is recommended that No. 28 Bent Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation / Inter-War Bungalow;
- although the house had extensive additions at the rear, these additions are not readily visible from the street;
- the building is largely intact and has retained a high degree of aesthetic significance, (the adjoining house No.26 is almost identical but has undergone modification to the frontage); and
- the building is one of the original houses in the subdivision, a prominent item in the street and contributor to the character of the immediate area.

11 Blenheim Road, Lindfield

It is recommended that No. 11 Blenheim Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation / Inter-War Bungalow which is largely intact externally and has retained a high degree of aesthetic significance;
- although the house has undergone some modifications, these changes are sympathetic and not readily visible from the street;
- the building contributes to the context of the group, Nos. 12, 15 and 19 Blenheim Road; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

12 Blenheim Road, Lindfield

It is recommended that No. 12 Blenheim Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation / Inter-War Bungalow which is largely intact externally and has retained a high degree of aesthetic significance;
- although the house has undergone some modifications, these changes are sympathetic and not readily visible from the street;
- the building contributes to the context of the group, Nos. 11, 15 and 19 Blenheim Road; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

15 Blenheim Road, Lindfield

It is recommended that No. 15 Blenheim Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Queen Anne style building which is largely intact externally and has retained a high degree of aesthetic significance;
- although the house has undergone some modifications and construction of a steel carport is visually intrusive, this structure is fully removable and the building is largely intact in its presentation to the streetscape;
- the building contributes to the context of the group, Nos. 11, 12 and 19 Blenheim Road; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

19 Blenheim Road, Lindfield

It is recommended that No. 19 Blenheim Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow which is largely intact externally and has retained a high degree of aesthetic significance;
- although the house has undergone some modifications , these changes are sympathetic and not readily visible from the street;
- the building contributes to the context of the group, Nos. 11, 12 and 15 Blenheim Road; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

17 Eton Road, Lindfield

It is recommended that No. 17 Eaton Road , **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a large prominent example of Inter-War Stripped Classical style residence which has been visually compromised by the construction of a large brick garage immediately in front of the house. This intrusive structure is not considered removable and this building has lost all aesthetic significance as a streetscape element.

21 Francis Street, Lindfield

It is recommended that No. 21 Francis Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a modest scale Inter-War Mediterranean style Bungalow;
- although the house has undergone some modifications including garages and colour scheme , the changes are largely sympathetic and have little impact on the significance of the building on its prominent corner site; and
- the building is a strong contributor to the character of the immediate area.

22 Kenilworth Road, Lindfield

It is recommended that No. 22 Kenilworth Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a transitional Federation / Inter-War period Bungalow;
- the building is unusual in its weatherboard construction within a predominately brick area;
- the later additions and garage are largely hidden at the rear of the house and do not detract from the aesthetic significance of the property when viewed from Kenilworth road; and
- the building is largely intact externally and has retained a high degree of aesthetic significance.

2 Mackenzie Street, Lindfield

It is recommended that No. 2 Mackenzie Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a large scale composite Inter-War Georgian Revival and Inter-War Functionalist style residence;
- although the house has undergone some modifications including a large garage , these additions are largely hidden from the street or in the case of the garage, do not diminish the aesthetic significance;
- the building is largely intact externally and has retained a high degree of aesthetic significance; and
- the building is a prominent item addressing three streets and is a strong contributor to the character of the immediate area.

1 Middle Harbour Road, Lindfield

It is recommended that No. 1 Middle Harbour Road, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the house is a two storey Inter-War Old English style residence on a prominent corner location and has undergone extensive modifications which have visually impacted on its significance. The original style and fabric of the extant building is now difficult to determine.

9 Middle Harbour Road, Lindfield

It is recommended that No. 9 Middle Harbour Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow which has undergone extensive sympathetic additions which do not visually impact on the significance of the building;
- the building is largely intact externally and with its original garden setting has retained a high degree of aesthetic significance; and
- the building and its curtilage is a strong contributor to the character of the immediate area.

31 Middle Harbour Road, Lindfield

It is recommended that No. 31 Middle Harbour Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- for its association with the early development of the immediate area and as a fine example of a modest scale Federation Arts and Crafts residence;
- the house does not appear to have undergone any significant modifications;
- the building is largely intact externally and has retained a high degree of aesthetic significance in style and original fabric; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

9 Nelson Road, Lindfield

It is recommended that No. 9 Nelson Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a one and a half storey Inter-War Bungalow. Significant as a largely intact example of the variety of Inter-War style residences within the immediate area;
- although the house has undergone some additions, these changes are not readily visible from the street and the building retains a high degree of aesthetic significance; and
- the building is a prominent item in the street and strong contributor to the character and variety of the immediate area.

20 Nelson Road, Lindfield

It is recommended that No. 20 Nelson Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is largely intact externally and has retained a high degree of aesthetic significance;
- as a good and largely intact example of a modest scale Federation Bungalow;
- although the house has undergone some modifications, these additions are not readily visible from the street;
- the building on its heavily wooded site is a strong contributor to the listed and potential items and the character of the immediate area.

44 Nelson Road, Lindfield

It is recommended that No. 44 Nelson Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good example of a largely intact Federation Bungalow which has retained a high degree of aesthetic significance with its original Federation Queen Anne stylistic detailing which is only slightly degraded by the addition of a small garage to the northern side;
- apart from the early garage, any modifications are sympathetic and not readily visible from the street; and
- with trimming of the overgrown cypress trees, the building would be a prominent item in the street and a strong contributor to the character of the listed and potential items nearby and the character of the immediate area.

50 Nelson Road, Lindfield

It is recommended that No. 50 Nelson Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Late Federation Period Bungalow. The modern garage detracts slightly from the aesthetic significance of the building however it is located towards the side boundary and the house retains aesthetic significance; and
- the building in its garden setting is a prominent item in the street and strong contributor to the context of listed and potential items nearby and to the character of the immediate area.

1 Ortona Road, Lindfield

It is recommended that No. 1 Ortona Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a Federation style residence;
- although the house has undergone some recent modifications to the rear, these additions are not readily visible from the street;
- the building is largely intact externally and has retained a high degree of aesthetic significance;
- the building is a prominent item in the street and strong contributor to the context of a number of heritage items in the immediate area; and
- the mature Hoop Pines on the corner street verge are of landmark significance and should be listed as significant landscape elements.

19 Russell Avenue, Lindfield

It is recommended that No. 19 Russell Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow;
- although the house has undergone modifications, these additions are sympathetic to the existing character and not readily visible from the street. The building retains a high degree of aesthetic significance; and
- the building is partially hidden by overgrown shrubs but contributes to the character of the immediate area.

22 Russell Avenue, Lindfield

It is recommended that No. 22 Russell Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a very prominent element within the streetscape and has a high level of aesthetic significance as a large scale 2 storey Federation Arts and Crafts mansion; and
- although the house has undergone modifications, these additions are largely sympathetic and have not impacted on the character of the building, some alterations such as infill of the verandahs is capable of restoration.

23 Treatts Road, Lindfield

It is recommended that No. 23 Treatts Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation period bungalow in a semi-rural style;
- although the house has undergone some additions, these modifications are sympathetic and not readily visible from the street;
- the building is largely intact externally in its form and style and while some fabric, such as the roofing, has been replaced, overall the building retains a high degree of aesthetic significance; and
- the building is a prominent item at the end of the street and a strong contributor to the character of the immediate area.

45 Treatts Road, Lindfield

It is recommended that No. 45 Treatts Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a modest scale Federation Queen Anne style residence;
- although the house has undergone recent modifications including complete painting in white, a degree of significance could be regained with a more sympathetic colour scheme. The building form, style and fabric is largely intact externally; and
- the building is a prominent item in the street and strong contributor to the context of nearby listed items and the potential item adjoining at No 47 Treatts Road.

47 Treatts Road, Lindfield

It is recommended that No. 47 Treatts Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a modest scale Federation Arts and Crafts style Bungalow;
- although the house has undergone recent additions such as the large garage at the rear, these additions are sympathetic and have little visual impact on the character of the building when viewed from the street, the building is largely intact externally in its form, fabric and detailing and has retained a high degree of aesthetic significance; and
- the building is a prominent item in the street and strong contributor to the potential item adjoining at No. 45 Treatts Road as well as the character of the listed item opposite.

17 Waimera Road, Lindfield

It is recommended that No. 17 Waimera Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a modest scale Late Federation period Bungalow with Art Nouveau detailing;
- although the house has undergone some modifications, these additions are sympathetic and the building has retained a degree of aesthetic significance; and
- the building is a prominent item in the street and contributes to the context of the listed items in the immediate area.

2 Westbourne Road, Lindfield

It is recommended that No. 2 Westbourne Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact example of a Late Federation Period Bungalow; and
- although the house has had significant additions , these additions are largely located at the rear and are not readily visible from the street; and
- the building is largely intact and has retained a high degree of aesthetic significance as a prominent item in the streetscape of the immediate area.

KILLARA

7 Arnold Street, Killara

It is recommended that No. 7 Arnold Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 7 Arnold Street, Killara is a two storey Inter-war Georgian Revival duplex which has had little change and retains its aesthetic significance in the original style, form and scale;
- the various additions such as the detached garage in the front yard do not visually detract from the significance of the building; and
- the building makes a positive contribution to the streetscape of the immediate area and to the context of listed items at Nos. 3 and 9 Arnold Street.

11 Arnold Street, Killara

It is recommended that No.11 Arnold Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a rare example of a small scale Late Federation / Inter-War period Bungalow with Art Nouveau detailing;
- although having undergone some modifications to the original building, the house remains largely intact externally with much of its original fabric and stylistic detailing;
- the additions to the building are generally sympathetic and not readily visible from the street;
- a modern garage is located in the basement under the front balcony which has been extended to cover the garage and retain the character of the building; and
- the building has retained a high degree of aesthetic significance and is contributory to the adjoining heritage item at No.13 Arnold as well as other culturally significant items in the streetscape

22 Buckingham Road, Killara

It is recommended that No. 11 The Grove, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a large scale Inter-War Georgian Revival mansion set in expansive grounds;
- the building has aesthetic and social significance as a large residence dating from the early 1940s which is situated in its original bushland garden which was characteristic of the development of the immediate area prior to the Second World War; and
- the building is largely intact externally and is a prominent item in the streetscape and strong contributor to the character of the immediate area and the context of listed items nearby at Nos. 10, 11, 26 and 41 Buckingham Road.

10 Culworth Avenue, Killara

It is recommended that No. 49 Victoria Street, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a largely intact representative example of an Australian version of the North American "Shingle Style" which gained popularity with architects and their clients following the construction of "Pibrac" and "Cheddington" at nearby Warrawee c.1888;
- the existing house appears to have been the residence constructed for Henry Selkirk in c.1924 as his home "Geraldine";
- the integrity of the house in visual terms is currently reduced by the painting of the original face brickwork and timber shingles in an intrusive colour scheme. The aesthetic significance of the house, which is largely intact in both fabric and detail externally, could easily be recaptured by stripping the brickwork and re-painting the timber shingles in a characteristic colour scheme; and
- the building is a prominent item in the street and combined with the neighbouring residence at No 12 is a strong contributor to the character of the immediate area.

12 Culworth Avenue, Killara

It is recommended that No. 49 Victoria Street, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Inter-War Old English residence;
- although the house has undergone recent modifications, these additions do not detract from the visual character of the building which has retained a high degree of aesthetic significance; and
- the building with its adjoining neighbour No. 10 has been painted in unsympathetic colours. The building however, is able to be restored to its former character with a change of colour scheme and remains as a prominent item in the street and strong contributor to the character of the immediate area.

30 Elva Avenue, Killara

It is recommended that No. 30 Elva Street **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a medium sized two storey Inter-War Georgian Revival style residence which is currently undergoing substantial modification; and
- the current alterations have reduced the original character and integrity and the building now has little remaining cultural significance.

31 Elva Avenue, Killara

It is recommended that No. 31 Elva Street **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Inter-War Old English residence which is a prominent element within the Elva Avenue streetscape; and
- although the house has undergone some modifications, the changes do not detract from the visual character of the building which has retained a high degree of aesthetic significance.

14 Forsyth Street, Killara

It is recommended that No. 14 Forsyth Street **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a Late Federation Period Bungalow which is a prominent element within the Forsyth Street streetscape;
- although having undergone some modifications to the original building, the house remains largely intact externally with much of its original fabric and stylistic detailing; and
- the building has retained a high degree of aesthetic significance and is contributory to character of the streetscape.

44 Greengate Road, Killara

It is considered that No. 44 Greengate Road **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a large scale 2 storey Inter-War Georgian Revival residence which is a prominent visual element in Greengate Road;
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact in its presentation to Greengate Road; and
- the building has a high degree of aesthetic significance and on its original large site located between two listed heritage items, it is contributory to the context of these items as well as to the character of the streetscape.

51 Greengate Road, Killara

It is recommended that No. 51 Greengate Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a medium sized Federation Bungalow which is a prominent visual element in Greengate Road;
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact in its presentation to Greengate Road. Extensive sympathetic additions have been made to the rear of the house which do not reduce the aesthetic quality of the original building;
- the building retains a high degree of aesthetic significance and on its original large site, is contributory to the character of the streetscape; and
- social significance as the home of S.H. Robertson and his descendants for over 90 years.

28 Karranga Avenue, Killara

It is recommended that No. 28 Karranga Avenue, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 28 Karranga Avenue, Killara is a fine and largely intact example of an Inter-War Bungalow style dwelling;
- significant as a design of the English trained architect James Peddle;
- significant as an interesting variation of style from this period. The building and its garden are prominent visual elements within the streetscape and make an important contribution to character of the streetscape and the listed heritage items in the immediate vicinity; and
- although the house has undergone recent modifications, these additions are sympathetic and not readily visible from the street.

38 Karranga Avenue, Killara

It is recommended that No. 38 Karranga Avenue, Killara, **SHOULD NOT BE INCLUDED** as a heritage item for the following reasons:

- the building is a one and a half storey Federation Bungalow which has had substantial alterations and additions;
- the additions are largely sympathetic however the extent of changes such as the extensive roof additions, dormers, side and rear additions and painting of face brickwork have significantly altered the character of the building and reduced the integrity of both character and fabric; and
- the building retains little cultural significance as a result of these modifications.

6 Lorne Avenue, Killara

It is considered that No. 6 Lorne Avenue, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a large scale, 2 storey Inter-War Functionalism mansion;
- the stylistic geometric forms and simple clean lines of the late Inter-War residence contributes to its character and aesthetic significance;
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact. The rear additions do not detract from the significance of the existing building and the style, form and detailing of the residence contribute to the character of the streetscape and the context of the nearby listed items; and
- the building has a high degree of aesthetic significance and as a prominent element on its original large site near the eastern end of Lorne Avenue, the extant building is contributory to the character of the immediate area.

9 Lynwood Avenue, Killara

It is considered that No. 9 Lynwood Avenue, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a 2 storey Inter-War Functionalist residence which, even with a carport structure located on the front boundary, is a prominent visual element in Lynwood Avenue;
- associated with architect Augustus Aley. The property was also owned by architect, Frederick Herbert Broughton Wilton, however, it would appear that Wilton did not modify the building in any significant way;
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact in its presentation to the street; and
- the building has a high degree of aesthetic significance and it is contributory to the context of the items at No. 11 as well as Nos. 4 and 6 Lynwood Avenue as well as to the character of the streetscape.

21 Lynwood Avenue, Killara

It is considered that No. 21 Lynwood Avenue, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a medium scale 2 storey Inter-War Georgian Revival residence which is a prominent visual element in Lynwood Avenue;
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact in its presentation to the streetscape; and
- the building, as a small scale example contributes to the variety of Inter-War housing within the immediate streetscape and in combination with the nearby potential items in Lynwood Avenue, makes a strong contribution to the character of the immediate area.

21A Lynwood Avenue, Killara

It is considered that No. 44 Greengate Road, Killara, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a large scale 2 storey Inter-War Period residence which has undergone extensive renovation and now retains little stylistic integrity; and
- the building has the appearance of a contemporary building and has little if any remaining significance.

23 Lynwood Avenue, Killara

It is considered that No. 23 Lynwood Avenue, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good representative example of a modest scale Inter-War Mediterranean style residence;
- although having undergone some modifications to the original building, the house remains largely intact externally with its original Inter -War Mediterranean stylistic detailing; and
- the building, as a small scale example contributes to the variety of Inter-War housing within the immediate streetscape and in combination with the nearby potential items in Lynwood Avenue, makes a strong contribution to the character of the immediate area.

28 Lynwood Avenue, Killara

It is considered that No. 28 Lynwood Avenue, Killara, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine representative example of a modest scale one and a half storey Inter-War Old English residence;
- the house remains largely intact externally with its original Inter -War Old English stylistic detailing ;
- as a design of the architectural firm of Robertson, Marks and McCredie;
- although having undergone some modifications to the original building, the house retains most of its original fabric intact; and
- the building has a high degree of aesthetic significance and in combination with the nearby potential items in Lynwood Avenue, makes a strong contribution to the character of the immediate area.

3 Maples Avenue, Killara

It is considered that No. 3 Maples Avenue, Killara, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the Inter-War Old English style residence has remained in the ownership of the Cathels Family for over 60 years, however has undergone some modifications and it is considered that there are other, better examples of the style within the LGA

5 Maples Avenue, Killara

It is considered that No. 5 Maples Avenue, Killara, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- Although having undergone some modifications to the original building, the Inter-War Old English residence remains largely intact externally, however, it is considered that there are other, better examples of the style in the LGA

24 Marian Street, Killara

It is considered that No. 24 Marian Street, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact external example of a simplified Inter-War Spanish Mission style dwelling;
- as a representative example of the variety of Inter-War Mediterranean style and as part of the earliest development of the subdivision associated with James George Edwards, "the Father of Killara";
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact in its presentation to the street; and
- this building is contributory to the character of the immediate area in combination with the potential items opposite at Nos. 27 and 29 Marian Street as well as contributory to the heritage item adjoining at No. 1 Cathiness Street.

27 Marian Street, Killara

It is considered that No. 27 Marian Street, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a modest scale Inter-War English Cottage style dwelling;
- which is a prominent visual element in Marian Street;
- for its association with James George Edwards who was instrumental in the development of the suburb of Killara;
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact in its presentation to Marian Street; and

- this building has a high degree of aesthetic significance when combined with the adjoining potential items at Nos. 29 and 24 Marian Street. These buildings are contributory to the context of the listed item at No. 31 Marian Street as well as to the character of the streetscape.

29 Marian Street, Killara

It is considered that No.29 Marian Street, Killara **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- for its association as the home of James George Edwards who was instrumental in the development of the suburb of Killara;
- as a good and largely intact external example of an Inter-War Spanish Mission style dwelling; and
- although having undergone some modifications to the original building, the house retains most of its original fabric and stylistic detailing intact and the building has a high degree of aesthetic significance in its contribution to the character of the streetscape.

16 Northcote Avenue, Killara

It is recommended that No. 16 Northcote Avenue, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- The building is a modified Federation Queen Anne dwelling which has undergone substantial modifications and is not recommended for listing as there are more intact examples elsewhere within the district.

5 Powell Street, Killara

It is recommended that No. 5 Powell Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good representative example of a variation of a Inter-War Old English style residence which is largely intact;
- the subject building contributes to the context of listed heritage items on either side with two additional listed items located close by on the north side of Powell Street;
- the building and its garden contributes to the character and quality of the streetscape; and
- the building is largely intact externally with no records of alterations and additions and has retained a high degree of aesthetic significance.

2 Spencer Road, Killara

It is recommended that No. 2 Spencer Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and interesting representative example of an Inter-War Mediterranean style residence;
- although the house has undergone recent modifications, these additions are sympathetic and not readily visible from the street;
- the building is largely intact externally and has retained a high degree of aesthetic significance as a variation of the style; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

8 Springdale Road, Killara

It is recommended that No. 8 Springdale Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good representative example of a large scale, 2 storey Federation Arts and Crafts dwelling;
- although the house has undergone modifications which have diminished its stylistic integrity, the building retains a degree of significance as a very dominant element within the streetscape; and
- the building on its large allotment, is a prominent item within the street and strong contributor to the character of the immediate area as well as contributory to the context of listed items at Nos. 1, 7 and 16 Springdale Road.

24 Springdale Road, Killara

It is recommended that No. 24 Springdale Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good representative example of a Federation Bungalow. No 24 Springdale Road has a high degree of integrity in the fabric and detailing;
- the building has been modified with the addition of a garage. This garage, located within the front façade has been designed in a sympathetic form and does not visually detract from the significance of the building when viewed within its garden setting on Springdale Road; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

12 Stanhope Road, Killara

It is recommended that No. 12 Stanhope Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a 2 storey Inter-War Georgian Revival mansion in expansive gardens;
- although having undergone some modifications to the original building, the house remains largely intact externally with its original Georgian Revival stylistic detailing. The mature gardens at the front of the house contribute to the streetscape character and are representative of the original curtilage to this significant residence;
- although the house has undergone recent modifications, these additions are sympathetic and do not detract from the significance of the building within the streetscape; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area as well as contributory to a number of potential and listed heritage items within Stanhope Road.

16 Stanhope Road, Killara

It is recommended that No. 16 Stanhope Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine example of a visually prominent Inter-war Georgian Revival mansion located in its expansive original garden;
- a rare example of Inter-war Georgian Revival constructed in dark liver brickwork;
- the properties on Stanhope Road (formerly Springdale Road) were originally occupied by a number of residents of high standing in the community including many JPs and Doctors. The quality of residence within this street is a reflection of its early importance and most of the original large residences in Stanhope Road, on the western side of the railway line, remain largely intact;
- although the house has undergone some modifications, these additions are sympathetic and not readily visible from the street;
- the building is largely intact externally and has retained a high degree of aesthetic significance; and

- the building is a prominent item in the street and strong contributor to the character of the immediate area as well as contributory to a number of potential and listed heritage items within Stanhope Road.

25 Stanhope Road, Killara

It is recommended that No. 25 Stanhope Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good representative example of a large scale 2 storey Inter-War Old English mansion with Spanish Mission detailing, and as an example of the variety of Inter-War styles which were popular with the owners as a reflection of their status within the community;
- although the house has undergone recent modifications, these additions are sympathetic and not readily visible from the street;
- the building is largely intact externally and has retained a high degree of aesthetic significance; and
- the building is a prominent item in the street and a strong contributor to the context of the neighbouring listed items and character of the immediate area.

3 Warwick Street, Killara

It is recommended that No. 3 Warwick Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a modest scale Inter-war Old English style residence;
- although the house has undergone modifications, the additions are largely sympathetic and do not detract from the aesthetic significance of the building when viewed from the street;
- the building is largely intact externally and has retained a high degree of aesthetic significance; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

GORDON

1 Bushlands Avenue, Gordon

It is recommended that No. 1 Bushlands Avenue, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 1 Bushlands Avenue is an Inter-War Bungalow which has some social significance as the home of a former Methodist Minister. The building is one of three adjoining buildings of similar style and age, however, it makes little contribution to the streetscape and there are better examples elsewhere in the LGA.

3 Bushlands Avenue, Gordon

It is recommended that No 3 Bushlands Avenue, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 3 Bushlands Avenue is an Inter-War Bungalow which has some social significance as part of the early subdivision of the immediate area, however this significance is slight. The house is not highly visible from the street and makes little contribution to the character of the immediate area. There are better representative examples of this style of building elsewhere in the LGA.

5 Bushlands Avenue, Gordon

It is recommended that No. 5 Bushlands Avenue, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 5 Bushlands Avenue is an inter-War Bungalow which has some social significance as part of the early subdivision of the immediate area, however this significance is slight and the building is not recommended for listing as there are better representative examples of this style of residence elsewhere in the LGA.

22 Highlands Avenue, Gordon

It is recommended that No. 22 Highlands Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow;
- the building is significant as a fine and largely intact example of the variety of stylistic housing types. The building is largely intact with a verandah infilled, however this is reversible and has not had any great visual impact on the street façade. The building retains a high degree of aesthetic significance; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

7 Robert Street, Gordon

It is recommended that No. 7 Robert Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 7 Robert Street is a good representative example of an Inter-war Functionalist residence;
- although the house has undergone some modifications such as the attached garage and rear additions, the building remains largely intact externally and has retained a high degree of aesthetic significance;
- the building is a prominent item in the street and contributes to the character of the immediate area.

18 Rosedale Road, Gordon

It is recommended that No. 18 Rosedale Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a medium scale representative example of a Late Victorian Italianate dwelling that despite some alterations retains its original character and decorative details;
- although the house has undergone some modifications, these additions are sympathetic and do not detract from the original details and character of the building; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

PYMBLE

21 Grandview Street, Pymble

It is recommended that No. 21 Grandview Street, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 21 Grandview Street, is an example of the Inter-War Mediterranean style, which has limited aesthetic significance. The building makes little contribution to the character of the area and there are many better examples of this style within the Ku-ring-gai LGA.

11 King Edward Street, Pymble

It is recommended that No. 11 King Edward Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Federation Bungalow with fine timber detailing;
- although having undergone additions to the original building, the house remains largely intact externally with its original stylistic detailing;
- the modern carport at the front of the house creates a visual intrusion on the character of the building however, the extant building imparts such a strong character to the streetscape, that its contribution is only slightly reduced by this intrusive element; and
- the building on its prominent corner allotment makes a strong contribution to the character of the immediate area.

25 King Edward Street, Pymble

It is recommended that No. 25 King Edward Street, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building appears to have undergone extensive modifications throughout its lifetime which has impacted greatly on the character of the building, resulting in substantially reduced aesthetic significance; and
- the existing building contributes little to the streetscape character.

31 King Edward Street, Pymble

It is recommended that No. 31 King Edward Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a modest scale example of a Federation Queen Anne residence;
- although the house has undergone substantial additions including a side addition which is visually intrusive due to its unsympathetic yellow colour scheme and a rear garage structure. These additions are visible from the side in Church Street but have no visual impact on the significance of the largely intact building in its prominent corner location when viewed from King Edward Street; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

18 Park Crescent, Pymble

It is recommended that No. 18 Park Crescent, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a medium scale residence with Inter-War Stripped Classical stylistic detailing;
- the house remains largely intact with little external modification apart from a side wing addition. The house has retained a high degree of aesthetic significance with its simple detailing; and
- the building is located on a prominent site and with some trimming of the shrubs which enclose the front garden, this building would make a strong visual contribution to the nearby Park Crescent Group and the character of the immediate area in general.

20 Park Crescent, Pymble

It is recommended that No. 20 Park Crescent, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is an Inter-War Spanish Mission dwelling which has been modified with substantial additions. The building has no historic or social significance which would demand its inclusion as a listed item. The battle axe site also means that the building and grounds are not visible from the street and therefore results in the building making no contribution to the character of the immediate area.

22 Park Crescent, Pymble

It is recommended that No. 22 Park Crescent, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significant as a good and representative example of a medium scale Inter-War Old English style residence;
- significant as a contributory item to the variety of Inter-War style residences within the immediate area;
- although the house has undergone modifications, these additions are sympathetic to the original style and fabric; and
- the building has retained a high degree of aesthetic significance and is located on a prominent site. The building makes a substantial contribution to the Park Crescent Group and the character of the streetscape generally

24 Park Crescent, Pymble

It is recommended that No. 24 Park Crescent, Pymble, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and representative example of a medium scale Inter-War dwelling with Modernist stylistic tendencies;
- although the house has undergone some additions, these changes do not impact on the character and fabric of the building and its contribution to the Park Crescent Group; and
- the building has retained a degree of aesthetic significance and its prominent location in the street makes it a strong contributor to the character of the immediate area.

40 Park Crescent, Pymble

It is recommended that No. 40 Park Crescent, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a composite Inter-War Georgian Revival dwelling with Spanish Mission detailing which has been heavily modified with substantial additions, resulting in loss of aesthetic significance. The building style is now largely indeterminate and it makes little contribution to the character of the area; and
- The building has little historic or social significance which would demand its inclusion as a listed item.

5 Taunton Street, Pymble

It is recommended that No. 5 Taunton Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the house has had substantial additions and alterations, however it remains largely intact with its original Inter-War Old English stylistic detailing and is a fine representative example of a large scale residential building of this style within Ku-ring-gai Local Government Area;
- the largely intact and mature gardens at the front of the house are significant to the contribution this building makes to the streetscape character as the original curtilage to this early 20th Century Inter-War style residence; and
- together with No 7 Taunton Street, these two building present as a fine pair of large scale Inter-War residences and make a strong contribution to the character of the immediate area.

7 Taunton Street, Pymble

It is recommended that No. 7 Taunton Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the house remains largely intact with little change to its original Inter-War Old English stylistic detailing and is a fine representative example of a large scale residential building of this style within Ku-ring-gai Local Government Area;
- the largely intact and mature gardens at the front of the house are significant to the contribution this building makes to the streetscape character as the original curtilage to this early 20th Century Inter-War style residence; and
- together with No. 5 Taunton Street, these two building present as a fine pair of large scale Inter-War residences and make a strong contribution to the character of the immediate area.

TURRAMURRA

34 Eastern Road, Turramurra

It is recommended that No. 49 Victoria Street, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building has some associational significance as the home of Professor Kenneth Edward, and historic and social significance for its use as a Manse by the Presbyterian Church of NSW from 1935 and The Uniting Church in Australia from 1980;
- although the house has undergone recent modifications, these additions are sympathetic and do not detract from the original character and scale of the building ;
- the building is largely intact externally and has retained a high degree of aesthetic significance; and
- the building is a prominent item in the street, located on a corner site, and strong contributor to the character of the immediate area.

14 Warrangi Street, Turramurra

It is recommended that No. 49 Victoria Street, Roseville, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a fine and largely intact example of a modest size Inter-War Bungalow style residence with intact features and Art Nouveau stylistic detail. Although the house has undergone recent modifications, these additions are sympathetic and not readily visible from the street;
- the building is largely intact externally and has retained a high degree of aesthetic significance; and
- the building is a prominent item in the street and strong contributor to the character of the immediate area.

WARRAWEE

42 Bangalla Street, Warrawee

It is recommended that No.42 Bangalla Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact (external) example of a two storey Inter-war Mediterranean Style dwelling that retains its original character within a garden setting;
- the building in its garden setting makes a positive contribution to the character of the immediate area; and
- associational significance as the home of Sydney architect Hugh Venables Vernon, son of Walter Liberty Vernon (NSW Government Architect 1890-1911).

8 Brentwood Avenue, Warrawee

It is recommended that No. 8 Brentwood Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact external example of a Post-War Old English Revival Style dwelling that retains its original form and scale as presents to Brentwood Avenue. The building has undergone some modifications but these works have not reduced the significance of the dwelling within the streetscape;
- the garden retains mature trees that may be associated with the construction of the adjacent Federation Period house; and
- the building contributes to the character and context of the nearby listed heritage items.

15 Brentwood Avenue, Warrawee

It is recommended that No.15 Brentwood Avenue, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building retains its earlier form and some details at the front however the successive additions and alterations have compromised the overall integrity of the property;
- the building now has limited aesthetic significance due to the extensive modifications and additions which are a result of its current use as a Pre School Kindergarten; and
- the modifications to the garden and yard have impacted on the character of the building.

42 Hastings Road, Warrawee

It is recommended that No.42 Hastings Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significant as a design of the early 20th Century architect Hugh Venables Vernon; and
- as a largely intact example of the Inter War Georgian Revival style which has retained its original form, style, fabric and garden context.

2 Heydon Avenue, Warrawee

It is recommended that No. 2 Heydon Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- as a good and largely intact example of a Late Federation Transitional style dwelling with "Richardson Romanesque" detail; and
- significance as one of the remaining large scale residences on large allotments featuring gardens and tennis courts.

17 Heydon Avenue, Warrawee

It is recommended that No. 17 Heydon Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significance as a largely intact example of a late Federation Period “rural” style dwellings attributed to the architectural firm of Castledon and Lake; and
- social significance as the home of Rev. Jackson and his family for over 60 years.

9 Pibrac Avenue, Warrawee

It is recommended that No.9 Pibrac Avenue, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the house and garden at No. 9 Pibrac Avenue, Warrawee have undergone extensive modification within the last 12 months which has greatly impacted on the nature of the building both externally and internally;
- these changes have reduced the significance of the property to such a degree that it is now difficult to identify the style and character of the original building or garden layout; however, there are a number of ornamental trees and shrubs on the site which possibly have association with the adjacent heritage item “Pibrac”; and
- the house and garden are not visible from the street and make no visual contribution to the streetscape or area.

18 Warrawee Avenue, Warrawee

It is recommended that No.18 Warrawee Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significant as a fine and largely intact example of a substantial residence constructed in the Inter-War Georgian Revival style;
- the building has undergone some modification however this does not impact on the aesthetic significance of the building in its presentation to Warrawee Avenue; and
- the building holds some associational significance as the home of Wellesley Burgoyne Hudson, an engineer of Sydney.

1 Yosefa Avenue, Warrawee

It is recommended that No. 1 Yosefa Avenue **SHOULD NOT BE INCLUDED** as a Heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a very recent addition to the streetscape of the Yosefa Avenue Group; and
- the extant building, although of good design and construction, makes no positive contribution to the Inter-War style characteristics of the original “Yosefa Estate” Group.

2 Yosefa Avenue, Warrawee

It is recommended that No. 2 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact example of an Inter-war dwelling that retains its original character and integrity as it retains its original form, fabric and detailing as a single storey Inter-War style residence;
- the extant building presents as a dominant face brick element on the high corner of the Yosefa and Heydon Avenue streetscapes and identifies the entry to the ‘Yosefa Estate’ Group; and
- the building addresses both streetscapes retaining its original matching fence and makes a positive contribution to the Yosefa Avenue streetscape and the area in general.

3 Yosefa Avenue, Warrawee

It is recommended that No. 3 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact (external) example of an of an Inter-war Mediterranean style dwelling that makes an active contribution to the “Yosefa Estate” group;
- the extant building has retained its original character and integrity in its form, fabric and detailing; and
- the building makes a positive contribution to the Yosefa Avenue streetscape and the area in general.

4 Yosefa Avenue, Warrawee

It is recommended that No. 4 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact (external) example of a modest Inter-War Old English style dwelling that makes an active contribution to the “Yosefa Estate” group;
- the extant building has retained its original character and integrity in its form, fabric and detailing; and
- despite some modifications the building makes a positive contribution to the Yosefa Avenue streetscape and the area in general.

5 Yosefa Avenue, Warrawee

It is recommended that No. 5 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact (external) example of a modest Inter-War Bungalow style dwelling that makes an active contribution to the “Yosefa Estate” group;
- the extant building has retained its original character and integrity in its form, fabric and detailing;
- the building makes a positive contribution to the Yosefa Avenue streetscape and the area in general; and
- the building is one of the early suburban designs of the architectural firm of Peddle Thorp & Walker.

6 Yosefa Avenue, Warrawee

It is recommended that No. 6 Yosefa Avenue, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- The extant building is a largely intact (external) example of a modern style dwelling of indiscernible style that makes no positive contribution to the character of the “Yosefa Estate” group.

7 Yosefa Avenue, Warrawee

It is recommended that No.7 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact (external) example of an of an Inter-war Mediterranean style dwelling that makes a strong contribution to the “Yosefa Estate” group;
- the extant building has retained its original character and integrity in its form, fabric and detailing;
- the building makes a positive contribution to the Yosefa Avenue streetscape and the area in general; and
- the building is one of the four residences in Yosefa Avenue designed by the architect Augustus Alley, the other three being Nos. 8, 9 and 11.

8 Yosefa Avenue, Warrawee

It is recommended that No. 8 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building was the home of the architect Augustus Aley;
- the extant building is a good and largely intact (external) example of an of an Inter-war Bungalow style dwelling that makes an active contribution to the “Yosefa Estate” group.
- the extant building although modified, has retained its original character and integrity in its form, fabric and detailing;
- the building makes a positive contribution to the Yosefa Avenue streetscape and the area in general; and
- the building is one of the four residences in Yosefa Avenue designed by the architect Augustus Aley, the other three being Nos. 7, 9 and 11.

9 Yosefa Avenue, Warrawee

It is recommended that No. 9 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact (external) example of an of an Inter-War Georgian Revival style dwelling that makes an active contribution to the “Yosefa Estate” group;
- the extant building has retained its original character and integrity in its form, fabric and detailing;
- the building makes a positive contribution to the Yosefa Avenue streetscape and the area in general; and
- the building is one of the four residences in Yosefa Avenue designed by the architect Augustus Aley, the other three being Nos. 7, 8 and 11.

11 Yosefa Avenue, Warrawee

It is recommended that No.11 Yosefa Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a good and largely intact (external) example of a two storey Inter-War Georgian Revival style dwelling that makes an active contribution to the “Yosefa Estate” group;
- the extant building has retained its original character and integrity in its form, fabric and detailing;
- the building makes a positive contribution to the Yosefa Avenue streetscape and the area in general;
- the building is one of the four residences in Yosefa Avenue designed by the architect Augustus Aley, the other three being Nos. 7,8 and 9.

WAHROONGA

12 Billyard Avenue, Wahroonga

It is recommended that No. 12 Billyard Avenue Wahroonga, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 12 Billyard Avenue, Wahroonga has aesthetic significance as a largely intact and fine example of a modest size Inter-War Georgian Revival residential building;
- the building has undergone some modifications to the roof, however these changes are minimal and do not impact on the fundamental character and presentation within the streetscape; and
- the building in its garden setting makes a positive contribution to the streetscape and area in general.

4 Burns Road, Wahroonga

It is recommended that No. 4 Burns Road, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- whilst an interesting building dating from the first decade of the 20th Century and incorporating fabric and detail from many periods, successive works have obscured the original character and overall integrity of the place; and
- due to the extent of the modifications, any future return of this building to something resembling its original style or character is not considered a possibility.

6 Burns Road, Wahroonga

It is recommended that No. 6 Burns Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons: .

- historic and social significance as one of the earliest houses in the western section of Burns Road;
- aesthetic significance as a good and largely intact example of a late Federation Period dwelling;
- significant for its contribution to the general visual character of Burns Road and to the adjacent listed heritage item at No. 7 Burns Road; and
- the house and its mature garden contribute strongly to the overall character of the immediate area.

11 Burns Road, Wahroonga

It is recommended that No. 11 Burns Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building, despite some additions at the rear and western infill and replacement of the roof cladding, is a good and largely intact example of a late Victorian (rural style) dwelling that retains its fundamental character and overall integrity as presents to the street;
- historic association with the early development of the Wahroonga Estate Precinct and dating from the late 19th century subdivisions of the earlier large allotments; and
- the additions are not largely visible from the street and appear to be sympathetic to the character of the building.

16 Burns Road, Wahroonga

It is recommended that No.16 Burns Road, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building does not represent any particular style and due to deep setback and overgrown front garden plantings it makes no visual contribution to the streetscape or area in general; and
- the trees, planting and garden may relate to the neighbouring property (No.14) , however the large box hedge, that runs across the front, street boundary largely obscures any view of the garden from the street.

17 Burns Road, Wahroonga

It is recommended that No. 17 Burns Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a good and largely (externally) intact example of a modest bungalow constructed in the Federation Arts and Craft style that retains characteristic details, form and scale;
- the property is significant for its association with William Walker an Alderman in the Local Council in the first decade of the 20th century;
- the building makes a positive contribution to the streetscape and area in general; and
- the subdivision of the property does not detract from the overall integrity and presentation in the streetscape.

18 Burns Road, Wahroonga

It is recommended that No. 18 Burns Road, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 18 Burns Road is not recommended for listing as recent modifications and additions have substantially altered the original character, the modernization of the building with rendering, painting and replacement of original fabric and detail has resulted in a loss of character which is not possible to regain; and
- although the property has retained a large site, the construction of a new modern carport structure close to the front boundary of the site has visually impacted on the character of the building and its contribution to the streetscape in general.

25 Burns Road, Wahroonga

It is recommended that No. 25 Burns Road, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the building is a good and largely (externally) intact representative example of a Late Federation Period dwelling that retains its stylistic identity and contributes strongly to the character of the immediate area; and
- the mature trees and plantings in the front garden contribute to the overall aesthetic character and presentation of the property within the streetscape.

15 Cleveland Street, Wahroonga

It is recommended that No. 15 Cleveland Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 15 Cleveland Street, Wahroonga is significant for its contribution to the overall character and significance of the Knox Preparatory School; and
- the building is a good intact representative example of a Early 21st Century school building which is sympathetic to the character of the school complex.

89 Coonabarra Road, Wahroonga

It is recommended that No. 89 Coonabarra Road, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- its significance has been greatly reduced by the visual impact of additions which have substantially modified the character of the building and its streetscape presentation.

92 Coonabarra Road, Wahroonga

It is recommended that No. 18 Burns Road, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the extant building is a typical, recently constructed, contemporary residence which has no particular definable stylistic references and does not contribute to the context of surrounding heritage items or add to the character of the area.

2 Fox Valley Road, Wahroonga

It is recommended that No. 18 Burns Road, **SHOULD NOT BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the front of the building retains its original character and details, however, there have been extensive alterations to the side and rear of the building;
- the building is not readily visible and makes limited contribution to busy intersection on Pacific Highway and Fox Valley Road; and
- there are better, more intact examples of the style within the LGA.

3 Gilda Avenue, Wahroonga

It is recommended that No. 3 Gilda Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- No. 3 Gilda Avenue is a fine, largely intact example of a Late Federation Period, Queen Anne Style dwelling of modest scale that makes a strong contribution to the character of the Gilda Avenue streetscape;
- the building retains its original form, fabric and details despite alterations and additions to the rear of the house; and
- the extant garden setting contributes to the overall aesthetic quality of the house and should be included in the listing.

18 Gilda Avenue, Wahroonga

It is recommended that No. 18 Gilda Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significant as a good and largely intact example (externally) of an Inter-War Old English style residence constructed in the early Post-War years

33 Illoura Avenue, Wahroonga

It is recommended that No. 33 Illoura Avenue, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significant for its association with Sir Sydney Snow;
- significant as an example of an early Inter-War period residence and as a fine example of the variety of style from this period; and
- the building makes an important contribution to the listed heritage items in the immediate vicinity.

6 Munderah Street, Wahroonga

It is recommended that No.6 Munderah Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- a high degree of significance as one of a pair of houses formerly on adjoining allotments, which were associated with RW McCoy the Crown Solicitor;
- significant as a good and largely intact example of a Late Federation Period / Inter-War Bungalow style residence designed and constructed by the Government Architect as a home for the Crown Solicitor;
- significance as a fine and strong contributory item to the variety of Inter-War style residences within the immediate area;
- a rare example of residential design by Government Architect for Government Appointed personnel (Crown Solicitor).

10 Munderah Street, Wahroonga

It is recommended that No.10 Munderah Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- a high degree of significance as one of a pair of houses formerly on adjoining allotments, which were associated with the McCoy family;
- significant as a good and largely intact example of a Inter-War Georgian Revival Bungalow style residence designed and constructed by the Government Architect W.L Vernon;
- significance as a fine and strong contributory item to the variety of Inter-War style residences within the immediate area; and
- the building makes an important contribution to the listed heritage items in the immediate vicinity.

1564 Pacific Highway, Wahroonga

It is recommended that No. 1564 Pacific Highway Wahroonga, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the house at No. 1564 Pacific Highway Wahroonga is a fine and largely intact two storey example of an Inter-War Old English style residence located on a prominent corner site on the Highway;
- the building, with its neighbour, No 1566 Pacific Highway contributes to the context of the listed heritage item in the immediate vicinity and the potential items in Gilda Avenue.

1566 Pacific Highway, Wahroonga

It is recommended that No. 1566 Pacific Highway Wahroonga, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- the house at No. 1566 Pacific Highway, Wahroonga, is a fine and largely intact two storey example of an Inter-War Old English style residence located on a prominent site on the Highway;
- the building is representative of the variety of detail in similar style residences of the period; and
- the building, with its neighbour, No 1564 Pacific Highway contributes to the context of the listed heritage item in the immediate vicinity and the potential items in Gilda Avenue.

1 Water Street, Wahroonga

It is recommended that No. 1 Water Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significant for its ownership by the Bennett family for over 90 years and its association with the architect Howard Joseland;
- representative of the residential development within the Wahroonga Heights Estate from the inception of the Wahroonga Progress Association;
- significant as a fine and largely intact example of a modest bungalow in the Federation Queen Anne style located on a prominent corner location; and
- the building makes an important contribution to the context of the many listed heritage items in the immediate vicinity.

59-61 Water Street, Wahroonga

It is recommended that No. 59-61 Water Street, **SHOULD BE INCLUDED** as a heritage item under the control of the Ku-ring-gai Planning Scheme Ordinance for the following reasons:

- significant for its association with the Andreas Von Faber-Castell family;
- significant as a good and largely intact example of an early Post- War residence constructed in the popular Inter-War Georgian Revival style; and
- the building has social significance for its contribution to the character of the immediate area throughout the second half of the 20th Century.

DESIGN OPTIONS FOR ENTRY SIGNS

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To report to Council on the preferred options for the design and locations for the erection of Council's entry signs.

BACKGROUND:

At Council's meeting of 28 February 2006, Council considered a Notice of Motion on the installation of entry signs at various locations on the boundaries of the Council's border on main and regional roads.

COMMENTS:

Claude Group was selected as the preferred consultant and a project brief was prepared.

The next phase of the project involves consultation with the community and this will be undertaken with a focus group on 21 June 2006. Following this process, the proposed designs will be placed on public exhibition.

RECOMMENDATION:

That the preferred design options for the entry signs be placed on public exhibition for a period of 28 days and that any comments reported back to Council.

PURPOSE OF REPORT

To report to Council on the preferred options for the design and locations for the erection of Council's entry signs.

BACKGROUND

At Council's meeting of 28 February 2006, Council considered a Notice of Motion on the installation of entry signs at various locations on the boundaries of the Council's border on main and regional roads.

The locations for the entry signs would be located at:

- a. each end of the Pacific Highway at Roseville and Wahroonga
- b. Mona Vale Road at St Ives
- c. Ryde Road at West Pymble
- d. Junction Road at Wahroonga
- e. Archbold Road at Roseville
- f. Boundary Street at Roseville
- g. Lady Game Drive at Lindfield
- h. The Comenarra Parkway at Wahroonga

Council resolved as follows:

- A. *That Council seek quotations from three (3) suitably qualified graphic design artists for the design of 'entry signs' to the Ku-ring-gai Local Government Area and that those designs reflect, in part, the Centenary of Local Government.*
- B. *That 'entry signs' be located at the above locations*
- C. *That three (3) options for the design, together with the costing, be brought back to Council within 3 months*
- D. *That the cost of the design work carried out by the graphic artist and the entry signs be funded from the bus shelter reserves to a maximum value of 50% of the Centenary Year's bus shelter advertising revenue.*

Expressions of interest documents were sent to four (4) graphic design art consultants in March 2006 that were considered suitable of providing the design services to Council. At the time of closing in April 2006, only two companies expressed an interest in providing the service to Council.

In early May 2006, the two consultants were requested to make a presentation to interested Councillors and relevant staff. Following the presentation, an assessment of the performance against the criteria that the consultants were required to address was carried out and the preferred consultant was selected. **Attached** is a copy of the assessment of the two consultants.

COMMENTS

Claude Group was selected as the preferred consultant and a project brief was prepared. A copy of the signed consultant brief is also **attached** to this report.

Since this time, the consultant has undertaken briefing sessions with interested Councillors and staff to advise of the background and theme for the designs. The theme of the designs is meant to represent the tall blue gum high forest trees and also represent the building materials used in the construction of the homes in the area.

The locations for the signs have been investigated and generally determined however, further investigation and assessment is required for some sites as it will involve inspections for utility locations and consultation with the Roads and Traffic Authority (RTA), nearby residents and in some cases Hornsby Council.

The type of design has developed to a stage where the consultant has prepared three (3) options for the entry signs. **Attached** are the proposed design options for the entry signs. The sizes and material selections still need to be determined so that the estimates of cost can be assessed.

There is no requirement to submit a development application for the entry signs as the signs will be located in the road reserve. However, consultation with the community, directly affected residents and the RTA will be required. Also, details of the proposed signs and locations will be placed on public exhibition for community comment.

CONSULTATION

Consultation with members of the community is scheduled for Wednesday 21 June 2006 at 6.00pm. The outcomes of the consultation will be reported back to Council as the meeting will be held after the preparation of this report. Further consultation will be held in the form of public exhibition with displays proposed for Council's libraries, Council Chambers and on Council's web site.

FINANCIAL CONSIDERATIONS

The design and installation of the entry signs is expected to be under \$125,000 and a further report on the cost of the works will be advised when further details are known.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

Consultation has taken place with Community Services in the selection process and the organising of the community consultation. Other Departments have been informed of the process and the proposed design options for the entry signs.

SUMMARY

Claude Group was selected to undertake the design and installation of the entry signs.

A project brief was prepared and several information sessions have been held between interested Councillors and staff to determine the preferred options for the design of the entry signs.

Investigation of the preferred locations has taken place but further refinement and consultation is required. Subject to Council endorsing the preferred options for the design of the entry signs, consultation will take place with directly affected residents and the Roads and Traffic Authority.

Based on the current project time frame for the entry signs, it is expected that installation will take place around October/November 2006.

RECOMMENDATION

- A. That Council endorse the concept designs options as attached to this report.
- B. That the design options for the entry signs be placed on public exhibition for a period of 28 days and that any comments reported back to Council.
- C. That a report be brought back to Council with comments from the consultation process with details of the preferred design and the estimate of cost for the installation of all the entry signs at the preferred locations.

Greg Piconi
Director Technical Services

Attachments: **Selection criteria for preferred company - 608449**
 Design brief for the work - 616141
 Concept design options - 628841

8 May 2006

MEMORANDUM

TO: MAYOR AND COUNCILLORS

FROM: DIRECTOR TECHNICAL SERVICES

SUBJECT: **ENGAGEMENT OF CONSULTANT FOR THE DESIGN OF COUNCIL'S ENTRY SIGNS**

A presentation was held on Thursday 4 May 2006 by two (2) consultants for the preparation of concept designs for Council's proposed new "Entry Signs".

Attached is a copy of the score sheet showing the assessment of the material in their submission and provided to those in attendance at the presentation.

Based on the assessment, the Claude Group has been selected to undertake the design work on the concept designs. This company also has the resources to manufacture and install the signs on Council's behalf. Please find **attached** a copy of their response to the Expressions of Interest.

The next stage of the project will be the evaluation of concept design options and a meeting will be held in due course to present a preliminary sketch to Council prior to developing the concept options. The design work will involve research into the Council area to help develop signs that represent the Council area. You will be further advised when the consultant will be in a position to present the preliminary design sketches to Council.

Greg Piconi
Director Technical Services

ASSESSMENT OF CRITERIA FOR ENTRY SIGN CONSULTANCY

Below is the score sheet rating the company's suitability to undertake the consultancy based on the information submitted and presentation to Councillors and Senior staff.

QUESTIONS	ENVIRON ART & DESIGN	CLAUDE GROUP
Task Analysis – actions and steps.	7 Covered all steps involved but site investigation process limited	9 Covered all the steps involved in the process including site investigation and installation processes
Details of experience in process.	8 Broad experience with other Councils.	7 Limited experience with other Councils but experience with companies.
Level of detail in concept stage.	6 Limited level of detail in concept designs	8 Extensive amount of detail in concept designs
Cost involved in preparing concepts, final designs and manufacturing.	7 Reasonable cost details based on estimated hours	8 Cost details within Council budget and rates are reasonable
Proposed involvement in manufacture and installation.	6 Supervision only	9 Extensive involvement and have their own engineering design and manufacture processes.
What level of assistance is required from Council.	7 Assistance would be required for site investigation and supervision of installation	10 Can manage the whole process.
Examples of designs expected for Council budget.	7 Good public art examples but limited examples of entry signs.	8 Good examples of entry signs but limited examples of contemporary style signage.
TOTAL	48	59

Scoring: 10 – excellent 5 – Fair 1 - Poor

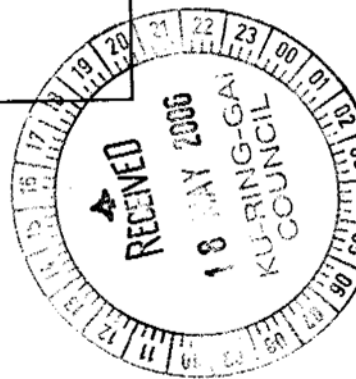
KU-RING-GAI COUNCIL

Celebrating 100 years 1906 to 2006

PROVISION OF DESIGN AND INSTALLATION SERVICES FOR COUNCIL ENTRY SIGNS

PROJECT BRIEF

May 2006



1. Introduction

The entry signs are intended to represent a new era for Ku-ring-gai with the Council area on the verge of major change. This will be evident over the coming years with increased residential development and redevelopment of the major town centres.

Ku-ring-gai has been typically characterised by large stately homes built in a heavily treed environment adjoining national parks and bushland reserves. The shopping centres tend to be small scale village type shopping centres around the railway stations. The area is traversed by two major arterial roads being the Pacific Highway and Mona Vale and Ryde Roads.

The design of the entry signs is intended to reflect the following characteristics:

- The history of the area.
- The heritage values of Ku-ring-gai in terms of the built environment and recognition of the indigenous people and their background.
- The bushland and tree landscape including threatened species.
- Existing signage and bus shelter themes and colours.
- Council's cultural background
- Modern and innovative

The project is to be consistent with Ku-ring-gai Council's Public Art Policy (1998) and Cultural Plan which are attached to this brief. Copies of these documents are available on Council's website at www.kmc.nsw.gov.au under the Cultural Development section.

As 2006 is a significant year for this Council as Council is currently celebrating its Centenary. The theme of the entry signs should also reflect Council's Centenary.

2. Siting of proposed entry signs

The suggested locations for the entry signs would be located at:

- a. each end of the Pacific Highway at Roseville and Wahroonga
- b. Mona Vale Road at St Ives
- c. Ryde Road at West Pymble
- d. Junction Road at Wahroonga
- e. Archbold Road at Roseville
- f. Boundary Street at Roseville
- g. Lady Game Drive at Lindfield
- h. The Comenarra Parkway at Wahroonga

Council staff can assist with the siting and investigation of the proposed signs and structures and can also assist with the installation of the signs if required.

3. The Artwork or Design of the signs

Council will need to advise of its acceptance to the preferred concept design for the entry signs and a presentation will be arranged with interested staff and Councillors on the preparation of the concept designs. The processes are intended to be as follows:

- Preparation of preliminary sketches and photographs of similar designs including presentation to interested staff and Councillors.
- Consultation with various local interest groups and various staff responsible for public art and signage.
- Presentation to Council on three (3) concept options including likely costs for manufacture and installation.

4. Consultation

Community consultation will be required through a public exhibition process on the three (3) concept options in order to gauge community feedback and support for the project. Consultation will also be required with any property owner or residents that are likely to be affected by the siting of the signs. Public consultation will involve public exhibition for a period of 28 days and the results of this process will need to be reported to Council.

As the signs are to be located on major and sub arterial roads, consultation will be required with the Roads and Traffic Authority seeking consent and conditions associated with the installation of the entry signs.

5. Timeframe

The overall timeframe will need to be advised to Council but the installation of the signs will need to be completed before December 2006 which is Council's Centenary year but preferably installed by October/November 2006..

A project timetable will need to be submitted to Council and should highlight the following milestones:

- Site visits
- Preliminary sketches
- Consultation with stakeholders
- Submission of concept designs for 3 options
- Public exhibition
- Report to Council and endorsement of preferred design and estimated costs.
- Engineering drawings and specifications
- Roads and Traffic Authority concurrence and conditions
- Manufacture
- Installation

6. Budget

The total budget for the project is approximately \$125,000 but must not exceed \$150,000. This must include:

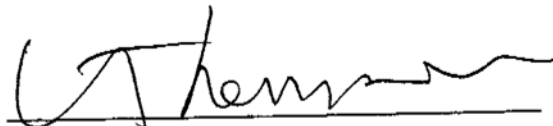
- Consultation
- preliminary design sketches
- preparation and decision making associated with concept design options
- site investigation
- engineering drawings and documentation
- manufacture
- installation costs.

All enquiries relating to the project are to be through Mr Greg Piconi, Director Technical Services on **9424 0796**.

Signed

LAYTON THOMSON
Name of company representative

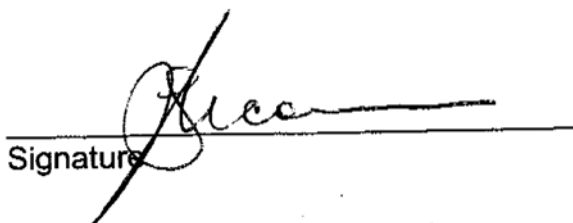
ART DIRECTOR CLAUDE GROUP
Position and Company Name


Signature

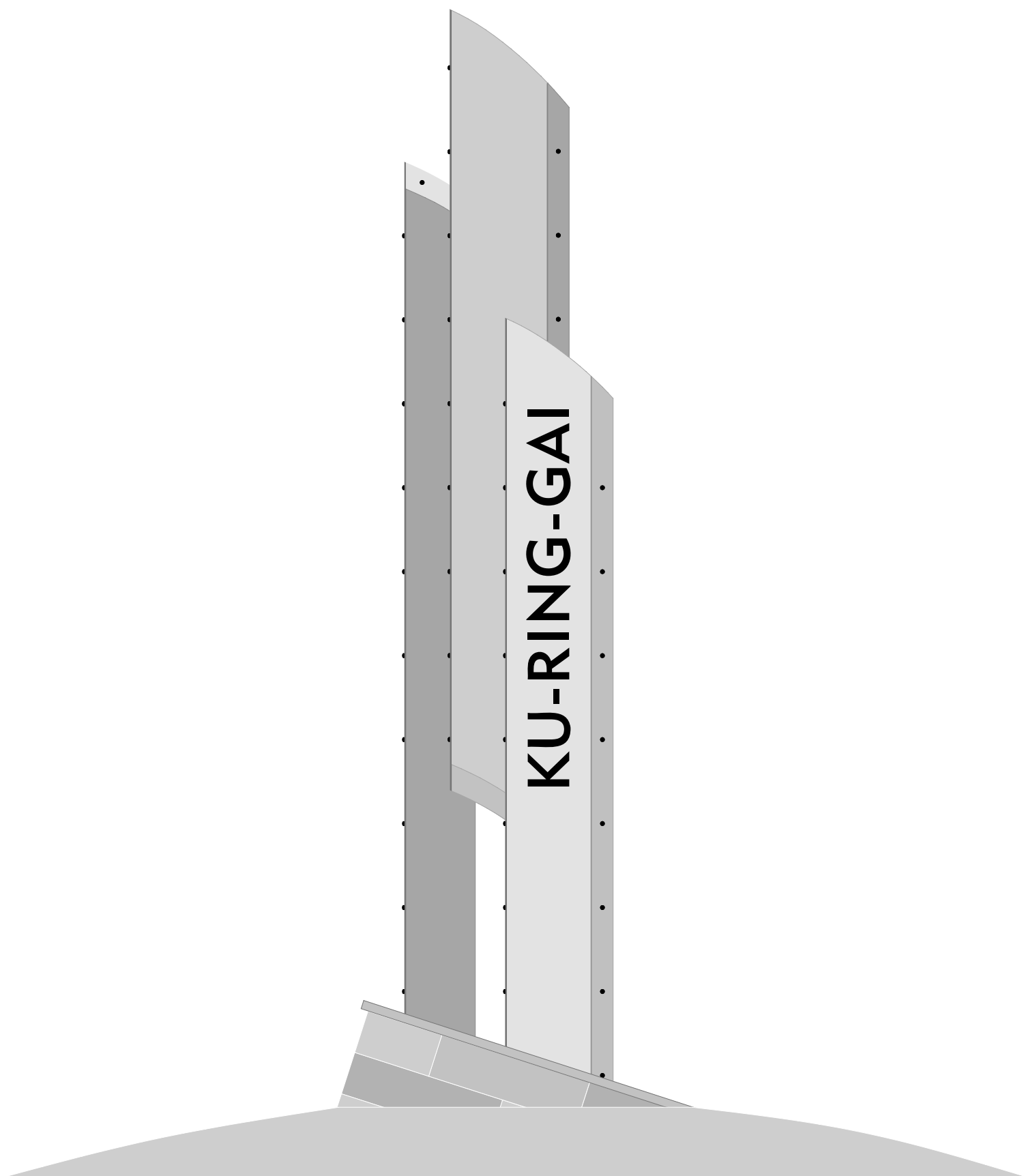
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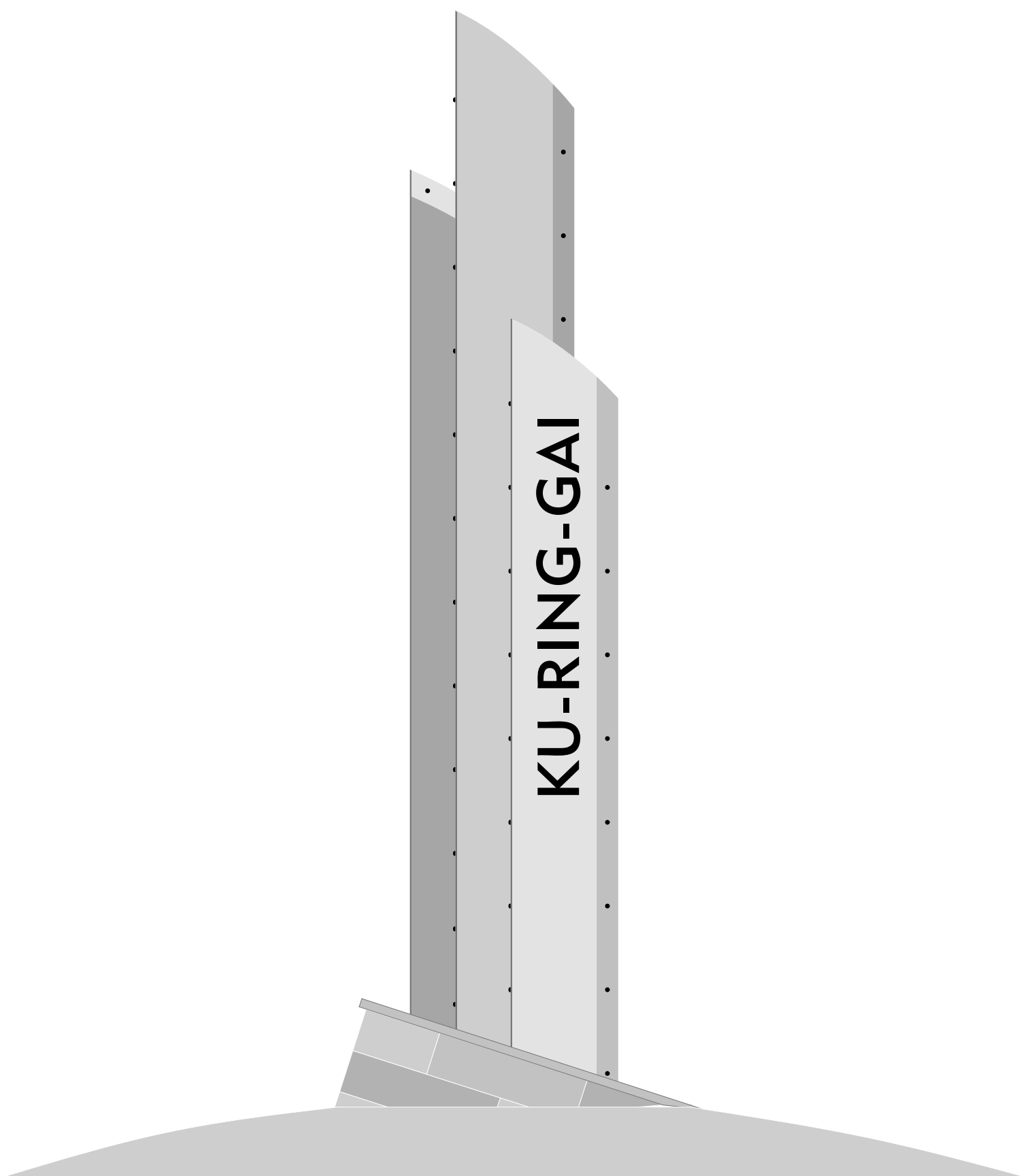
GREG PICONI
Ku-ring-gai Council representative

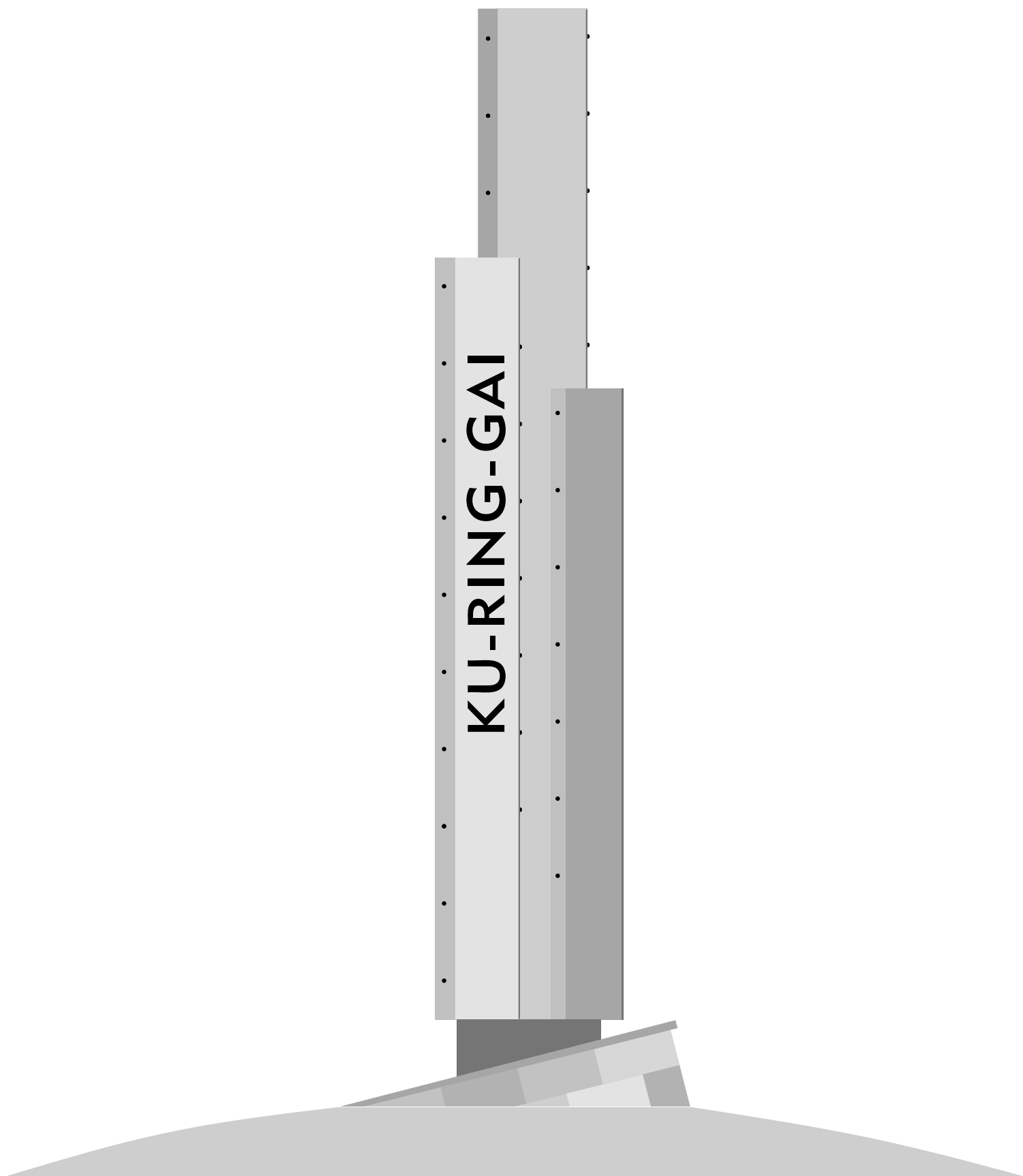
DIRECTOR TECHNICAL SERVICES
Position Title


Signature

18th MAY 2006.
Date







TOWN CENTRES PLANNING - EXTRAORDINARY MEETINGS OF COUNCIL

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

To request Council to hold two extraordinary meetings in July and August 2006, to allow Council to consider the draft Local Environmental Plan and draft Development Control Plan for Gordon and Pymble Centres in late July and for Lindfield and Roseville in August 2006.

BACKGROUND:

This report outlines the need to have two extraordinary meetings of Council to consider the draft LEPs and draft DCPs in accordance with Council's adopted time frame for completing planning for the 6 Town Centres.

COMMENTS:

A timeframe and milestones for completion were put forward and adopted by Council on 7 February 2006. To date this timetable has been complied with to meet the Minister's Section 55 Direction for the Town Centres and to have them completed by 31 December 2006.

RECOMMENDATION:

That extraordinary meetings of Council be held on 26 July 2006 to consider the proposals for Gordon and Pymble draft Local Environmental Plan and draft Development Control Plan and 17 August 2006 for the Lindfield and Roseville draft Local Environmental Plan and draft Development Control Plan.

PURPOSE OF REPORT

To request Council to hold two extraordinary meetings in July and August 2006, to allow Council to consider the draft Local Environmental Plan and draft Development Control Plan for Gordon and Pymble Centres in late July and for Lindfield and Roseville in August 2006.

BACKGROUND

On 7 February 2006 Council adopted a timeframe for meeting the planning requirements under Council's Section 55 Direction for the Town Centres Program.

COMMENTS

To complete the next stage of planning for the centres, the following dates are proposed for July / August 2006:

July 2006 – Key Dates

- July 12 - Planning Committee – Presentation on Gordon and Pymble key sites and Lindfield and Roseville updates.
- July 14 - Release of business paper – preliminary exhibition period commences – Gordon and Pymble Centre.
- July 26 - Extraordinary meeting of Council to consider draft LEP and draft DCP for Gordon & Pymble

August 2006 key dates

- August 1 - Planning Committee – Lindfield and Roseville overview of LEP and DCP.
- August 7 Release of business paper - preliminary exhibition commences.
- August 17 Extraordinary meeting of Council to consider draft LEP & draft DCP for Lindfield and Roseville.

Adoption of these dates will allow Council to exhibit and adopt final plans (subject to Department of Planning approval to exhibit) in accordance with timeframes adopted by Council in February, 2006.

CONSULTATION

Not required for this report. The proposed extraordinary Council meeting will facilitate improved community review and input into the draft plans and assist in the public participation process.

FINANCIAL CONSIDERATIONS

Covered by the Urban Planning budget.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

All departments involved in the development of plans for each Town Centre have been involved in the development of these timeframes.

SUMMARY

This report outlines the need to have two extraordinary meetings of Council to consider the draft LEPs and draft DCPs in accordance with Council's adopted time frame for completing planning for the 6 Town Centres.

RECOMMENDATION

- A. That an extraordinary meeting of Council be held on 26 July 2006 to consider the draft Local Environmental Plans and draft Development Control Plans for Gordon and Pymble centres.
- B. That an extraordinary meeting of Council be held on 17 August 2006 to consider the draft Local Environmental Plans and draft Development Control Plans for Lindfield and Roseville centres.

Antony Fabbro
Manager Urban Planning

Steven Head
Director Open Space & Planning

METROPOLITAN STRATEGY

EXECUTIVE SUMMARY

PURPOSE OF REPORT:

For Council to consider its position for sharing of dwelling and employment targets with Hornsby LGA toward the Northern subregion component of the Metropolitan Strategy.

BACKGROUND:

A component of the Sydney Metropolitan Strategy is the preparation of housing and employment targets.

COMMENTS:

Council is required as part of the Sydney North Sub-Region to provide its contribution to dwelling targets.

RECOMMENDATION:

That the Mayor, General Manager and Director Open Space and Planning be delegated to resolve the matter with Hornsby Council (including their Mayor and staff as appropriate).
That Council determine a figure for the purposes of this negotiation. That staff enter yield and centre typology consistent with the tables outlines in this report and final figures negotiated with Hornsby Council into the Model.

PURPOSE OF REPORT

For Council to consider its position for sharing of dwelling and employment targets with Hornsby LGA toward the Northern subregion component of the Metropolitan Strategy.

BACKGROUND

Metropolitan Strategy

In an effort to provide for and guide the future development of Sydney covering employment and residential needs the State Government have developed the Metropolitan Strategy.

Given likely population growth and demographic change it has been outlined that the city will need approximately 500,000 new dwellings by 2031, the period covered by the Metropolitan Strategy.

Detailed information regarding background to the Metropolitan Strategy, its aim and process have previously been disseminated to Councils and can be downloaded from www.metrostrategy.nsw.gov.au.

The Strategy is effectively based on a concentration of growth of centres around retail/ commercial precincts with complementary services such as transport as the most effective means of delivering growth in a way which will improve the liveability of the city, provide a mix of uses and activities in every area and promote the centres as stronger focal points for local residents.

A hierarchy of centres has been identified which include neighbourhood, small village, village, town centre and major centre to assist in identifying current and future centre types and to identify potential dwelling yields within these areas.

A significant component of the Metropolitan Strategy is the allocation of residential dwelling and employment targets on a subregional basis. A combined figure for the Hornsby and Ku-ring-gai LGA's has been identified which requires a dwelling increase of 20,000 additional dwellings. This figure represents the expectation of residential dwelling increase on the ground by 2031. This figure is required to be allocated across both Hornsby and Ku-ring-gai. It should also be noted that this figure is the requirement for growth of actual dwellings and that appropriate zoning will be required considerably above this figure as the full potential of zonings are often not realised.

Subregional Metrix Model

To assist in the development of yield targets consistent with the various centre typologies, to provide a means for testing alternative distribution of dwelling yields and to aid in monitoring of actual dwelling increases the Department of Planning have developed a software tool utilising Geographic Information Systems overlaid with various layers of data based on Australian Census Collector Districts.

Item 12

S02315, S02342
27 June 2006

Based on the census collector districts and Sydney Water connections, a benchmark number of actual dwellings for all LGA's have been established. For Ku-ring-gai the total dwellings in 2004 were 35,493.

The software tool additionally outlines a number of dwelling assumptions based on centre typology to predict a series of yield targets at 2013, 2021 and 2031. For the Hornsby Ku-ring-gai area this is identified at approximately 36,000 dwellings.

The software tool also provides information on current zoning, potential of existing planning schemes to highlight potential inconsistencies with centre based planning. Areas not provided for within collector districts allocated within specific centres are considered within the model collectively as infill. Significantly collector districts not allocated to a specific centre within the model will incur larger discounts to the take up rate of dwellings outlined for target years 2021 and 2031. That is larger areas will be required to be zoned to produce dwellings that are equivalent to what can be achieved within the centres. This drop in what are referred to as "build our rates" reflects the policy of reducing the amount of additional dwellings in areas not related to centres.

Work to date by Council

Since Council was provided access to the software tool (15 June 2006) staff have undertaken an initial review of both the software tool and information provided by it.

An overlay of Council's own GIS system with dwelling data sources from Proclaim identified to each collector district has been undertaken. This provides an accurate benchmark for Council as of June 2006. This figure of 36,493 represents a growth of 1,000 dwellings from Department of Planning figures of 2004. Further analysis of this figure is being currently undertaken.

Detailed yields anticipated from Stage One of Council's RDS and Stage Two (Centres Planning) are currently being applied to this overlay prior to any actual input of data into the Department of Planning's Subregional Metrix Model. Updates to this program are accessible by the Department and other Councils.

Although allocation of Stage One and Stage Two yields have not been allocated fully to census districts the table below (Table 1) provides a detailed view on potential dwelling yields identified to date. Additional potential dwellings in infill areas outside of 2D3 zones have not been identified.

Item 12

S02315, S02342
27 June 2006

Table 1

**Ku-ring-gai Residential Development Strategy (RDS)
Proposed Dwelling Yields to 2031**

Suburb	Stage 1 <i>LEP 194, LEP 200 & Minister's Targeted Sites</i>		Stage 2 <i>Town Centres</i>		Total <i>Stage 1 + Stage 2</i>	
	<i>Dwellings*</i>	<i>Projected pop'n^</i>	<i>Dwellings#</i>	<i>Projected pop'n^</i>	<i>Dwellings</i>	<i>Projected pop'n^</i>
Roseville	544	968	379	675	923	1 643
Lindfield	1 589	2 828	758	1 350	2 347	4 178
Killara	1 657	2 949	-	-	1 657	2 949
Gordon	1 352	2 407	1 641	2 920	2 993	5 327
Pymble	832	1 481	379	675	1 211	2 156
Turramurra	1 163	2 070	748	1 330	1 911	3 400
Warrawee	351	625	-	-	351	625
Wahroonga	999	1 778	-	-	999	1 778
St Ives	1 815	3 231	753	1 340	2 568	4 571
Total	10 302	18 337	4 658	8 290	14 960	26 627

* Based on 110sqm per dwelling

These preliminary figures assume:

- 80sqm average for shop top units;
- 110sqm average for non shop top units.

^ Occupancy rate assumed to be 1.78 per dwelling. This may be revised down for Stage 2 units.

Item 12

S02315, S02342
27 June 2006

Table 2 below outlines proposed changes to the Centre typology to be included in the final version of the model to be submitted to the Department.

Subregional Plan – Centres Classification

Centre	Current DoP Centre Role	Proposed Centre Role
East Killara	Neighbourhood	Neighbourhood
East Lindfield	Neighbourhood	Neighbourhood
Eastern Rd-Turramurra	Neighbourhood	Neighbourhood
Fox Valley	Neighbourhood	Neighbourhood
Gordon	Town	Town
Hampden Ave Shops-Nth Wahroonga	Neighbourhood	Neighbourhood
Killara	Neighbourhood	Neighbourhood
Lindfield	Small Village	<i>Village</i>
North Turramurra	Small Village	<i>Neighbourhood</i>
Princes St-Turramurra	Neighbourhood	Neighbourhood
Pymble	Small Village	Small Village
Roseville	Small Village	Small Village
Roseville Chase	Neighbourhood	Neighbourhood
South Turramurra	Neighbourhood	Neighbourhood
St Ives	Village	Village
St Ives Chase	Neighbourhood	Neighbourhood
St Ives North	Neighbourhood	Neighbourhood
Turramurra	Village	Village
Wahroonga	Small Village	Small Village
Warrawee	Neighbourhood	Neighbourhood
West Gordon	Neighbourhood	Neighbourhood
West Lindfield	Neighbourhood	Neighbourhood
West Pymble	Small Village	<i>Neighbourhood</i>

COMMENTS

Council is required in conjunction with Hornsby to allocate the 20,000 dwellings required across the two LGA's. The Department of Planning have advised that these figures should be entered into the Metrix software tool by the third joint workshop with Hornsby Council and the Department of Planning. Once finalised, the targets will be binding. Staff from the Department have outlined that the next (third) workshop will be held mid July to early August, but no time has yet been set. It has also been further outlined that work on the employment targets will be discussed in more detail at the next workshop.

In order that discussion and negotiation with Hornsby can proceed, Council will need to adopt its position regarding the number of dwellings.

Item 12

S02315, S02342
27 June 2006

Review of growth of dwellings achieved from 2004 to present and an increase of potential yields from the zoning of the Minister's sites, LEP 194, 200 and from Centres Planning provide for a growth of up to 16,000 dwellings bearing in mind that the actual take up rate for these rezonings will be somewhat lower. Feedback from the meeting of the Mayor and General Manager with the Director General and Acting Executive Director, Metropolitan Planning from the Department of Planning is that a figure considerably less than half of the total for the sub-region being allocated to Ku-ring-gai would represent a satisfactory outcome.

Accordingly the following course of action is proposed:

- 1) That the Mayor, General Manager and Director Open Space and Planning be delegated to resolve the matter with Hornsby Council (including their Mayor and staff as appropriate).
- 2) That Council determine a figure for the purposes of this negotiation.
- 3) That staff enter yield and centre typology consistent with the tables outlined in this report and final figures negotiated with Hornsby Council into the Model.
- 4) That a further briefing be provided for Councillors to outline the final makeup of Council's input to the Model.

CONSULTATION

Much of the information outlined in the subregional Metrix Model has been restricted to Council viewing only. Consequently given this and the timeframes involved, consultation has not been undertaken with the community generally. Various dwelling yields outlined in this report are the collective result of other planning work, of which has been subject to various levels of consultation with and information to the community.

Two briefings have been undertaken with Councillor's in the preparation of dwelling yield targets for Ku-ring-gai.

FINANCIAL CONSIDERATIONS

Financial considerations have not been undertaken in the preparation of this report. Various financial aspects of re-development, viability and impacts on community of the Ku-ring-gai centres LEP are currently being undertaken.

CONSULTATION WITH OTHER COUNCIL DEPARTMENTS

There was no consultation with other Council departments.

SUMMARY

As a component of the Metropolitan Strategy, an increase of dwellings of 20,000 actual residents by 2031 has been allocated to the Sydney North subregion which includes Ku-ring-gai and Hornsby.

Item 12

**S02315, S02342
27 June 2006**

This figure needs to be allocated across both LGA's and final centre typology and associated dwelling targets allocated within the subregional Metrix Model. These will be required to correlate with the agreed targets.

This report seeks delegation of Council for the Mayor, General Manager and Director Open Space and Planning to negotiate an appropriate figure with Hornsby Council.

RECOMMENDATION

- A. That the Mayor, General Manager and Director Open Space and Planning be delegated to resolve the matter with Hornsby Council (including their Mayor and staff as appropriate).
- B. That Council determine a figure for the purposes of this negotiation.
- C. That staff enter yield and centre typology consistent with the tables outlined in this report and final figures negotiated with Hornsby Council into the Model.
- D. That a further briefing be provided for Councillors to outline the final makeup of Council's input to the Model.

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