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LINDFIELD VILLAGE HUB URBAN DESIGN REPORT

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LINDFIELD VILLAGE HUB **URBAN DESIGN REPORT**



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AJ+C acknowledges the Guringai people, the traditional custodians of Ku-ring-gai, and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past, present and emerging.

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INTRODUCTION

EXECUTIVE SUMMARY

This Urban Design Report has been prepared in support of a Planning Proposal which seeks to amend the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 (KLEP (LC) 2012). The amendments relate to planning controls that apply to the land at 1 Woodford Lane, 2-10 Bent Street, part of 12 Bent Street, 1B Beaconsfield Parade, 19 Drovers Way, Drovers Way Road Reserve and Woodford Lane Lindfield. The site is also known as the Lindfield Village Hub.

The Planning Proposal seeks to amend the KLEP (LC) 2012 with respect to the height and floor space ratio provisions at the site. The proposed amendments follow from a previous amendment to the KLEP (LC) 2012 published in March 2017. That previous amendment (i.e. Amendment No.6 to KLEP (LC) 2012) initiated changes to the zoning, height and floor space ratio (FSR) provisions for the site.

The current Planning Proposal responds to the Ku-ring-gai Council (KMC) Draft Local Strategic Planning Statement (LSPS), a 2019 document which outlines KMC's current planning priorities for the Local Government Area (LGA) generally and the Lindfield Local Centre specifically.

It also responds to the Greater Sydney Commission's (GSC) North District Plan, which came into effect in March 2018. The North District Plan requires Council to deliver upon the agreed five year housing target of 4,000 additional dwellings for the period of 2016 to 2021, and requires Council to establish a new 6 to 10-year housing target.

One of the key objectives of the Draft LSPS and North District Plan is the provision of new housing supply, choice and affordability, with access to jobs, services and public transport. Ku-ring-gai Council has also identified through community engagement that residents are seeking greater choice in residential accommodation for all age groups.

In that context, the Lindfield Village Hub site has been identified as a location that is well suited to accommodate increased density in close proximity to an established Train Station and Local Centre.

This Urban Design Report evaluates possibilities for increasing the density at the site, above that which would be possible under the current applicable planning controls. It does this by analysing the existing urban and environmental conditions, considering the constraints and opportunities of the site, and then testing the urban capacity of the site.

Importantly this Report reaffirms the urban design objectives and principles as established in the urban design analysis undertaken in preparing the planning controls in the current DCP. This Report maintains those key urban design objectives and principles, using them as the basis to test new opportunities and urban design outcomes for the site.

Overall, the testing undertaken as part of this Urban Design Report demonstrates that the site is capable of supporting an increase in the intensity of land use through changes to maximum Height of Building (HOB) and Floor Space Ratio (FSR) controls. It demonstrates that the site is capable of accommodating buildings of a greater scale than currently permitted, without resulting in significant adverse impacts in terms of overshadowing, visual massing and resident amenity.

Ultimately, this Report demonstrates that the site is of sufficient size, orientation and topography to allow the increase in development intensity proposed, while maintaining and enhancing the public infrastructure to be delivered at the site.

PROJECT OBJECTIVES

The Lindfield Village Hub is a project funded and directed by Ku-ring-gai Council. The following objectives for the project were defined and developed by Council, and adopted in the August 14, 2018 Ordinary Meeting of Council:

Community Objectives

- · Liveable: a desirable and safe place to live and visit
- · Accessible: community services for all age groups
- · Engaging: local activities, amenities and experiences
- · Cohesive: places, communities and events that bring diverse groups together
- · Adaptable: adaptable to future social and technology
- · Aesthetic: aesthetically pleasing buildings that residents can be proud of

Property & Infrastructure Objectives

- · Active Places: rejuvenated Lindfield Local Centre
- · Open Space: new park and public open space
- · New Facilities: new library and community centre
- · Accessible: new roads and vehicular, pedestrian and cycle facilities
- · Housing: new homes

Financial & Economic Objectives

- · Capital Funding: capital to build new community facilities, excluding any section 94 funding
- · Ongoing Revenue: revenue streams to fund the ongoing costs of running Council's buildings and services
- · Growth: new jobs and population in Lindfield to sustain the local economy
- · Legacy: Council to retain ownership of land and new buildings for future generations
- · Catalyst: investment attracted to Lindfield and Ku-ring-gai

REPORT STRUCTURE

This Urban Design Report is composed of six chapters:

- **1.0** Planning Framework: provides an overview of strategic planning priorities as they relate to the site, and outlines the current statutory controls in order to understand how these may change.
- **2.0 Site Context:** introduces the site of the Lindfield Village Hub project, and describes its local and larger context.
- 3.0 **Design Principles + Option Testing:** establishes design principles for the site and a basic site strategy, tests several design arrangements and then assesses the impacts of each in order to select an option for further development.
- **4.0 Indicative Design Development:** analyses the selected option in detail through plans, sections, diagrams and visualisations.
- **5.0 Recommended Planning Framework:** outlines recommended planning changes for the site to permit the proposal to be delivered.
- **6.0 Appendices:** additional material is provided in support of the conclusions made in the chapters above. This includes impact testing as well as a detailed comparison of the Indicative Design to existing DCP controls and objectives.

PLANNING FRAMEWORK

STRATEGIC PLANNING FRAMEWORK

Greater Sydney Region Plan & North District Plan

A Metropolis of Three Cities - the Greater Sydney Region Plan outlines the NSW State Government's broad strategic planning priorities for metropolitan Sydney, with additional detail provided in the North District Plan.

Lindfield is identified as a Local Centre just north of the Eastern Economic Corridor, which includes the Macquarie Park Urban Renewal Area and Chatswood Strategic Centre. These are connected by Metro trains, with the T1 Epping Line being upgraded to a Metro line as part of the Metro North West works.

The North District Plan set Ku-ring-gai's immediate housing supply target at 4,000 new dwellings between 2016 and 2021. This represents approximately 15% of new housing within the North District.

The identification of Lindfield as a Local Centre establishes the following state priorities for the area:

- · Deliver transit-oriented development and co-locate facilities and social infrastructure
- · Provide, increase or improve local infrastructure and open space
- · Improve walking, cycling and public transport connections including through the Greater Sydney Green Grid
- · Protect or expand retail and/or commercial floor space
- · Protect or expand employment opportunities
- · Integrate and support arts and creative enterprise and expression
- · Support the night-time economy
- · Augment or provide community facilities, services, arts and cultural facilities
- · Conserve and interpret heritage values
- · Accommodate local festivals, celebrations, temporary and interim uses
- · Increase residential development in, or within a walk able distance of the centre
- · Provide parking that is adaptable to future uses and takes account of access to public transport, walking and cycling

These Plans indicate the long-term, broader, economic, social and environmental goals.

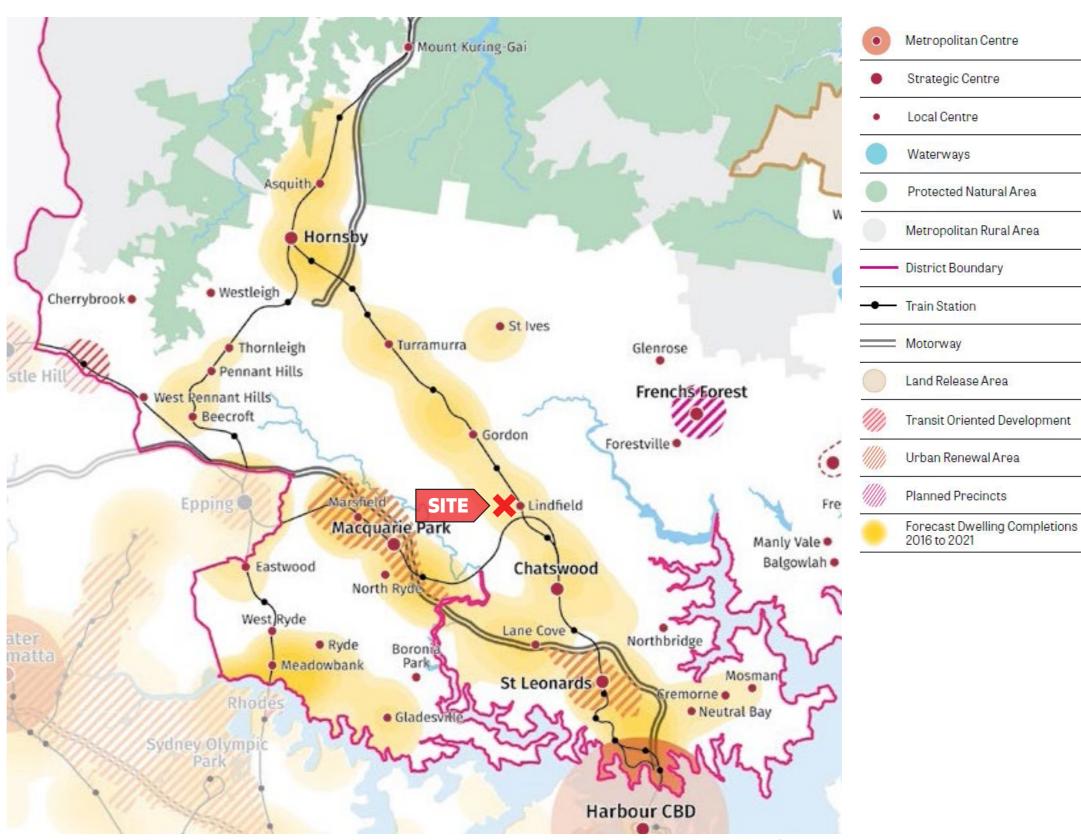


Figure 01: North District Future Housing Supply Map Source: North District Plan (GSC, 2018)

Ku-ring-gai Local Strategic Planning Statement (Draft)

The Draft Ku-ring-gai Local Strategic Planning Statement (LSPS) describes KMC's planning priorities for the Ku-ring-gai LGA and the Lindfield Local Centre specifically.

Several priorities are relevant for the Lindfield Village Hub site:

Planning Priorities (p20):

- · K1. Providing well planned and sustainable local infrastructure to support growth and change
- · K3. Providing housing close to transport, services and facilities to meet the existing and future requirements of a growing and changing community.
- · K7. Facilitating mixed-use developments within the centres that achieve urban design excellence
- · K14. Providing a range of cultural, community and leisure facilities to foster a healthy, creative, culturally rich and socially connected Ku-ring-gai
- · K17. Providing a broad range of open spaces, sporting and leisure facilities to meet the community's diverse and changing needs

Lindfield Local Centre Structure Plan (p76-79):

- · Improve the visual link between the Pacific Highway and Woodford Lane.
- Support the two-sided nature of Lindfield by providing a vibrant mix of retail, open space and community facilities on each side of the centre so that residents need not travel between the sides to meet their daily needs.
- · Redress the historical imbalance of the centre by providing a new mixed use community hub on the western side of the centre as a vibrant new community heart for residents.
- · Maintain and upgrade existing, and provide new, pedestrian lanes and arcades through the main street shops.
- Provide new traffic signals at [the] intersection of Beaconsfield Parade and Pacific Highway.
- · Deliver the Lindfield Village Hub as a new revitalised retail precinct.
- Create new public streets connecting Beaconsfield Avenue
- · Provide a new town square and park as part of the Lindfield Village Hub Project.
- · Create a small urban plaza by closing Bent Street at the intersection of Pacific Highway.

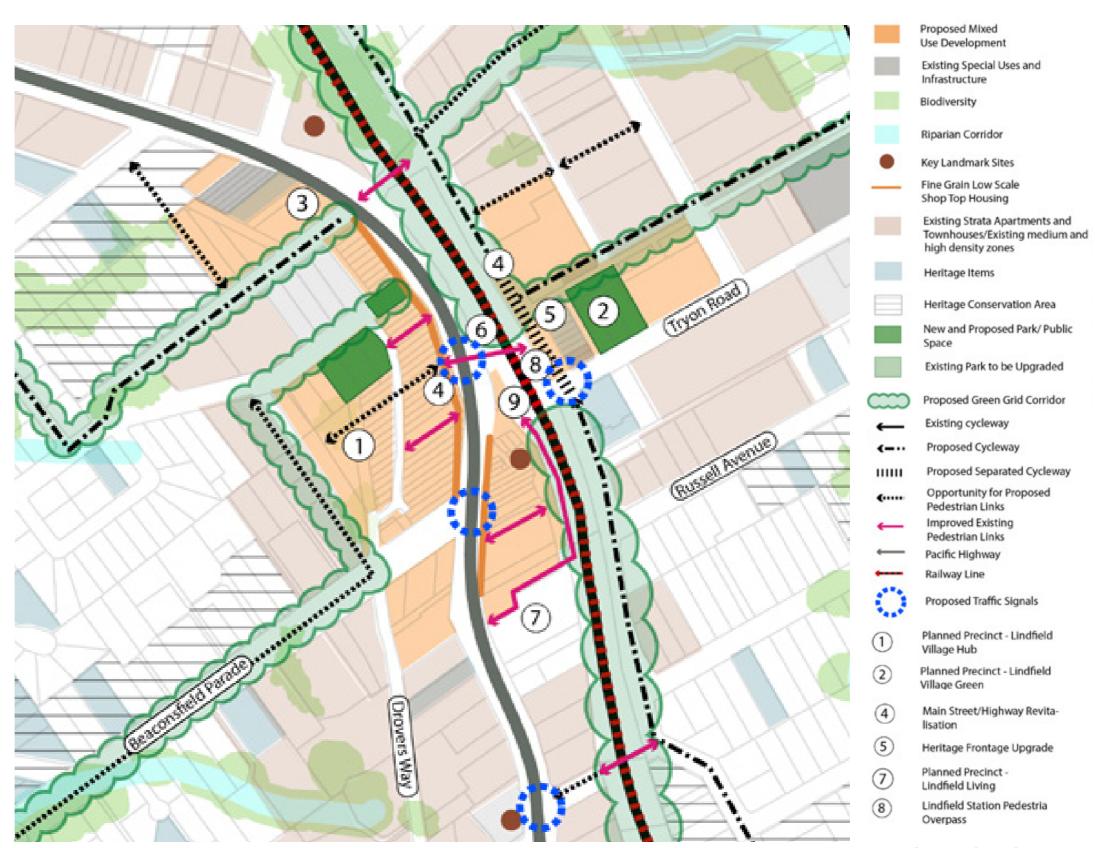


Figure 02: Lindfield Local Centre Structure Plan Source: Ku-ring-gai Draft Local Strategic Planning Statement, p79 (KMC, 2019)

1.2 STATUTORY PLANNING FRAMEWORK

KMC LOCAL ENVIRONMENTAL PLAN (LOCAL CENTRES) 2012

The KLEP(LC) 2012 applies to the Turramurra, St Ives, Pymble, Gordon, Lindfield and Roseville town centres only. The KMC LEP 2015 applies to the remainder of the municipality. In March 2019, KMC submitted a Planning Proposal to merge the two into a single LEP.

The KLEP(LC) key controls for the majority of the Hub site are:

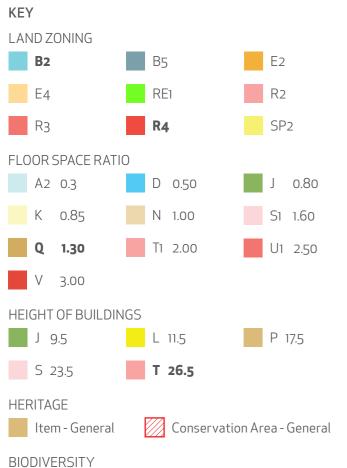
• Floor Space Ratio 1.30:1

Height of Buildings 26.5h jvv metres
 Land Use Zoning B2 Local Centre

The site is not within a conservation area and does not contain any heritage listed items. There are two nearby conservation areas north-west and south-west of the site.

There are two areas of biodiversity within the site; to the south and near the centre of the site. There are also significant areas of biodiversity to the near north, south and east of the site.







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Areas of Biodiversity Significance

KMC LOCAL CENTRES DEVELOPMENT CONTROL PLAN

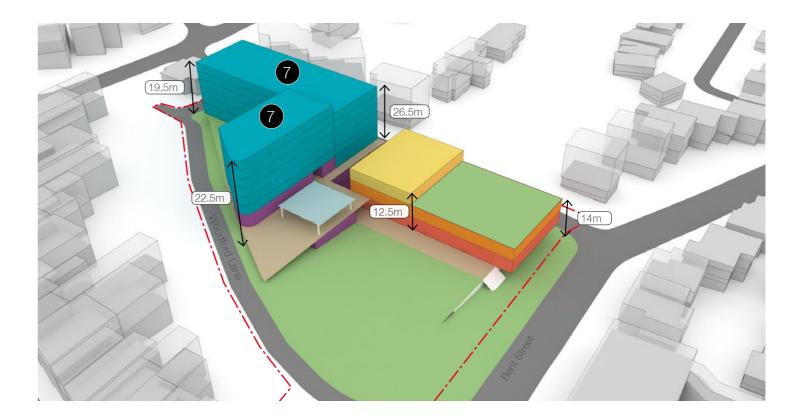
The Ku-ring-gai Local Centres Development Control Plan (KLCDCP) covers the same areas as the KLEP(LC). It contains prescriptive, design-specific controls intended to deliver a particular built outcome (shown in Figure 04, henceforth referred to as the DCP Master Plan). The full master plan report, as submitted with a 2016 Planning Proposal for the site, is referenced by the KLCDCP both in the main body of the document and as an appendix.

The site design required by the KLCDCP would involve:

- · A park on the north eastern corner of the site, set 5-metres below Woodford Lane
- · An east-west open-air cross-site link that doubles as a plaza, raised above the park with a stair connection to Drovers Way
- · Retail frontage along the plaza/cross-site link
- · Library with Community and Day Care over (5-storeys total) at the park level
- · A supermarket underneath the park
- · 7-storeys of residential over commercial or retail ground floors, in an L-shape format oriented southwest
- · A small commercial tenancy on the southwest corner of the
- · Three loading and parking entrances along Drovers Way and Woodford Lane South
- · 4 levels of underground parking

The controls and diagrams included in the KLCDCP are included in Appendix 2, Figures 112-125, and compared to the Indicative Design as outlined later in this report.





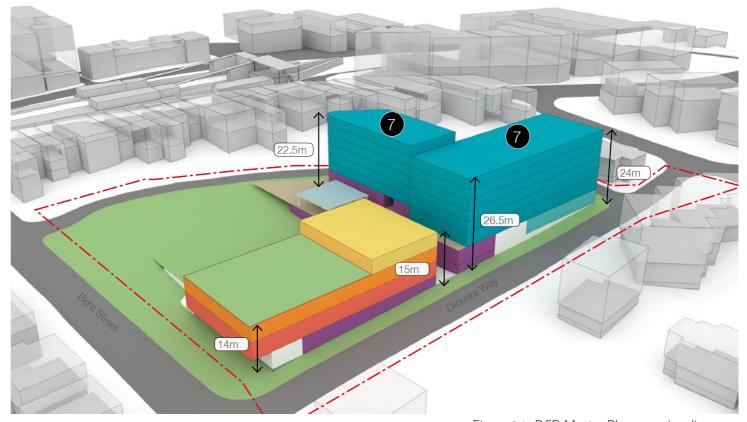


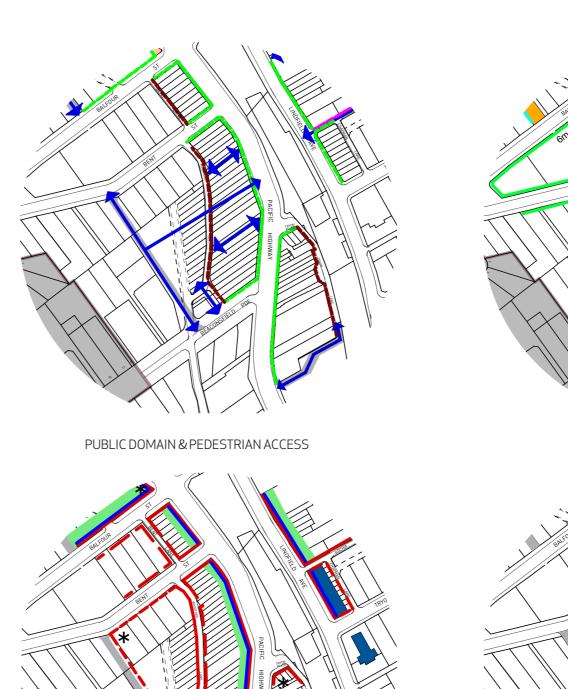
Figure 04: DCP Master Plan, massing diagrams source: KLCDCP 14-171, images by SJB Architects

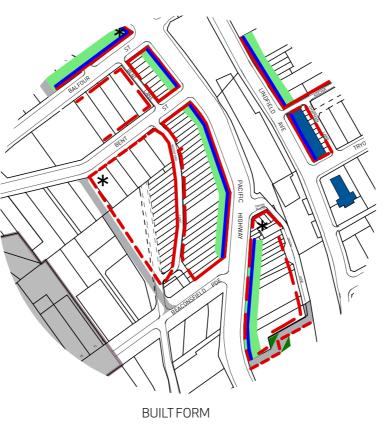
As well as the design-specific controls, the KLCDCP also establishes general guidelines for the site and surrounding local centre, including:

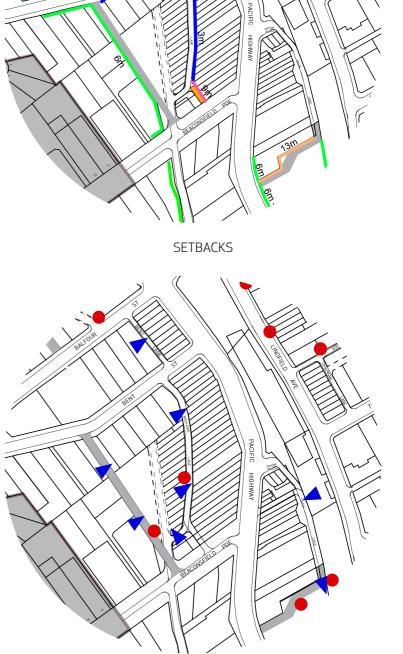
- $\cdot\;$ The extension of Drovers Way, aligning with the western boundary
- · Principal active frontages along Woodford Ln
- · Supporting active frontages along Bent St and Drovers Way
- · A 'landmark building' is identified with an Asterix to the northwest of the site. Its character is not described/discussed.
- · 3m setback requirement along Bent St, with no other setback requirements within the site
- · 3-9m setbacks are required to the rear of the properties facing Pacific Highway. Figure 14E.12-10 of the DCP also increases the 3m area to be "3-6m setback to boundary subject to ADG", effectively creating an additional 3m upper-level setback.
- $\cdot\,$ 6m setbacks are required north of Bent St and along the western site boundary (the future Drovers Way)
- · Through site link to be between Drovers Way and Woodford Ln
- · Through site link(s) to be created through the retail along Pacific Hwy
- · Through site link to be created between Beaconsfield Pde and Woodford Ln
- · Two vehicular access points into the basement along Drovers Way, and one along Woodford Ln.

These controls are illustrated in Figure 05, which are extracted from the KLCDCP.

PUBLIC DOMAIN & PEDESTRIAN **BUILT FORM LEGEND** ACCESS LEGEND - Principal active frontage Supporting active frontage Pedestrian through site link - 3 storey street wall Entry plaza/forecourt 4m upper level setback above Awnings street wall height - Awnings where possible - Landmark building - Colonnade or awning - Heritage item - New/realigned road - Public open space SETBACKS LEGEND - New/realigned road - 15m setback - 13m setback **ENTRIES & ACCESS** - 11m setback - Vehicular access to site - 10m setback - Pedestrian access to site - 9m setback - New/realigned road - 6m setback - 5m setback - 4m setback







ENTRIES & ACCESS

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3m setback

- New/realigned road - Land dedication

Figure 05: DCP Controls

SITE CONTEXT

REGIONAL CONTEXT

The site is located within the Lindfield Local Centre within the Ku-ring-gai Local Government Area, approximately 16km north of Sydney's CBD. Lindfield is part of the traditional lands of the Guringai people, with the suburb name meaning 'clearing in the lime forest.

Most of Ku-ring-gai's urban areas are situated along the northsouth rail and road transport corridor. Lindfield is in close proximity to two smaller neighbourhood centres, Killara and Roseville, a larger local centre at Gordon, and the regional centre of Chatswood. The site is west of a major ridge line along the Pacific Highway.

Connection to Employment Hubs

- · Direct rail connections are available to the major employment centres of Chatswood (7 mins), St Leonards (10 mins), North Sydney (17 mins) and the Sydney CBD (24 mins). The extension of Metro services from Chatswood to the CBD will provide additional connections and shorter trip times.
- · The employment hubs at Macquarie Park and Bella Vista are accessible via the North West Metro by transferring at Chatswood.

Education

- · Macquarie University, a major educational hub, is located approximately 8km to the west. It is accessible via the North West Metro by transferring at Chatswood.
- · The site sits within the catchment of numerous primary and secondary schools.

Retail and Recreation

- · Chatswood, approximately 3km to the south, is the closest regional retail centre. It contains the Westfield Chatswood and Chatswood Chase shopping centres.
- $\cdot\,\,$ The Macquarie Centre, a regional retail and leisure centre, is accessible from the site by rail.
- $\cdot\;$ Lane Cove National Park is located to the west of the site and Garigal National Park is located to the east of the site.
- · A number of small ovals and parks are located within the vicinity of the site.

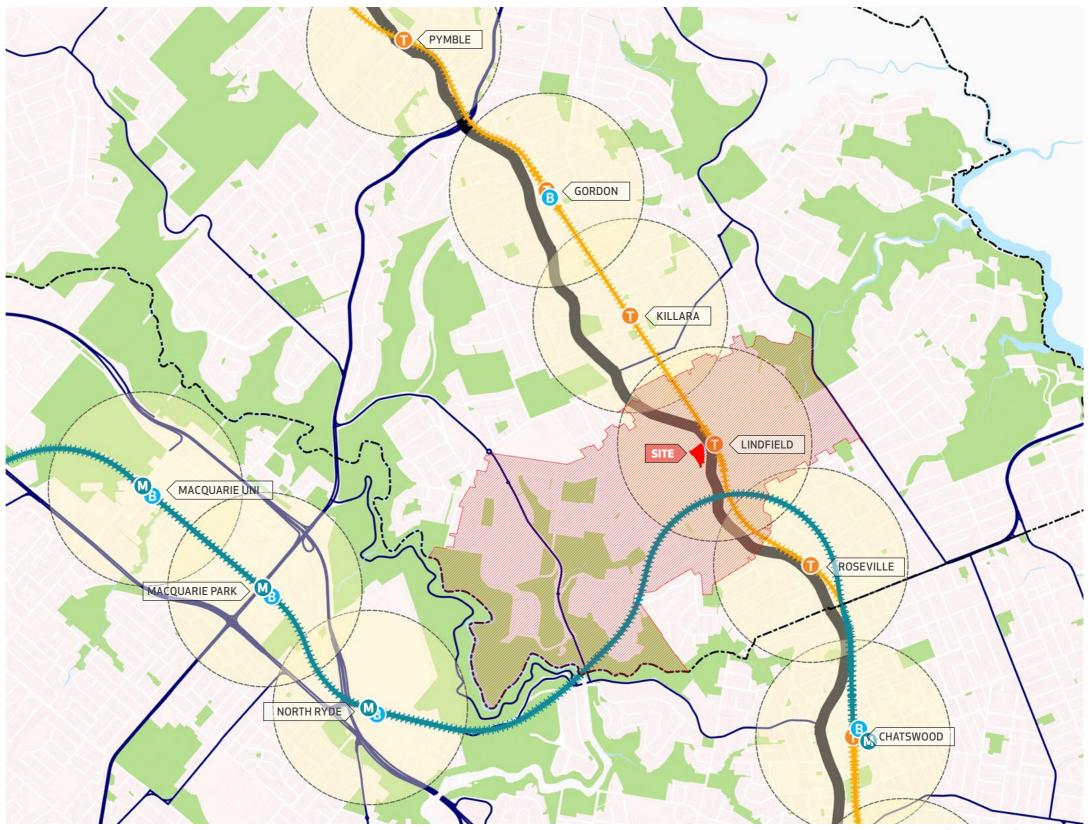


Figure 06: Regional Context Map

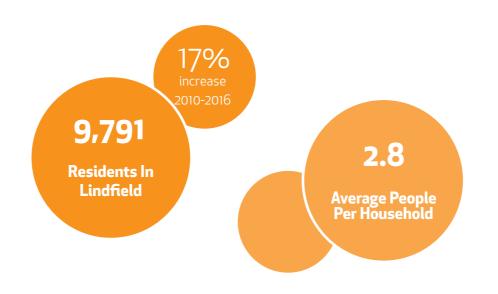
2.2 DISTRICT CONTEXT: DEMOGRAPHICS

ABS data from the 2016 Australian Census indicates that Lindfield, when compared to the Greater Sydney Region, has an older, wealthier demographic residing in denser housing. The suburb of Lindfield, the boundaries of which are identified in Figure 06, has:

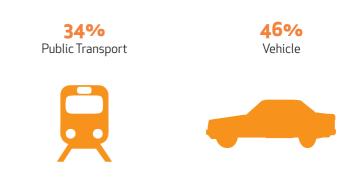
- A greater proportion of residents in Family Households 79% in Lindfield vs. 69% in Greater Sydney
- A greater population 50 and over 34.9% vs. 31.2%
- Similar household sizes 2.77 vs. 2.72
- More residents living in high density housing 33.2% vs. 23.5%
- A similar percentage of residents living in single-family homes 57.7% vs. 55%
- Significantly fewer residents living in medium density housing 8.6% vs. 20.3%
- Greater use of public transport 33.7% vs. 22.3%
- With a corresponding decrease in the amount of residents commuting by car, truck or motorbike 45.6% vs. 58.2%
- Higher cost of housing 56.1% vs. 32.2% in the highest quartile of loans 60.4% vs. 35.0% in the highest quartile of rents
- Higher incomes 50% vs. 30.6% in the highest quartile

Source: Australian Bureau of Statistics, 2016 Australian Census

Ku-ring-gai's Draft Local Strategic Planning Statement (2019) further notes that the increase in population over the last ten years has resulted in greater demand for high density housing along the main transport corridor. The Draft LSPS expects this trend to continue with a population growth of 25% by 2036.



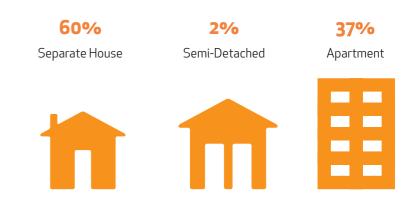
Commuting Mode



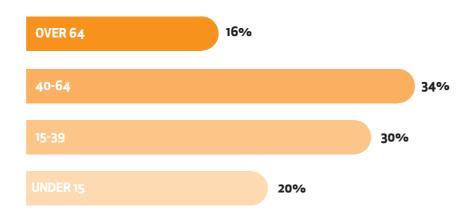
Household Type



Housing Type



Age Distribution



Employment Status

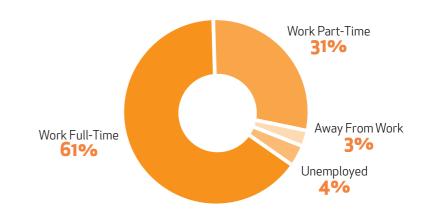


Figure 07: Lindfield Demographics Source: 2016 Australian Census, ABS

2.3 DISTRICT CONTEXT: OPEN SPACE

The NSW Government Architect advises that low- to mediumdensity housing should be provided with access to open spaces within 400m, reduced to 200m for high-density housing. The Lindfield Local Centre is therefore considered to be poorly served by local open spaces, with no existing public space within 400m of the Hub site, as indicated in Figure 08.

Within a larger 800m catchment (an approximately 10 minute walk) of the site there are a number of smaller local parks. Of these, Ibbitson Park, Paddy Pallin Reserve and Two Turners Reserve are all of a suburban character serving a localised catchment.

There are also number of open space and recreational areas across the broader district providing a variety of passive and active recreational opportunities, with parks of significant scale accessible in a 1500m catchment (an approximately 20 minute walk).



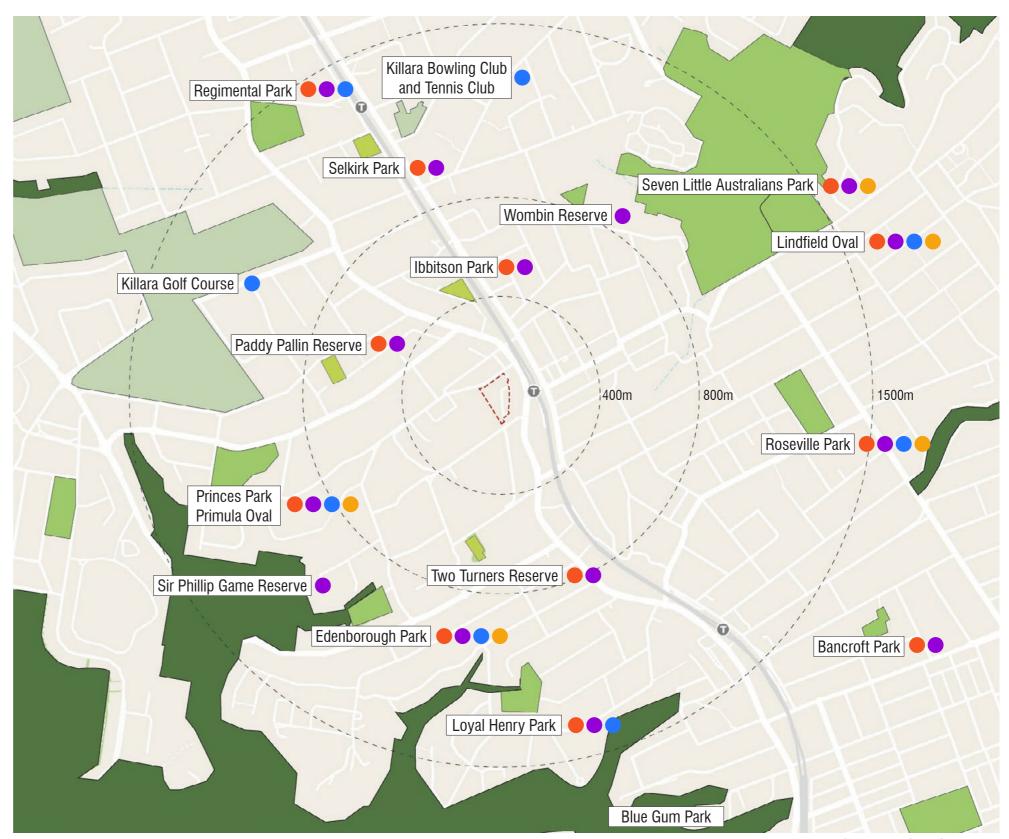


Figure 08: Existing Open Space Map

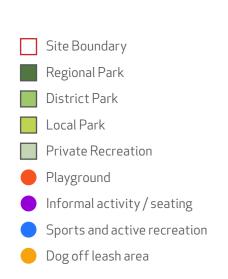
The lack of open space within Lindfield has been highlighted as a strategic priority for KMC, with the KMC Draft LSPS noting the "considerable lack of local parks and publicly-accessible open space within walking distance of the [Lindfield] train station"

Within Lindfield, this is being addressed by several current KMCled projects:

The Lindfield Village Green will provide an underground commuter car park with a public open space above. This will provide a new town square and park approximately 3-minutes walk from the Hub site across the rail line. Development Approval for the Green was secured in August 2018.

The Lindfield Village Hub, which is the site of this Planning Proposal, will provide additional major new public open spaces. The north-facing park proposed for the Hub, in both the existing DCP and the current proposal, will improve the available amenity on the western side of the railway, and will benefit from being co-located with a proposed Library, Community Centre and significant retail component.

Together, these two projects will fill in the local open space 'gap' at the Lindfield Local Centre.



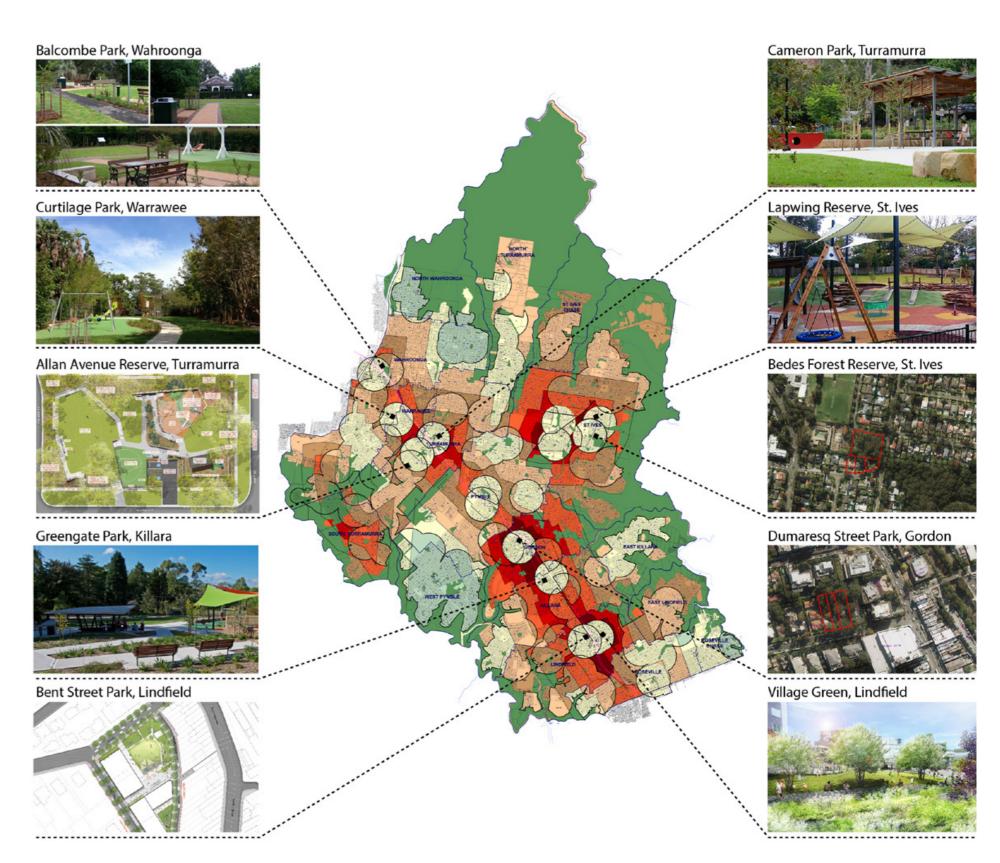


Figure 09: Ku-ring-gai Future Open Spaces Map Source: Ku-ring-gai Draft Local Strategic Planning Statement 2019, p135

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2.4 LOCAL CONTEXT: LINDFIELD LOCAL CENTRE

The Lindfield Local Centre is a long-established neighbourhood that spans the Pacific Highway and both sides of the T1 North Shore Rail Line.

The Rail Line is on a ridge, with the Lindfield Local Centre sloping away to the west and northeast. The topography causes significant walkability issues, with few streets to the west considered accessible.

The centre is characterised by 2-storey shop-top buildings with specialty retail on the ground floors and a single floor of residential or offices above. Current ground-floor uses are highlighted in Figure 10, with a photomontage of the retail strip along the western side of the Pacific Highway shown in Figure 11.

Retail fronting the Pacific Highway includes a supermarket, numerous cafés and restaurants, several bank branches, pharmacies, real estate agents and other specialty retail. To the east of the rail line there are two smaller supermarkets and a mix of specialty retail.

Existing social infrastructure within Lindfield includes St Alban's Church, which has a large community hall, and the existing Lindfield Library. KMC has lodged a Development Application to replace the existing library and two Council-owned tennis courts with multi-residential and small scale retail.

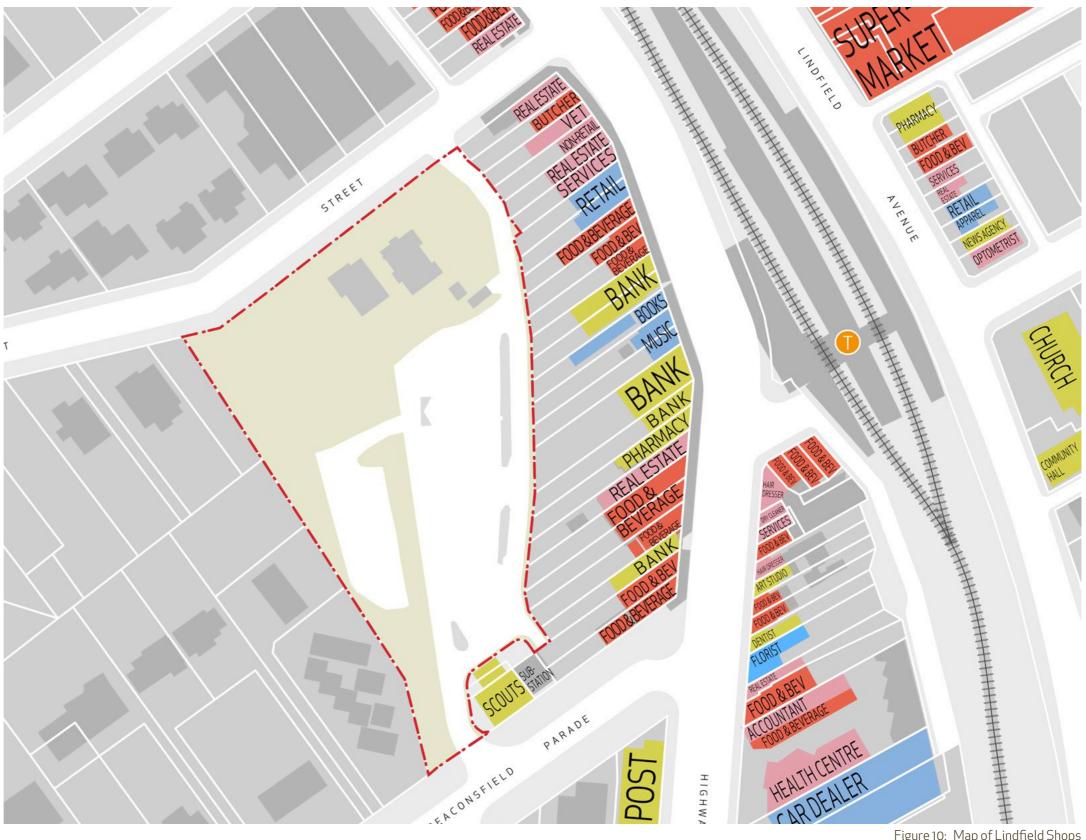






Figure 10: Map of Lindfield Shops



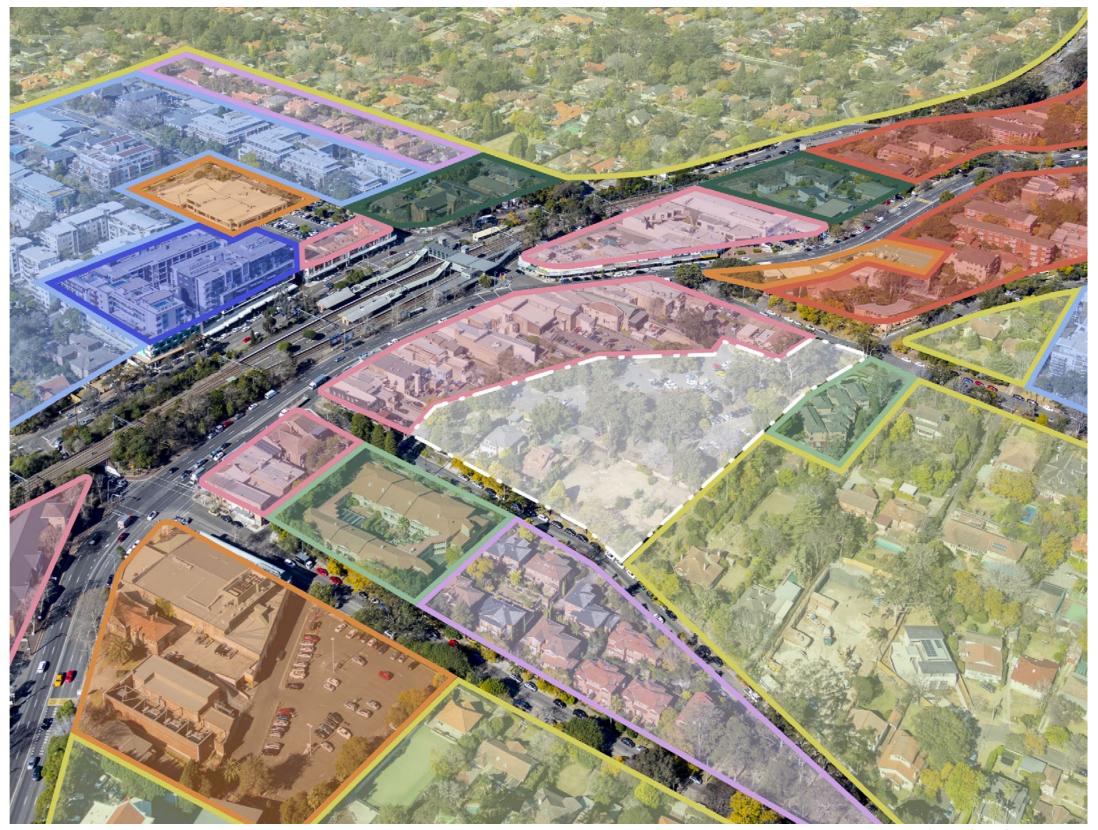
Figure 11: Pacific Highway Streetscape

2.5 LOCAL CONTEXT: BUILT FORM

The built form character in the Lindfield Local Centre is varied, with no particular typology dominating (Figure 12). There are numerous residential flat buildings including shop-top housing east of the rail line as well as smaller scale multi-residential buildings north and south of the Hub site.

The Pacific Highway features small-lot 2-storey retail buildings typical of long established main street retail. As identified in the KMC Draft LSPS, the retail buildings are "largely in the Art Deco style" and have an "intimate scale and original 'high street' character" (Draft LSPS p72). The Draft LSPS identifies a desire to retain these shops in any future development, with new throughblock connections made to Woodford Lane, which should be "a secondary retail street, activating the back of house of the existing shops" (Draft LSPS p76).

The area west of the Hub is a mixture of 1- to 3- storey residential typologies which are mainly single family homes but also include townhouse-style and seniors living.



Key

Lindfield Village Hub Site

Single Detached Dwelling

Walk-up Flat

Multi-Residential

Shoptop Housing

Townhouses

Retirement Village

Multi-Residential Shoptop

Community

Retail/Commercial

Figure 12: Aerial of Lindfield Built Form

2.6 SITE CONTEXT: PHOTOGRAPHS

Site photography shows that the existing site is mostly occupied by a sloping car park and planting, bounded by a service lane as well as two streets of a predominantly residential character.

Woodford Lane runs along the eastern edge of the site and provides access to the rear of the two-storey shops along the Pacific Highway, only a few of which face the Lane. Instead, Woodford Lane is dominated by their service entries, with curb cuts having replaced the majority of the footpath.

The western edge is the low point of the site, with a continued slope towards the northwest. The properties at 3 and 3A $\,$ Beaconsfield Pde house a Seniors Living community, the façades of which face northeast into the Lindfield Village Hub site. The site slope and a low retaining wall obscures the view from these residences up onto the surface car park. On the northwest corner, the neighbouring single family home is largely obscured by a boundary fence and thick planting.

To the north, there are a series of medium-density but low-scale residential developments along the north side of Bent St, with single family homes along the south side. Due to the fall of Bent St, the larger medium density buildings are partly set below the street, varying from one- to two- storeys in appearance. Bent St possesses a strong residential character, with a wide road reserve and significant tree canopy coverage.

Beaconsfield Pde, to the south, has a similarly residential character, although it has a clearer connection to the commercial buildings on Pacific Highway. The Australia Post building is visible from the corner of the site, and a Scouts Hall and Energy Australia Substation share the southern boundary. Like Bent St, Beaconsfield Pde falls towards the west. Occupied primarily by single-family homes, Beaconsfield Pde is a wide and heavily planted street with significant tree canopy. The existing Drovers Way, to the south, rises briefly before continuing the slope downwards towards a line of recent 4- and 5- storey multiresidential buildings. It is a narrow street with high fences and few street trees.





Key





01. Through site link at 328 Pacific Hwy



04. South west corner of site, looking south on Drovers Way



07. Looking south towards 2 & 4 Bent Street



10. Steep grade of car park



02. Looking north along Woodford Lane



05. Units and garden of 3 Beaconsfield Parade



08. Looking east onto 356 Pacific Hwy



11. Boundary of 3 & 3A Beaconsfield Parade



03. Looking south along Woodford Lane



06. Looking north towards the Scouts Hall



09. Looking north west across site



12. North west corner of site Figure 14: Site Photographs (eye-level)

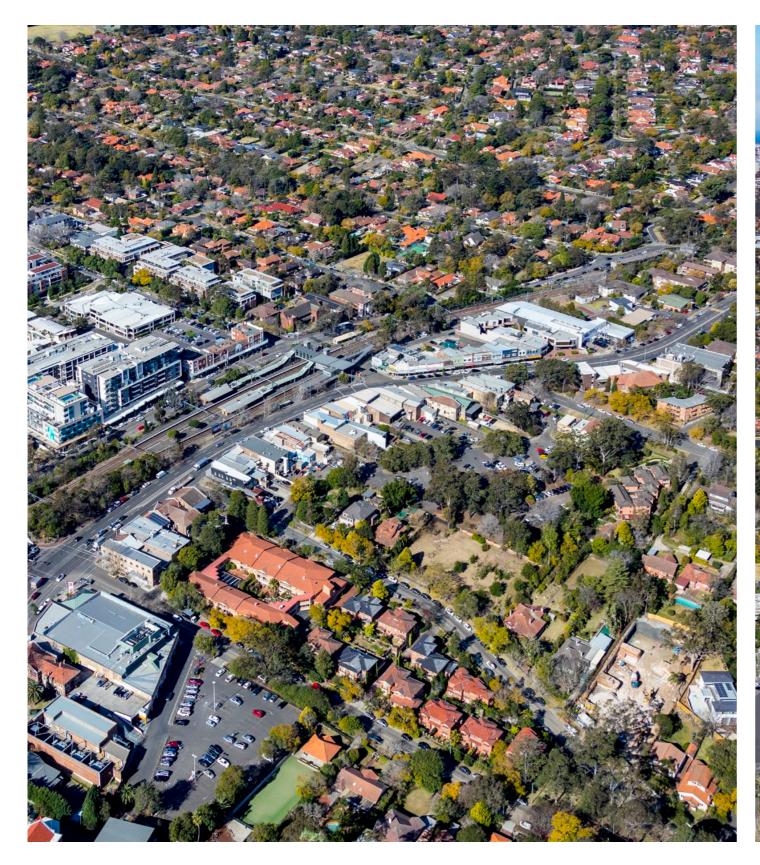




Figure 15: Site Photographs (aerial)

2.7 SITE CONTEXT: ACCESS AND ACTIVATION

Direct vehicular access to the site from the south is at the intersection of Beaconsfield Parade and Drovers Way. Access from the north is via the intersection of Bent Street and Woodford Lane.

Both Bent Street and Beaconsfield Pde can be accessed from Pacific Highway from the northbound lanes only.

Woodford Lane is currently a service lane, used to access the Council car park as well as by the shops on Pacific Highway for deliveries and rubbish removal.

Pedestrian access to the site is relatively informal. There are currently two through-site links within the retail strip that link the site to the Pacific Highway. There is also an informal but frequently used pedestrian path through the rear car park of the Pacific Highway shops abutting the southeast corner of the Hub

There is very limited active frontage around the south, as most of the shops along the site's eastern edge only face the Highway.

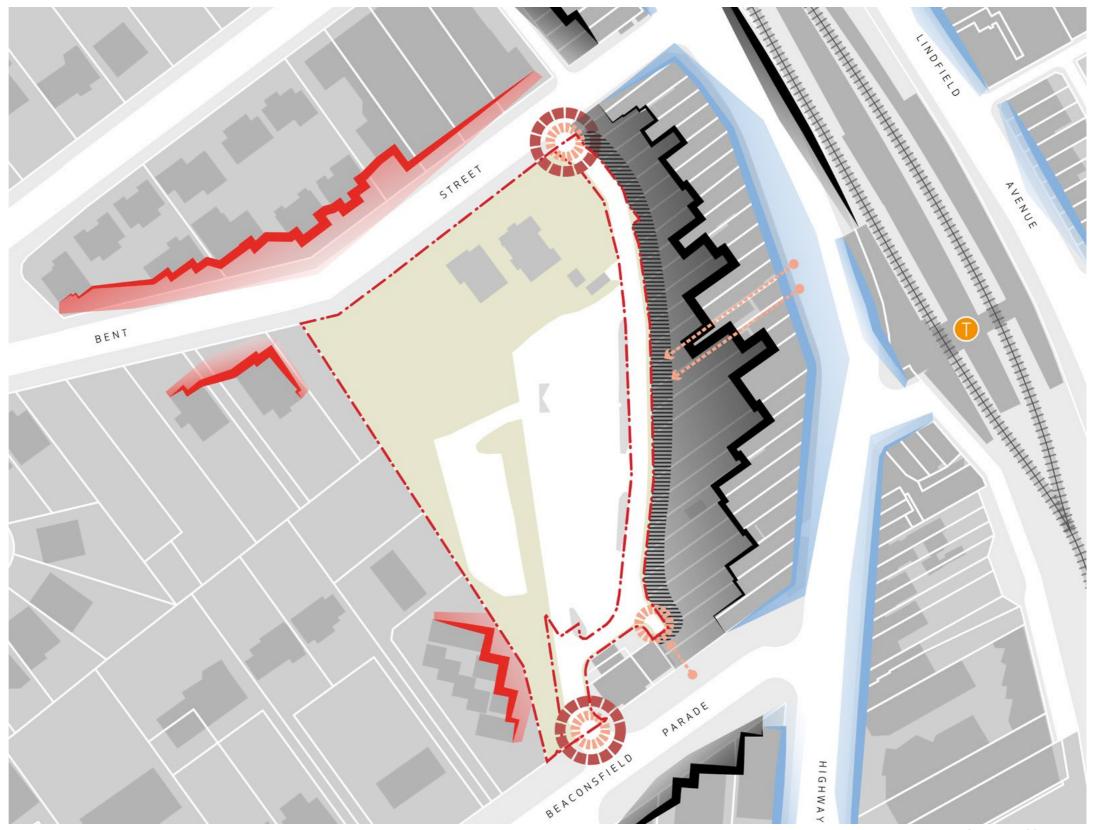




Figure 16: Types of frontages

2.8 SITE CONTEXT: CONSTRAINTS

Based on the analysis outlined above, the following constraints have been identified on and around the site:

- · The site is surrounded by lower density residential to the west and northwest
- · Bent Street and Beaconsfield Parade are only accessible by vehicles from Pacific Highway's northbound lanes
- $\cdot\;$ There is an inactive interface along the eastern boundary, with the rear car parks of the Pacific Highway retail strip facing the
- · There is significant existing tree cover
- · The width of Woodford Lane for 'Kiss and Ride' function is quite constrained
- · Woodford Lane is not suitable for articulated trucks / large service vehicles.
- · There are significant accessibility issues, including:
 - · A steep cross fall both east to west and south to north, with up to a 12 metre level change (roughly equivalent to a 4-storey building)
 - · Beaconsfield Pde and Bent Street are both relatively steep, meaning there are few accessible routes into the



Key

Site Entry Points Blank Frontage Train Station Impacted Views Congestion Residential Area Overshadowed Buildings Physical East-West Barrier





2.9 SITE CONTEXT: OPPORTUNITIES

As well as the constraints listed, numerous opportunities have been identified on and around the Hub site. These include:

- · Multiple transport options, including rail, connect the site to the Sydney CBD and other local and regional centres
- · The site is adjacent to an established retail precinct within the Lindfield local centre
- $\cdot\,\,$ The shops along Pacific Highway could be an asset to the site if they turn to also face Woodford Lane
- $\cdot\,\,$ The shops along Pacific Highway provide an acoustic buffer from the Highway
- · There is potential to utilise the site's fall to locate servicing and parking at the western boundary to minimise visual impact.
- · The fall of the site to the west is an opportunity to minimise the visual impact of the inactive supermarket façades
- $\cdot\,\,$ The alignment of the eastern edge is beneficial for solar access
- $\cdot\;$ Site trees could minimise the visual impact of future development from the lower-density areas to the west and
- · Potential exists to plant a significant amount of trees possibly regenerated from the seeds collected on site
- · Opportunity for wide reaching views including to the surrounding national parks from the ridge line







DESIGN PRINCIPLES +
OPTIONS TESTING

DESIGN PRINCIPLES

Based on our analysis of the regional, local and site context, as well as that of its strategic and statutory framework, four key design principles were defined for the site. These principles were driven by, and to a large extent reflect, those established in the previous master plan and adopted in the existing KMC planning framework.

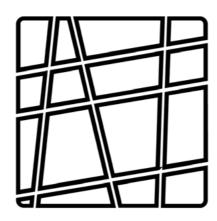
As will be outlined in this chapter, these design principles were first used to establish a basic site plan, then to analyse the different options for distributing building height, and finally to select an option for further development.





CREATE A NORTH-FACING PARK, PROTECTED FROM OVERSHADOWING

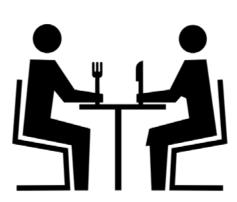
- · Create a high-quality north-facing park receiving adequate sunlight throughout the entire day
- · Key characteristics should include: large flexible green space, events space, walking & cycling path connectivity, a variety of seating opportunities in sun and shade, security & lighting for safety, food and beverage offerings, strong planting structure, as well as contained play areas with good surveillance.



PRINCIPI F #2 LINKAGES

EXTEND THE PUBLIC STREET NETWORK AND CREATE THROUGH SITE LINKS

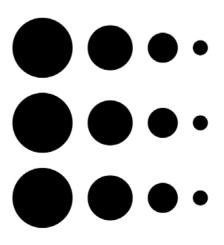
- · Extend Drovers Way through the Hub site along its western boundary, terminating at Bent St.
- · Transform Woodford Lane from a service lane into a formal public street.
- · Create a through-site link connecting Drovers Way and Woodford Lane.
- · Promote the creation of neighbouring through-site links across the retail properties to the Pacific Highway.



PRINCIPI F #3 **ACTIVATION**

PROVIDE ACTIVE **GROUND-FLOOR USES**

- · Park: all sides of the park are to be activated with either public streets, retail tenancies or community uses.
- · Woodford Lane: create an active retail character as an alternative pedestrian experience to the Pacific Highway, encouraging Highway retail to also face onto Woodford Lane.
- · Drovers Way: create a partly passive residential character that responds to the lower-scale residential along the Hub's western boundary, while still providing active frontage to encourage local residents into the Hub site.



PRINCIPI F #4 **TRANSITION**

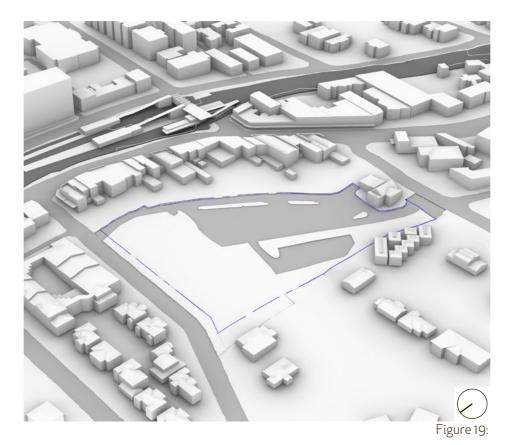
CREATE BUILT-FORM TRANSITIONS BETWEEN THE LOCAL CENTRE AND ITS SURROUNDS

- · Utilise the fall of land to create a visible 'height step', transitioning from the lower-density residential towards the Lindfield Local Centre.
- · Use differing street widths to reflect the different neighbouring contexts to the east and west.

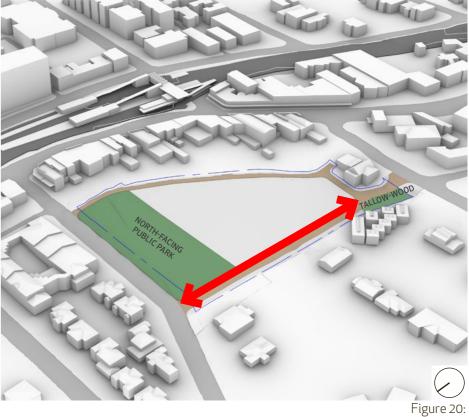
image credits: Andrew Nolte (left), Gerald Wildmoser (centre) and 'Batibull' (right) from the Noun Project

3.2 APPLICATION OF DESIGN PRINCIPLES TO THE SITE

The graphics here summarise how the design principles were used to inform the preferred site layout: proposing a north-facing public park (Figure 20), with a permeable street and pedestrian network, surrounded by active ground floor uses (Figure 21) and protected from overshadowing (Figure 22).



EXISTING SITE



PUBLIC PARK & LINKAGES

A north-facing public park is positioned on the northern boundary. The public street network is improved, with Drovers Way extended along the western boundary and Woodford Lane formalised along the eastern boundary. New pocket park is created on the south-west corner, intended to protect a high value Tallow-wood.







The main design principles thus establish a basic structure plan, identifying the potential build-able area on the site.

RESULTING STRUCTURE PLAN

This shows an arrangement that permits a north-facing park, receiving good solar access and activated on all sides by public streets or retail/community uses, with a through-site pedestrian walkway linking the future Drovers Way to Woodford Lane.

LINKAGES, ACTIVATION

A through-site pedestrian link is created through the site, linking Woodford Lane and Drovers Way.

 $\label{lem:continuous} Active frontage is provided along the park and \ Woodford \ Lane.$

PROTECT OPEN SPACE FROM OVERSHADOWING

In order to protect the park's solar access, built form along Woodford Lane is pulled back from the northeast corner. Any future height increases of neighbouring buildings should also be limited so that total overshadowing of the park is not impacted.

3.3 MASSING OPTIONS

With the basic structure plan established, a number of massing options were explored. These were informed by the Design Principles and the Opportunities and Constraints established in the previous chapters of this document.

Each option proposes alternatives for the Lindfield Village Hub site at a greater density than that of the DCP Master Plan. The optioning process added retail and residential floor space beyond that envisaged in the DCP master plan while enhancing the quality of the public park, public plaza, library and community centre. This will support the significant amount of social infrastructure being delivered, and position new housing where it best optimises the use of existing transit infrastructure.

Several of the arrangements that were explored are highlighted here. The first four options investigated significant height increases:

Option 1 retains the site arrangement of the DCP Master Plan, increasing building heights within the proposed residential building footprint.

Option 2 similarly retains the DCP Master Plan site arrangement, but raises the park by one level to accommodate a greater amount of retail underneath and adds a residential tower on the north-western corner.

Option 3 introduces an additional building on the north-eastern corner of the site, moving the building height to be furthest from the western edge.

Option 4 continues the building massing along the entire eastern edge, positioning the tallest building component on the southernmost end of the site.

Following further engagement with Council Planning staff, Councillors and the community, it was then decided to focus on lower height options. Options explored included:

Option 5 repeats the Option 3 layout at a lower maximum building height.

Option 6 generally follows the site layout of Option 4, however breaks up the built form along Woodford Lane to create two separate buildings, at lower maximum heights.

Option 7 is similar to Options 3,5 & 6 in the northern part of the site, but positions two separate buildings in the southern portion of the site which are oriented perpendicular to Drovers Way.

Each option was tested to analyse its impact on the surrounding area, as well as the amenity it provides. These tests involved visual bulk testing through photomontage, and overshadowing impact tests through shadow diagrams. Analysis against the provisions of SEPP65 and the Apartment Design Guide (ADG) were also undertaken. The outcomes of this impact testing is shown in Appendix 1.



Figure 24: Option One





Figure 25: Option Two Massing







Figure 28: Option Five Massing

Figure 29: Option Six Massing

Figure 30: Option Seven Massing

3.3.1 OPTION 1

The first exploration increased building heights within the footprints of the DCP Master Plan. Although this increases the project density, it provides few other benefits to offset the impacts associated with increasing the building size and so represents a negative change overall.

Maximum Building Height: 14-storeys

Strengths

- · Taller buildings create visibility of the Hub site from Pacific Highway and Lindfield Station.
- · The southern section of Drovers Way is modified to avoid an existing retaining wall, allowing an existing Tallow-wood tree to be retained.

Weaknesses

- $\cdot \;$ Repeats the open space and retail weaknesses of the DCP Master Plan, being: vertically separated park and plaza, inaccessible entry routes, a compromised supermarket footprint, and a lack of specialty retail.
- $\cdot\;$ The taller building along the western boundary causes significant overshadowing of western neighbours.
- · The tallest section of building is oriented east-west, maximising its overshadowing.
- \cdot $\,$ Increased building height on the prominent southern corner creates significant bulk visible from the south/south-western approach.





Refer to Appendix 1 for Visual Impact and Overshadowing Impact analysis of this Option.

Figure 31: Option One, Plan

Figure 32: Option One, Massing

3.3.2 OPTION 2

This option raises the park level to be accessible directly from the corner of Bent St and Woodford Lane, bringing the park and plaza to the same level and so allowing them to be combined into a single public space. This also allows the size of the supermarket/retail floor to be increased underneath. The north-western building is increased to 14-storeys, supporting a significant number of additional units.

Maximum Building Height: 14-storeys

Strengths

- · Continues strengths identified in Option 1
- · Park and plaza are combined into a single combined public space on the same level, directly accessible from Woodford Lane and bounded on two sides by public streets.
- · Additional floor area underneath the combined park/plaza allows for a more spatially feasible supermarket layout, and for a better balance between 'major' and 'specialty' retail.

Weaknesses

- · The tallest building on the northwest is positioned on a prominent corner, with significant bulk visible from the neighbourhood downhill to the west.
- · Taller buildings along the western boundary, including the tallest building section, would cause a significant increase in the overshadowing of western neighbours.
- · Increases the level change between Drovers Way and the park/ plaza level.
- · Less clear division of public/semi-public/private functions, with residential uses positioned above community uses.





Figure 33: Option Two, Plan

Figure 34: Option Two, Massing

3.3.3 OPTION 3

This option introduces a new building on the north-eastern corner, while otherwise retaining the DCP Master Plan arrangement. The total area of public open space, with plaza and park on the single level, is maintained, and the through-site link is kept open-to-the-air.

Maximum Building Height: 14-storeys

Strengths

- · Continues strengths identified in both Options 1 and 2
- Creates a height transition between the Hub site and western neighbours by maintaining the existing height limit along the western edge (Drovers Way) and positioning taller sections of building behind it.
- The tallest building component is positioned furthest from the south-western edge and is oriented north-south, minimising its overshadowing impact.
- The position of the tallest building component on the eastern edge minimises visual bulk when viewed from the north-west, west and southwest.
- The additional building form is oriented north-south, allowing the overall development to meet ADG solar requirements.

Weaknesses

- · Introduces additional private frontage along the public park, reducing its connection to the public street.
- · Creates a narrower park.







Figure 36: Option Three, Massing

3.3.4 OPTION 4

This option extends the new built form proposed on the northeast corner along the entire eastern boundary. As in Option 3, this creates a longer and narrower park. The building partially covers the through-site link / plaza with built form above, which is considered acceptable as it still provides a wide, two-storey high break in the building for pedestrian access through to the park and public building(s).

Maximum Building Height: 14-storeys

Strengths

- · Park and plaza are combined into a single combined public space on the same level, directly accessible from Woodford Lane and bounded on two sides by public streets.
- · The main building form is oriented north-south, creating fast moving shadows
- · The north-south orientation of the main building easily satisfies ADG solar requirements, with nearly all units receiving 2-3 hours of sunlight on the Winter Solstice.
- · A low-height transition is created on the southern corner, reducing part of the building height below current LEP controls.
- · The arrangement accommodates a similar underground retail layout to Options 2 & 3, with a standard full-line supermarket layout and appropriate major: specialty mix.

Weaknesses

- · The tallest building component is positioned on a prominent corner, with significant bulk visible from the south/southwestern approach.
- · The tallest building component is also in the location that causes the maximum overshadowing impact of neighbouring properties to the west.
- · The elongated building form requires significant articulation to reduce the perception of a continuous building mass.

PARK 8 (5) 10 PLAZA (14) PARADE



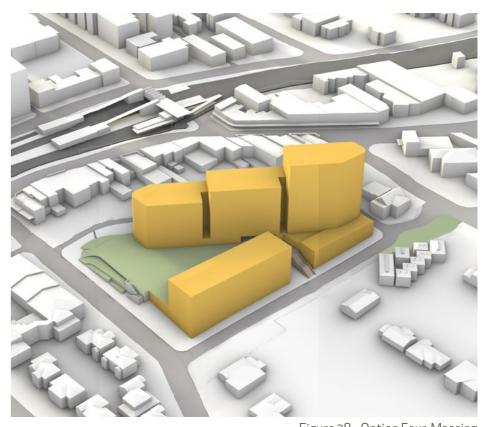


Figure 38: Option Four, Massing

3.3.5 OPTION 5

This option is a further exploration of the site layout configuration of Option 3, generally retaining the DCP Master Plan arrangement with an additional building on the northeastern corner.

The north-eastern building and southern building are reduced $\,$ to 9-storeys with the south-eastern edge along Drovers Way appearing lower due to the site topography.

Like Option 3 the total area of public open space, with plaza and park on the single level, is maintained, and the through-site link is kept open-to-the-air.

Maximum Building Height: 9-storeys

Strengths

- · Continues strengths identified in options 1,2 & 3 at lower
- · The additional building form is oriented north-south, allowing the overall development to meet ADG solar requirements.
- · Slope of land used to create a height transition between the Hub site and its western neighbours.

Weaknesses

· Continues the weaknesses of Option 3.





Figure 39: Option Five, Plan

Figure 40: Option Five, Massing

3.3.6 OPTION 6

This option generally follows the site layout of Option 4 with the main built form occupying the eastern edge along Woodford

The key departure from Option 4 is the repositioning of the southern building to align to Woodford Lane, creating a stronger street wall. The southern building sits on a 3-storey platform, creating a significant height step to its western neighbours.

Maximum Building Height: 9-storeys

Strengths

- \cdot Continues strengths identified in Option 4 at lower heights.
- $\cdot\,$ The separation between the buildings along the eastern edge breaks up the built form allowing a continuous open air plaza through the site, an improvement from Option 4.

Weaknesses

- · Reduces sense of enclosure of the park and plaza.
- · Reduces the legibility of the master plan when viewed from the
- $\cdot \;$ Reduces street definition along Drovers Way.
- · Less variety in massing to other Options.



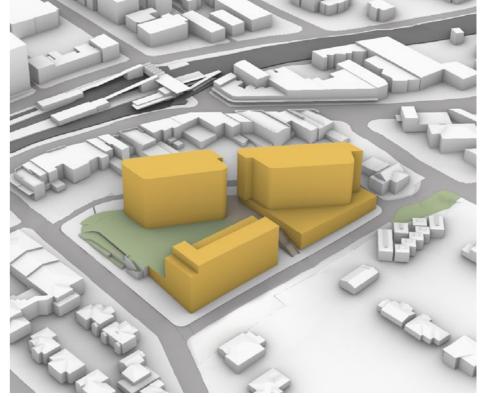


Figure 41: Option Six, Plan

Figure 42: Option Six, Massing

3.3.7 OPTION 7

This option is similar to options 3,5 & 6 in the northern part of the site but provides an alternate southern layout and built form configuration. The plaza and park remain consistent with these options.

Two 9 storey buildings sit on a platform occupying the southern $\,$ portion of the site, the platform being similar to the options noted above. The southern buildings run perpendicular to Drovers Way separated by ADG compliant dimensions, measured as storeys above podium.

Maximum Building Height: 9-storeys

Strengths

- \cdot Continues strengths identified in options 1,2 & 3 at lower
- · The additional building forms are oriented north-south and east-west, minimising frontage along Drovers and allowing the overall development to meet ADG solar requirements.

Weaknesses

- \cdot Continues weaknesses of Option 3 and 5.
- · Reduces street definition along Drovers Way.
- $\cdot\;$ Bedrooms on the southern tower face directly onto those of the central tower.
- \cdot $\,$ Increases visual prominence from southern approach.
- · Limited height transition between the Hub site and its western neighbours.
- · Little benefit made of the site topography.







Figure 44: Option Seven, Massing

3.4 OPTION SELECTED FOR FURTHER DEVELOPMENT

Of the seven options explored, **Option 5** is proposed as the basis for this Planning Proposal for the reasons listed below:

- · The park and plaza are amalgamated into a single combined public space on the same level, maximising their perceptual scale and use value.
- · Park and plaza are directly accessible from Woodford Lane.
- · The southern section of Drovers Way avoids an existing retaining wall to allow an existing Tallow-wood tree to be retained, subject to future design development.
- · Additional floor area underneath the combined park/plaza allows for a more spatially feasible supermarket layout, and for a better balance between 'major' and 'specialty' retail.
- · The additional building form is oriented north-south, allowing the overall development to meet ADG solar requirements.
- $\cdot\,\,$ The fall of the site is used to create a two-storey height step from Woodford Lane down to the buildings along Drovers Way, creating a sense of transition between the Hub and its western neighbours.

Overall, this option best satisfies the design principles as defined by the project team as well as the project objectives adopted by

Alignment with Design Principles:

- ✓ Creates a north-facing park, protected from overshadowing
- ✓ Extends the public street network and create throughsite links
- ✓ Provides active ground-floor uses
- ✓ Creates built-form transitions between the local centre and its surrounds

Alignment with KMC Project Objectives:

- ✓ Liveable: a desirable and safe place to live and visit
- ✓ Accessible: community services for all age groups
- ✓ Engaging: local activities, amenities and experiences
- ✓ Cohesive: places, communities and events that bring diverse groups together
- ✓ Adaptable: adaptable to future social and technology
- ✓ Aesthetic: aesthetically pleasing buildings that residents can be proud of
- ✓ Active Places: rejuvenated Lindfield Local Centre
- ✓ Open Space: new park and public open space
- ✓ New Facilities: new library and community centre
- ✓ Accessible: new roads and vehicular, pedestrian and cycle facilities
- ✓ Housing: new homes
- ✓ Capital Funding: capital to build new community facilities, excluding any section 94 funding
- ✓ Ongoing Revenue: revenue streams to fund ongoing costs of running Council's buildings and services
- ✓ Growth: new jobs and population in Lindfield to sustain the local economy
- ✓ Legacy: council to retain ownership of land and new buildings for future generations
- ✓ Catalyst: investment attracted to Lindfield and Ku-ring-gai



Figure 45: Selected Option, Massing

DETAILED STUDY OF INDICATIVE DESIGN PROPOSAL

INDICATIVE STRUCTURE PLAN

This chapter investigates the potential of the selected option in detail through sections, massing, open space design and character studies. It explores possible future details based upon the selected massing option and provides an indicative design for key elements. It also analyses the potential impact of this option in terms of visual bulk and overshadowing.

As indicated in Chapter 3, the selected option largely repeats the structure of the DCP Master Plan with a few key changes:

- The park and plaza are combined on a single level, brought up to the level of Woodford Lane to be directly accessible from the corner of Bent & Woodford as well as mid-block at Woodford.
- The alignment of the future Drovers Way extension has been modified to avoid an existing retaining wall, retaining a high value Tallow-wood tree.
- An additional building has been introduced along the eastern edge of the park.

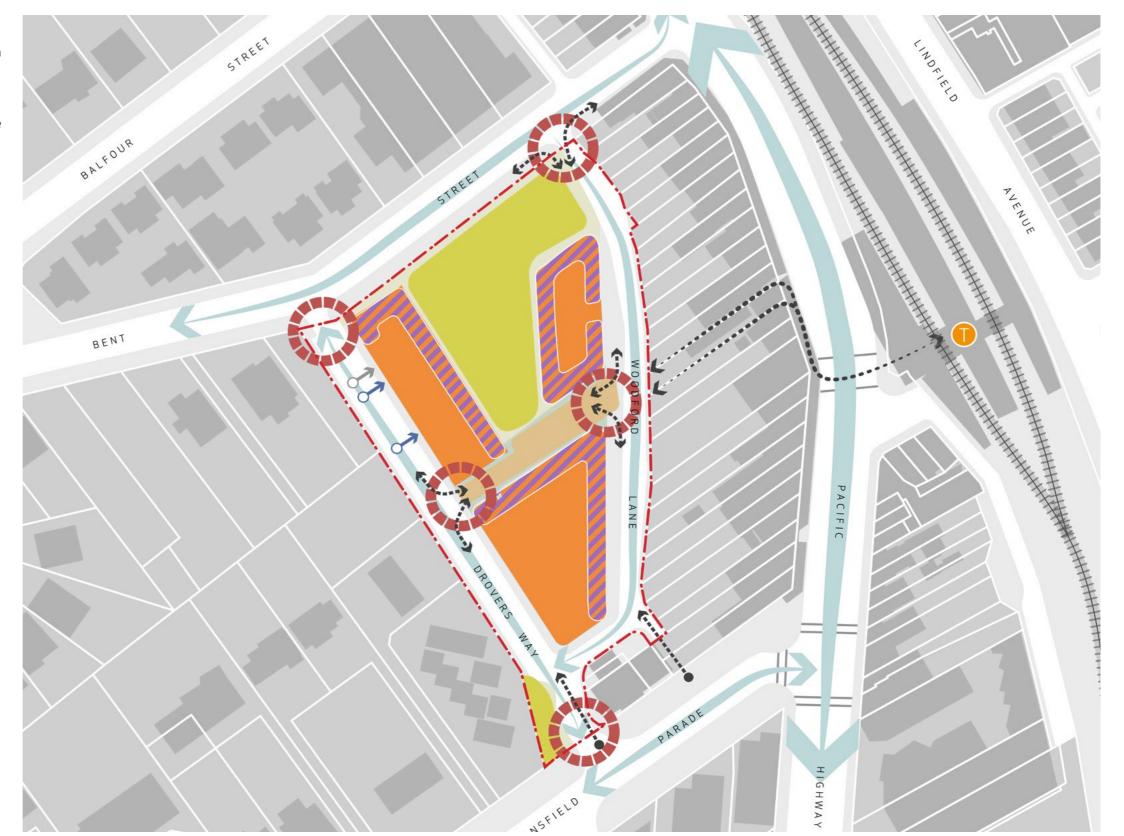
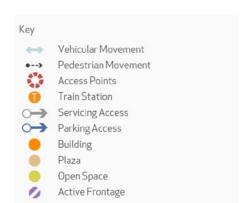


Figure 46: Structure Plan



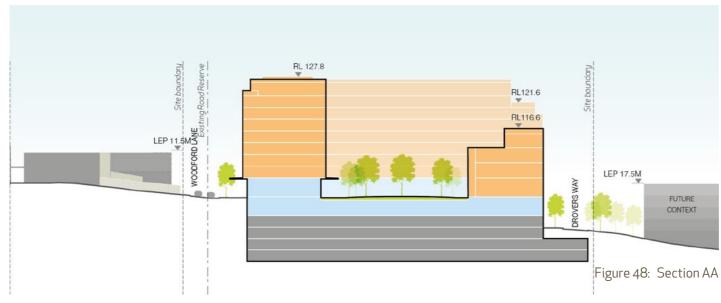
4.2 INDICATIVE ENVELOPE DESIGN

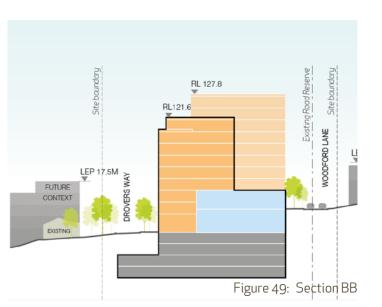
The indicative envelope is designed to present to each public street as an ensemble of nine-storey buildings. This is composed of a largely underground retail centre sitting underneath a raised park, an exterior specialty retail level above that provides active frontage to Woodford Lane and the park, and an additional 8levels of residential above the exterior specialty retail. Consequently, the buildings present as 9-storeys in height when viewed from the public streets surrounding the Hub, with the retail and parking levels concealed underneath the park.

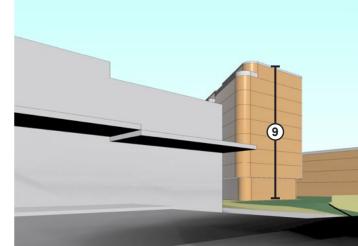
The community building will be 6-7 storeys high but, due to the difference in ceiling /floor heights compared to residential, will present at a similar height to the other buildings above the park.

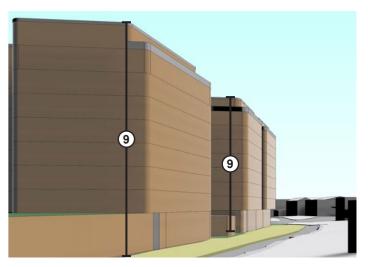
In the indicative design, the building envelopes have been arranged to frame the public spaces, use the fall of the site to create a visible transition from west to east, and leave the northern boundary largely unobstructed to protect solar access to the park..

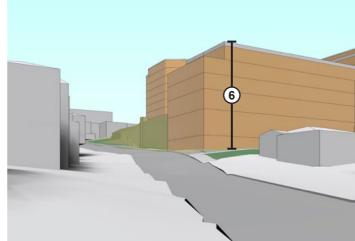
All buildings directly face onto the public spaces, with active retail or community frontage required along the park/plaza as well as Woodford Lane.















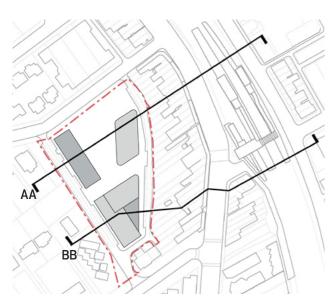


Figure 47: Key Plan

4.3 INDICATIVE PUBLIC OPEN SPACE

This indicative, illustrative open space plan shows the potential $% \left(1\right) =\left(1\right) \left(1\right) \left$ site strategy in detail. The park, plaza, public streets and communal open space together make up a significant portion of the site.

The arrangement of the public realm capitalises on the new retail offering and community facilities to ensure activity and surveillance to public spaces, with key active frontages to the park and to Woodford Lane.

Public spaces may include:

- Central lawn
- Primary site entries
- Shaded seating area 3.
- Woodford Lane
- Pedestrian link 5.
- Plaza 6.
- Playground 7.
- Terraced edge to Bent St with stair + lift access 8.
- Dining terrace 9.
- Community terrace 10.
- Bent St shared zone 11.
- Tallow-wood tree retained



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4.4 INDICATIVE LANDSCAPE CHARACTER

CENTRAL LAWN



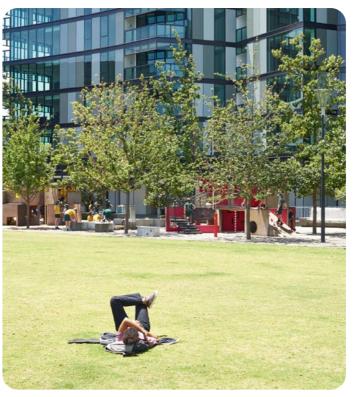
Figure 52: Key Plan

Design and Approach:

A proposed central lawn within the park provides a sunny space for informal recreation and gathering as well as a location for larger community events. The lawn provides a gently sloped bank to the northern edge and seating along the eastern and western edges. The plaza provides a focal point to the south, where it may be adapted as a stage facing out across the open lawn

Materiality and Elements:

- High quality, well maintained lawn area that can withstand regular use for informal recreation and events
- Stepped edges will be constructed out of stone or class 2 concrete. The lawn edge will include planting and trees at the adjacent terrace level, seating opportunities and steps to the lawn.







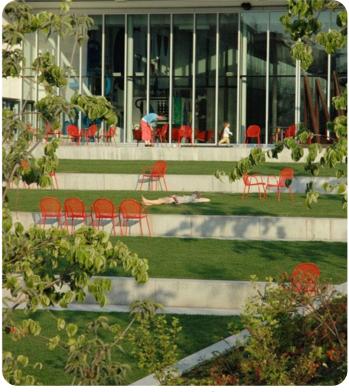


Figure 53: Central Lawn Precedents

PLAZA



Figure 54: Key Plan

- 1. Drovers Way entry plaza
- 2. Central plaza
- 3. Pedestrian link

Design and Approach:

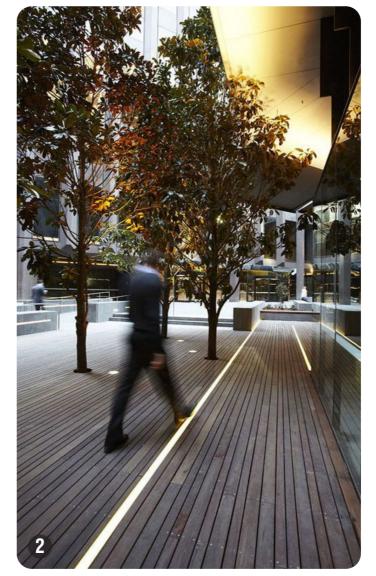
The central plaza provides a shaded urban space in the centre of the precinct with opportunities for movable furniture and outdoor dining. This hard space also provides the flexibility for performances and stalls during programmed events. The plaza space continues between the buildings to the east as a generous pedestrian through site link, with opportunity for seating and a retail kiosk.

At the lower level, the Drovers Way entry plaza provides an inviting entry space to the lower level retail as well as public stair and lift access to the upper level and park.

Materiality and Elements:

- All plaza areas will have high quality and robust surface treatments of stone unit paving. Changes in textures, patterns and sizes may be used, as well as timber decking in specific locations, in order to define the plaza spaces within
- A combination of fixed and moveable furniture will provide flexibility of use.





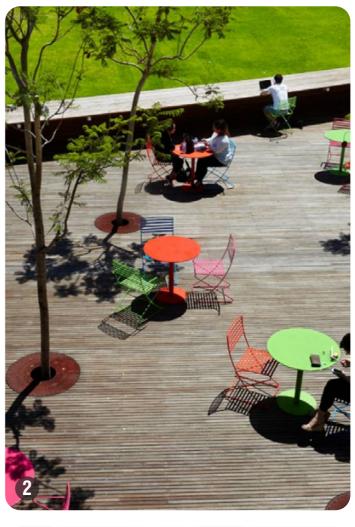




Figure 55: Plaza Precedents

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COMMUNITY & DINING TERRACES



Figure 56: Key Plan

- 1. Community terrace
- 2. Dining terrace

Design and Approach:

The dining terrace to the east and community terrace to the west of the park frame the space, providing seating and activity to the edges of the park. Trees and awnings provide weather protection to outdoor dining and pedestrian footpaths.

Materiality and Elements:

- Large format stone paving will provide a high quality and
- Continuous awnings will provide weather protection, designed as part of the buildings.
- Moveable furniture provided by tenants will be in keeping with the character of the precinct
- A clear pedestrian path will be maintained through areas of outdoor dining and seating.







Figure 57: Community and Dining Precedents

INDICATIVE PLANTING STRATEGY

An indicative planting strategy for the public domain is identified here, emphasising a native palette in keeping with the local character, with the addition of exotic species for colour and winter sun as the planting progresses into the centre of the site.

Species have been selected that grow root plates rather than root balls, as these prefer broad shallow soil rather than narrow, deep soil. This allows large trees to be provided throughout the project's new public open spaces as well as in the existing and future adjoining streets, even where $% \left(x\right) =\left(x\right) +\left(x\right)$ planted on deck.

Main Park (central lawn) 14 x 1000L trees 3.8m high on installation

Drovers Way 16 x 1000L trees

4.8m height on installation

Woodford Lane 21 x 800L trees

3.6m height on installation

An early procurement strategy for all tree stock is intended to be pursued by Council to ensure that the trees are relatively mature at the time they are planted.



LIND	INDFIELD VILLAGE HUB - INDICATIVE PLANTING SCHEDULE								
AREA	BOTANIC NAME	COMMON NAME	CONTAINER SIZE	INSTALLATION MIN HEIGHT	INSTALLATION MIN SPREAD	MATURE SIZE (HxW)	DENSITY /SQ.M	% IN MIX	INDICATIVE QUANTITY
Zone 1	DROVERS WAY								
	Trees Waterhausia flaribunda	Wooning Lillunilly	10001	4.9m	1.6m	20 v 15m	As shown	n/2	16
7	Waterhousia floribunda	Weeping Lillypilly	1000L	4.8m	1.6m	20 x 15m	As shown	n/a	16
Zone 2	WOODFORD LANE Trees								
	Flindersia australis	Crows Ash	800L	3.6m	1.6m	20 x 15m	As shown	n/a	21
Zone 3	ENTRY GARDEN		5,555					.,,=	
LONG 3	Trees								
	Corymbia eximia	Yellow Bloodwood	200L	2.8m	1.2m	20 x 15m	As shown	n/a	3
	Corymbia gummifera	Red Bloodwood	200L	2.8m	1.2m	20 x 15m	As Shown	n/a	4
	Harpulia pendula	Tulipwood	1000L	3.8m	1.8m	8 x 12m	As shown	n/a	6
	Planting Mix Anigozanthos hybrid 'Amber Velvet'	Velvet Kangaroo Paw	200mm	250mm	150mm	0.4 x 0.5m	6	dicative Area: 15%	180 162
	Doryanthes excelsa	Gymea Lily	45L	450mm	300mm	2.0 x 1.2m	4	5%	36
	Grevillea Robyn Gordon	Red Grevillea	300mm	250mm	200mm	0.5 x 0.5m	6	10%	108
	Lomandra 'Little Con'	Lomandra cultivar	150mm	250mm	150mm	0.3 x 0.3	8	10%	144
	Poa labillardieri	Tussock Grass	150mm	250mm	150mm	0.5 x 0.5m	6	20%	216
	Grevillea lanigera	Woolly Grevillea	150mm	250mm	150mm	0.8 x 1.0m	4	15%	108
	Westringia fruticosa 'Mundi'	Coastal Rosemary	300mm	250mm	200mm	1 x 1m	4	25%	180
Zone 4	PLAYGROUND								
	Trees Backhousia citriodora	Lemon Scented Myrtle	400L	3.2m	1.2m	6 x 4m	As shown	n/a	8
	Buckinghamia celisissma	Ivory Curl	400L	3.2m	1.2m	5 x 3m	As shown	n/a	10
	Pyrus calleryana 'Chanticleer'	Callery Pear	1000L	4.8m	1.8m	10 x 15m	As shown	n/a	4
	Planting Mix	_						dicative Area:	95
	Acacia cognata 'Limelight'	Bower Wattle	300mm	200mm	200mm	0.4 x 0.4m	6	10%	144
	Alternanthera dentata Dietes grandiflora	Alternanthera Fairy Iris	150mm 200mm	200mm 200mm	150mm 150mm	0.3 x 1.5m 0.5 x0.8m	4 6	5% 5%	48 29
	Grevillea lanigera	Woolly Grevillea	200mm	200mm	150mm	0.5 x 0.5m	4	5%	48
	Lomandra 'Katie Belles'	Lomandra cultivar	150mm	150mm	150mm	0.3 x 0.3m	8	20%	152
	Myoporum parvifolium 'Yareena'	Myoporum cultivar	150mm	150mm	150mm	0.3 x 1.0m	5	20%	95
	Pennisetum alopecuroides 'Nafray'	Dwarf fountain grass	150mm	200mm	150mm	0.5 x 0.5m	8	15%	114
	Nandina domestica 'Obsession'	Nandina cultivar	150mm	200mm	150mm	1.0 x 1.0m	6	10%	57
	Trachelospermum jasminoides	Star Jasmine	150mm	350mm	150mm	0.3 x 1.0m	4	10%	38
Zone 5	BENT STREET TERRACES								
	Trees Harpullia pendula	Tulipwood	1000L	3.8m	1.8m	8 x 12m	As shown	n/a	6
	Jacaranda mimosifolia	Jacaranda	800L	3.6m	1.8m	12 x 7m	As shown	n/a	4
	Feature Shrubs	Jacai ariaa	0002	3.0111	1.0111	12 // // //	AS SHOWN	11/0	-
	Doryanthus excelsa	Gymea lily	45L	450mm	300mm	2.0 x 1.2m	As shown	n/a	6
	Planting Mix (Medium)							dicative Area:	240
	Acacia cognata 'Limelight'	Bower Wattle	300mm	300mm	200mm	0.4 x 0.4m	4	10%	96
	Callistemon 'Little John'	Callistemon	300mm	450mm	200mm	1.2 x 1.5m	4	25%	240
	Correa alba	White Correa Purple Fountain Grass	150mm 150mm	200mm 200mm	150mm 150mm	0.5 x 0.5m 0.5 x 0.5m	2 8	10% 20%	48 384
	Pennisetum alopecuroides 'Purple Lea' Grevillea 'Ivanhoe'	Grevillea 'Ivanhoe'	300mm	300mm	200mm	1.2 x 1.5m	2	10%	48
	Grevillea rhyolitica x juniperina	Grevillea Cherry Cluster	150mm	200mm	150mm	0.5 x 0.8m	4	15%	144
	Callistemon viminalis 'Slim'	Callistemon cultivar	300mm	300mm	200mm	1.3m x 3m	2	10%	48
	Planting Mix (Small)							dicative Area:	240
	Alternanthera dentata	Alternanthera	150mm	200mm	150mm	0.3 x 1.5m	4	5%	48
	Grevillea poorinda 'Royal Mantle'	Grevilea Royal Mantle	150mm	100mm	150mm	0.3 x 1.0m	4	15%	144
	Grevillea 'Gaudichaudii' Hardenbergia violacea 'Meema'	Prostrate Grevillea Happy Wanderer	150mm 150mm	100mm 200mm	150mm 150mm	0.3 x 3.0m 0.5 x 1.5m	5 3	15% 20%	180 144
	Hibbertia scandens	Snake Vine	150mm	200mm	150mm	0.3 x 1.5m	5	10%	120
	Myoporum parvifolium 'Yareena'	Myoporum cultivar	150mm	150mm	150mm	0.3 x 1.0m	5	15%	180
	Nandina domestica 'Obsession'	Nandina cultivar	200mm	200mm	150mm	1.0 x 1.0m	6	10%	57
	Trachelospermum jasminoides	Star Jasmine	150mm	200mm	150mm	0.3 x 1.0m	4	10%	96
Zone 6	CENTRAL LAWN								
	Trees Zelkova serrata 'Green Vase'	Green Vase Zelkova	1000L	3.8m	1.0m	14 x 10m	As shown	n/2	10
	Groundcovers Planting Mix	Green vase Zeikuva	1000L	5.0111	1.8m	14 X 10111		n/a dicative Area:	30
	Trachelospermum jasminoides	Star Jasmine	200mm	350mm	150mm	0.3 x 1.0m	4	100%	120
Zone 7	CENTRAL PLAZA	·							
	Trees								
	Brachychiton acerifolius	Illawarra Flame Tree	800L	3.8m	1.5m	12 x 6m	As shown	n/a	6
	Quercus palustris "Freefall'	Pin Oak	1000L	4.8m	2.8m	10 x 7m	As shown	n/a	1
	Planting Mix (Medium)	Altananthas	450	200	450	1 0215		dicative Area:	50
	Alternanthera dentata Clivia miniata	Alternanthera Clivia	150mm 200mm	200mm 350mm	150mm 150mm	0.3 x 1.5m 1.0 x 1.0m	4	15% 15%	30 30
	Kalanchoe orgyalis 'Copper Spoons'	Copper Spoon	150mm	100mm	100mm	0.3 x 0.3m	6	5%	15
	Myoporum parvifolium 'Yareena'	Myoporum cultivar	150mm	150mm	150mm	0.3 x 1.0m	5	5%	13
	Nandina domestica 'Obsession'	Nandina cultivar	200mm	200mm	150mm	1.0 x 1.0m	6	10%	30
	Pennisetum alopecuroides 'Purple Lea'	Purple Fountain Grass	150mm	200mm	150mm	0.5 x 0.5m	8	15%	60
	Grevillea rhyolitica x juniperina	Grevillea Cherry Cluster	200mm	450mm	200mm	0.5 x 0.8m	4	15%	30
	Rhaphiolepsis indica	Indian Hawthorn	200mm	450mm	200mm	1.2 x 1.2	2	20%	20
Zone 8	BENT STREET PEDESTRIAN PLAZA								
	Trees Platanus x acerifolia	Plane Tree	1000L	4.8m	1.8	20 x 15m	As shown	n/a	6
	Planting Mix (Medium)	prane rice	10001	7.0111	1.0	20 / 13111		dicative Area:	40
	Clivia miniata	Clivia	200mm	350mm	150mm	1.0 x 1.0m	4	10%	16
	Kalanchoe orgyalis 'Copper Spoons'	Copper Spoon	150mm	100mm	100mm	0.3 x 0.3m	6	5%	12
	Nandina domestica 'Obsession'	Nandina cultivar	200mm	200mm	150mm	1.0 x 1.0m	6	10%	24
	Pennisetum alopecuroides 'Purple Lea'	Purple Fountain Grass	150mm	200mm	150mm	0.5 x 0.5m	8	20%	64
	Grevillea rhyolitica x juniperina	Grevillea Cherry Cluster	200mm	450mm	200mm	0.5 x 0.8m	4	15%	24
	Rhaphiolepsis indica Trachelospermum jasminoides	Indian Hawthorn Star Jasmine	200mm 150mm	450mm 200mm	200mm 150mm	1.2 x 1.2 0.3 x 1.0m	2 4	15% 25%	12 30







Flindersia australis







Westringia fruticosa 'Mundi'











Harpullia pendula





Doryanthes excelsa











4.6 INDICATIVE STREET CHARACTER

WOODFORD LANE



Figure 58: Key Plan

- 1. Shaded seating area
- 2. Urban laneway

Design and Approach:

 $Woodford\,Lane\,will\,be\,upgraded\,into\,a\,new\,destinational\,street$ for the area with outdoor dining, retail frontages and residential lobby entries facing onto a pedestrian friendly laneway environment.

At the northern end, a shaded seating area will form the entry to the park from the intersection with Bent Street, featuring a native planting palette, large canopy trees and intimate seating areas.

Materiality and Elements:

Shaded seating area:

- Native planting and canopy trees.
- Exposed aggregate concrete pathways.
- Custom seating with arm rests and backs built into low walls.
- Laneway:
- Unit paved footpath adjacent the building for pedestrian movement and outdoor dining.
- Tree / path zone with planted tree pits.
- Tree/ parking zone to one side with planted tree pits
- Unit paving for parking spaces and in bands across the asphalt carriageway
- Paved raised pedestrian crossing at key pedestrian link location.

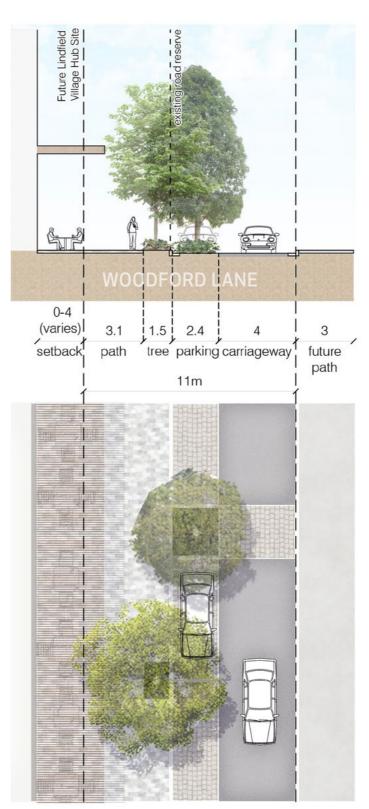








Figure 60: Precedent Images



DROVERS WAY



Figure 61: Key Plan

1. Local street

Design and Approach:

Drovers Way will become a new, well defined street providing a new frontage to the residential lots to the west and the Village Hub to the east. Drovers Way provides the main access to basement parking and loading for the Hub, but is also activated by residential frontages as well as access to the main retail level. $% \label{eq:control_eq}$

Materiality and Elements:

Local street:

- 1.5m concrete pathway to the west.
- 2.3m parking / street tree zone to either side of the carriageway with planted tree pits.
- 2.4m unit paved footpath to the east.

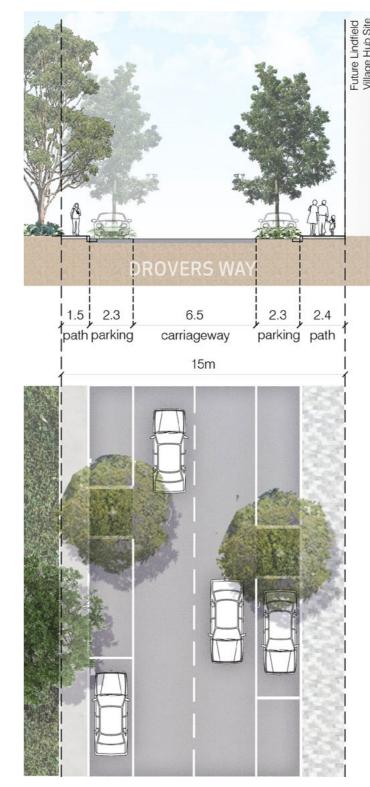






Figure 63: Precedent Images

Figure 62: Drovers Way Section and Plan

BENT STREET



Figure 64: Key Plan

- 1. Terraced landscape with vertical access
- 2. Pedestrian link / Shared zone
- 3. Local street

Design and Approach:

The configuration of Bent Street will remain largely the same, with existing street trees retained within the verge. Bent St is out of the Planning Proposal site area, and only some of the landscaping works indicated will form part of the Hub project.

The frontage to Bent Street includes landscaped terraces with stair access towards Woodford Lane. These terraces will create a green edge along Bent Street with significant native planting.

KMC has also proposed that Bent Street between Pacific Hwy and Bent Lane is turned into a shared zone. This will provide improved pedestrian connectivity to the precinct.

Materiality and Elements:

Terraced landscape:

- Native planting and canopy trees. Planting to be graded at a maximum of 1:3 and include a variety of heights and forms in order to reduce the visual impact of the retaining walls.
- Stair and lift access from Bent Street to the park. The stairs are to be integrated with retaining walls to form a series of planted terraces along this frontage.
- Retaining walls are to be clad in sandstone to reflect the local character of the area.
- Balustrades and handrails are to be provided as required and designed to minimise their visual impact.

Pedestrian link:

- Clear and accessible paths of travel to be provided in unit paving.
- Existing trees to be retained and supplemented with additional trees to provide shade and amenity.
- Low level planting to provide amenity and define spaces/ walkways.
- Seating to be integrated into the public space.

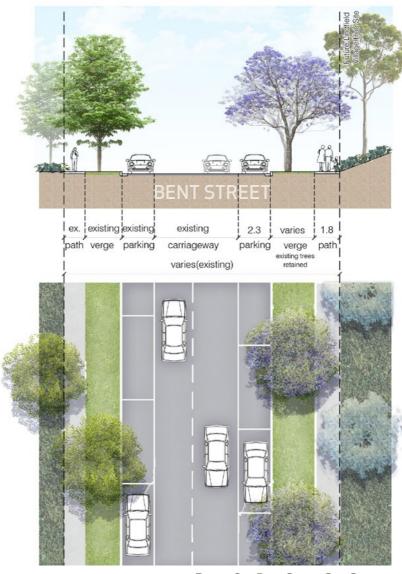


Figure 65: Bent Street Site Section









Figure 66: Precedent Images

INDICATIVE ACCESS AND SERVICING DIAGRAM

The following areas have been identified as key access and servicing points:

- · Three primary vehicular access points:
- · The intersection of Bent Street and Drovers Way
- · The intersection of Bent Street and Woodford Lane
- · The intersection of Beaconsfield Parade and Drovers Way
- $\cdot\;$ Four main pedestrian access points are located around the site as follows:
- · Accessible at-grade entry through the public open space is available at the north-eastern corner of Woodford Lane and Bent St.
- · Accessible at-grade entry into the through-site link is available mid-block along Woodford Lane. Access to the retail level is also provided through lifts and escalators at this point.
- · A mid-block stair and public elevator is provided to link Drovers Way to the public open space above. Access to the retail level is also provided off Drovers Way, through stairs or the public elevator.
- · A mid-block stair and public elevator is provided off Bent street at the northwest corner, potentially part of a community building at that location, and leads up to the public open space.
- · Vehicular parking and servicing for all uses at the Hub site are proposed to be accessed from Drovers Way only.





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Vehicular Access Point Pedestrian Access Point Secondary Pedestrian Access

Potential Residential Lobby Potential Community Hub Access Potential Servicing Access Potential Parking Access

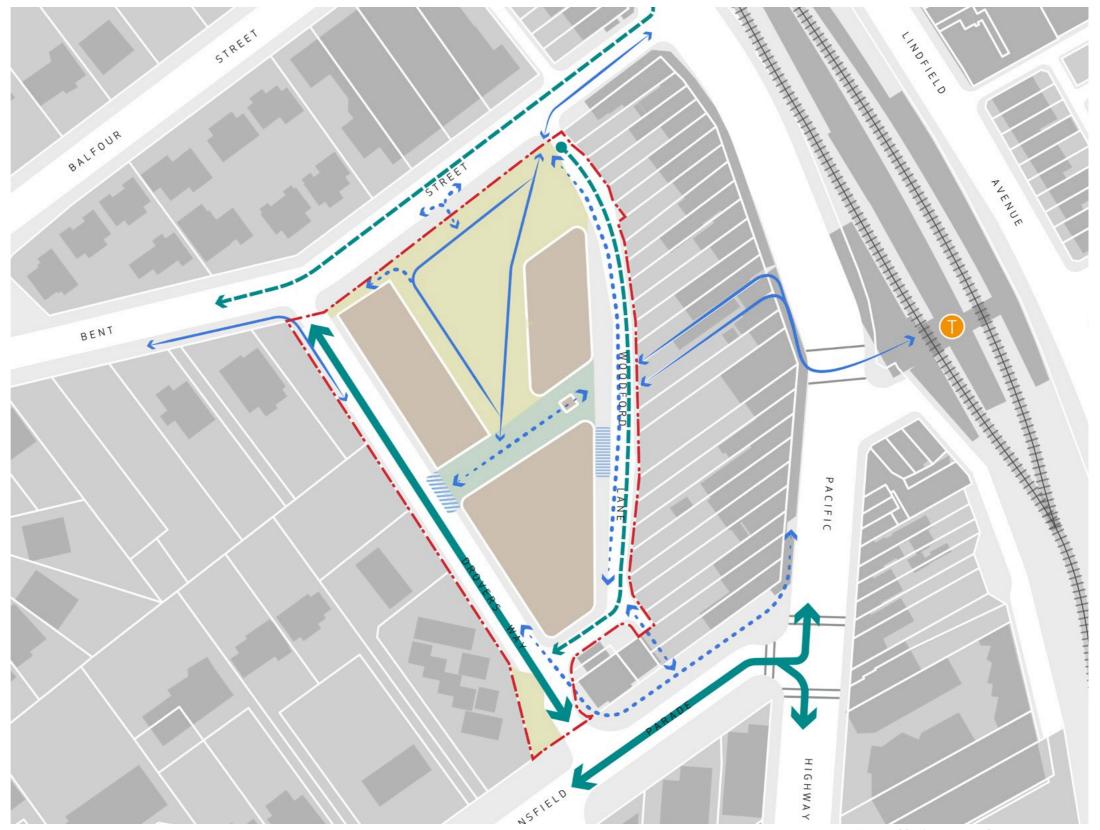
Figure 67: Access and Servicing Diagram

INDICATIVE MOVEMENT DIAGRAM

The site contains multiple access/egress points, circulation zones and connections for pedestrians and vehicles.

The following key movements have been integrated into the site:

- · Accessible pedestrian connection from Pacific Highway into the park via Bent Street.
- · Pedestrian access directly into the retail mall from Drovers
- · Pedestrian access and bicycle route through Woodford Lane. Pick up and drop off zones at the main entry at Drovers Way and the main entry at Woodford Lane.
- · Two way vehicular movement on Drovers Way.
- · The upper portion of Bent Street will become one way only allowing vehicles to turn left onto Pacific Highway.
- · Primary vehicle access is off Beaconsfield Parade into Drovers Way.





Primary Pedestrian Movement

Secondary Pedestrian Movement

Primary Vehicular Movement

← - → Secondary Vehicle Movement

Potential Pick Up/Drop Off Zone



Figure 68: Access and Servicing Diagram

4.9 AMENITY ANALYSIS

ALIGNMENT WITH SEPP65 AND ADG

State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development (SEPP 65) sets out the NSW Government's policy direction for residential apartment development in NSW. It aims to improve the design quality of residential flat development and establishes nine design quality principles to be applied to the design and assessment of residential apartment developments. It applies to all residential flat developments. The KLCDCP also makes reference that all such developments must comply with the SEPP and the ADG.

The following preliminary assessment of the nine principles demonstrates that the indicative design is consistent with SEPP 65.

Principle 1: Context and Neighbourhood Character

The proposal will enhance the character of the Lindfield neighbourhood and revitalise the town centre by providing a new mixed-use hub with a library, park, community spaces, shops, restaurants and apartments, replacing a surface car park owned by Ku-ring-gai Council. Features that positively contribute to the $neighbourhood\ have\ been\ retained\ while\ undesirable\ features\ have$ been improved wherever possible. For example, the significant Tallow-wood tree at the southern end of the site is intended to be retained by bending the road around it. Conversely, the less active existing frontage along Woodford Lane will be offset by new shops and outdoor dining, creating a double retail frontage.

Principle 2: Built Form and Scale

Differences between the lower and upper storey façades in terms of materiality, form and aesthetics will aid in modulating the development. The fall of the site is utilised to create a visible 'height step' despite the consistency in building height, providing variety to the built form.

Principle 3: Density

The development will co-locate residences with retail and commercial, and community uses, providing new high-quality public spaces and parks and upgrading existing infrastructure. As the site is a two minute walk to Lindfield Train Station, the proposed density of the site is appropriate and is consistent with Lindfield's projected population growth. The proposal will include new public spaces, a new purpose-built library and community centre as well as childcare. In addition to the social amenity these uses provide, they will also create permanent local jobs.

Principle 4: Sustainability

Water Sensitive Urban Design measures are proposed throughout the new development. Deep soil zones will be in excess of Apartment Design Guide (ADG) minimum requirements. A significant amount of new, native vegetation is proposed. The development intends to secure Green Star certification of 5- or 6- stars.

Principle 5: Landscape

Public open space is a key feature of the development and will directly benefit the surrounding suburb, enhancing the neighbourhood of Lindfield as a whole. A variety of landscape character zones are present in the proposal and each will have its own unique character and function. These include a central lawn, a children's playground, a plaza and shaded outdoor dining terraces. To the south-west of the site, the retention of a tallow-wood tree provides an opportunity to create a 'pocket park' - a garden consisting of native plants. These places will be sheltered away from the noise of Pacific Highway.

Principle 6: Amenity

The proposal will contribute to a high level of amenity for existing and future residents, including high quality accessible public spaces and streets, new community spaces, improved public transport access and a genuine mixed-use centre.

Principle 7: Safety

The development aims to maximise passive overlooking of streets, public spaces and communal open space. Ground floor retail and residential uses will provide casual surveillance of the street. The retail will also likely mean there is a security presence late into the night.

Principle 8: Housing Diversity and Social Interaction

The proposal will achieve a mix of apartment types, sizes and orientations to suit a broad range of people. Additionally, the variety of community spaces will promote interaction between residents and the wider Lindfield community.

Principle 9: Aesthetics

The proposal aims to foster cohesion through the site while allowing for a diversity of character between buildings to create interest and variety. Buildings are envisaged to be of differing materiality ensuring a variety of aesthetic outcomes.



Figure 69: Precedent - Chippendale Green

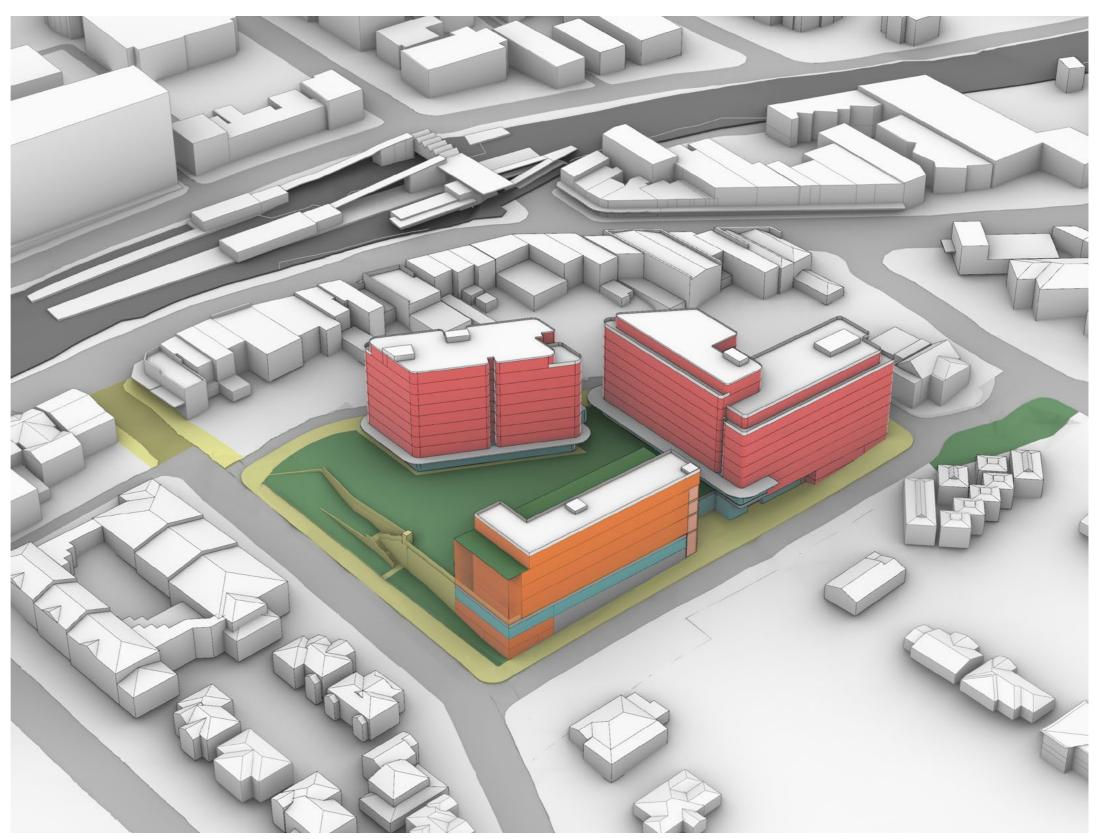


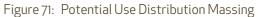
Figure 70: Precedent - Green Square Library

POTENTIAL USE DISTRIBUTION

In order to investigate the character and amenity of a potential built form outcome on the site, as well as its compliance with SEPP65 and the Apartment Design Guide, the basic massing identified in Chapter 3 is shown here with indicative building uses identified. In brief:

- All buildings facing public spaces or Woodford Lane are shown with active retail or community frontage at the park or street level.
- The buildings along Woodford Lane and the southern half of Drovers Way have been identified as a residential flat buildings.
- The building located in the north west corner has been identified as a shared library, community and child care building, with a single level of retail/commercial sandwiched in-between. The ground level is again library, community or childcare, providing street activation.
- The three buildings sit on a podium which contains a fullline supermarket and specialty retail accessed by vertical circulation from the park level and directly accessed from Drovers Way.
- · Four levels of basement parking and shared servicing are located under the podium, including commuter parking.





BUILDING SEPARATION

A combination of proposed setbacks, appropriate building depths and building separation controls will ensure apartment amenity meets ADG guidelines while creating a quality urban design outcome for the site:

· The building setback along Woodford Lane will vary from 11-metres to 15-metres, measured from the eastern extent of the existing Woodford Lane road reserve. The variability is caused by a straight building line opposite a curved road reserve.

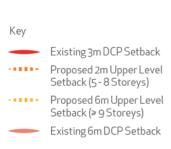
When measured from the western boundary of the future Woodford Lane road reserve (following the development of the Hub), the building setback ranges from 0- to 4- metres.

· Under the existing LEP, neighbouring properties between Woodford Lane and the Pacific Highway have an 11.5m building height limit, representing an effective height of 2 to 3 storeys. If these properties are developed as shoptop residential, they will have an ADG separation requirement of 12-metres.

The DCP imposes a 3-metre setback control from Woodford Lane. Added to the setback of the Lindfield Village Hub building, the minimum separation will be 14-metres, exceeding the ADG requirement.

· Neighbouring properties west of the future Drovers Way have a taller LEP height of building limit of 17.5m, representing an effective height of 5-storeys. The ADG will require a building separation of 12-metres for the first four storeys and 18metres for the 5th storey only.

The current DCP sets a 6-metre setback control for these properties. Added to the 15-metre new Drovers Way road reserve, the properties west of the Hub will have a minimum 21-metre separation from any buildings at the Lindfield Village Hub., again exceeding ADG requirements.



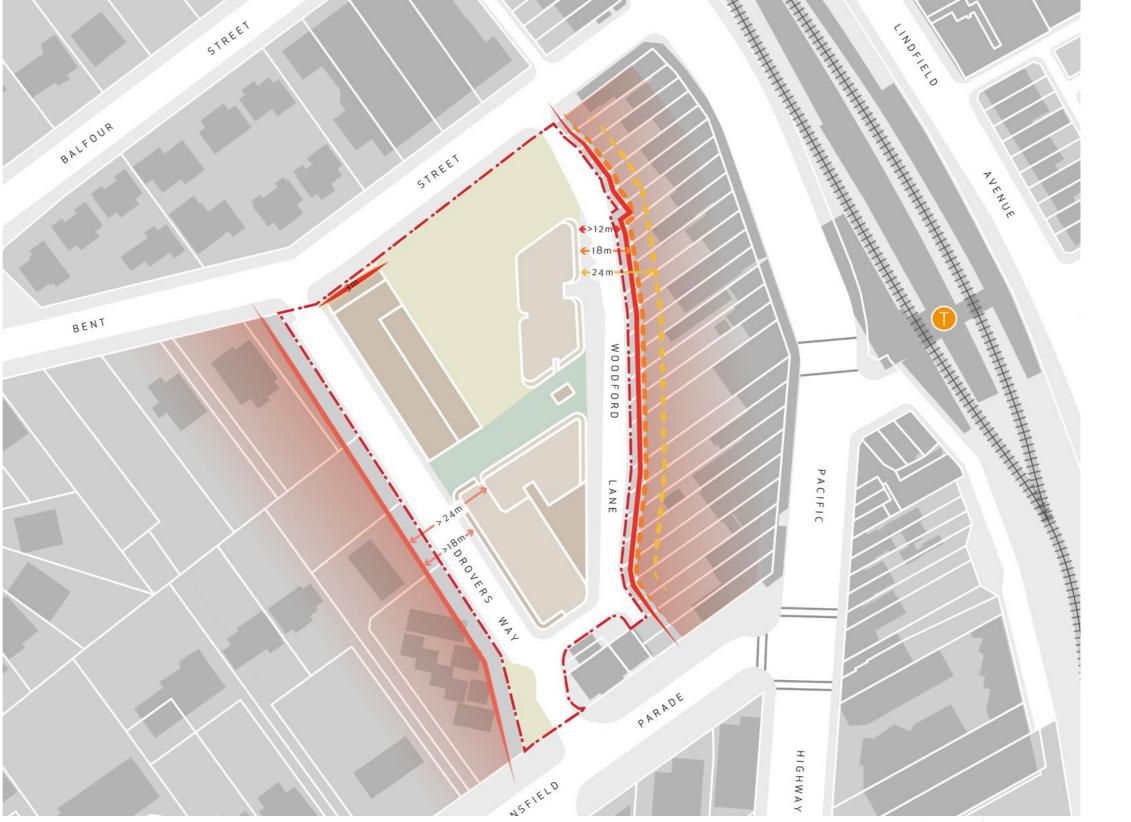


Figure 72: Setbacks Diagram



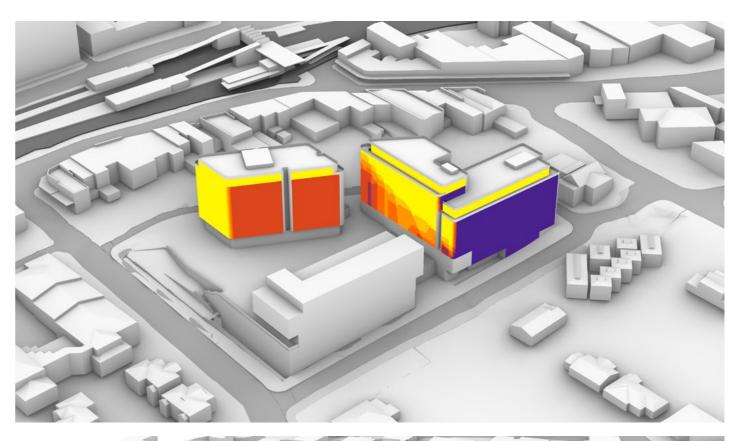
SOLAR ACCESS & CROSS-VENTILATION

The NSW Apartment Design Guide is a resource to be used in the planning and design of residential apartment developments that are three or more storeys and have four or more dwellings. The ADG is intended as a guideline document and does not impose compliance beyond certain non-discretionary standards referenced in State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development (SEPP65). Per the NSW Department of Planning: "the ADG is not intended to be and should not be applied as a set of strict development standards."

Among other criteria, the ADG advises that at least 70% of apartments should receive at least 2 hours of sunlight in mid-winter, that no more than 15% of units should receive zero sunlight, and that at least 60% of units in the first 9-storeys should be naturally cross-ventilated.

In order to test that the basic massing proposed here could comply with the ADG, the overall facade was modelled for solar access and an indicative distribution of apartment layouts designed for building footprints identified as residential in the indicative design. Note that the ultimate outcome of the site design may not match this is arrangement.

Envelopes were solar tested on a 0.5m² grid every 1 hour between 9am and 3pm on June 21 to calculate the percentage of façades receiving a minimum 2 hours solar access. Access was measured only against the façades likely to have living rooms, with roof skylights on upper levels assumed.





6.00 5.00 4.00

Figure 73: Facade Solar Access Model

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SOLAR ACCESS & CROSS-VENTILATION (CONTINUED)

To test solar access, and to test cross-ventilation, indicative floor layouts of each level were drawn. These confirm ADG compliance is a chievable in this format.

It is important to note that this layout or unit mix will not represent the final design outcome, and ADG compliance will be properly assessed at the D.A. stage.

1-Bedroom Units

Living

2-Bedroom Units

Bedroom Other Spaces

3-Bedroom Units

Living

Bedroom

Other Spaces

ಕ್ Cross-Ventilated

× No Direct Sunlight

(Daylight Only)

Primary Open Space

☆ 2 Hours Direct Sunlight

Living

Bedroom Other Spaces

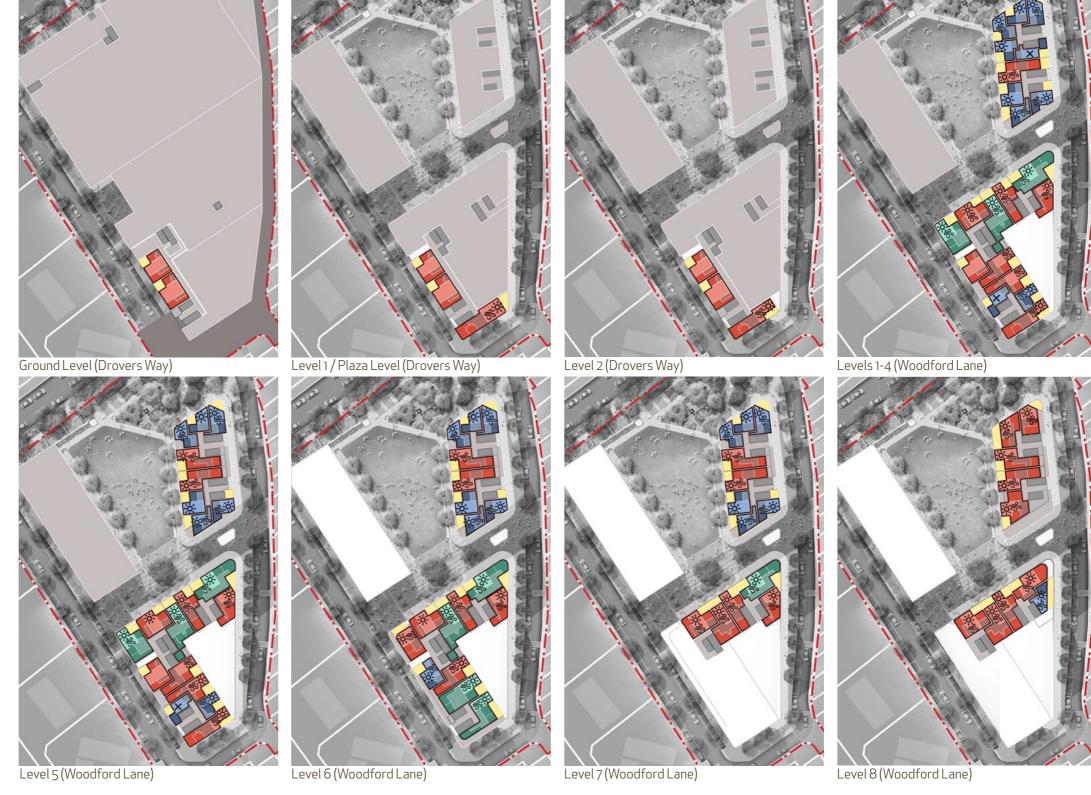


Figure 74: Indicative floor layouts for ADG

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SUN EYE VIEWS

Sun eye views were prepared to further test solar access by analysing the solar penetration into rooms and open areas of $% \left\{ 1,2,\ldots ,n\right\}$ the apartments.

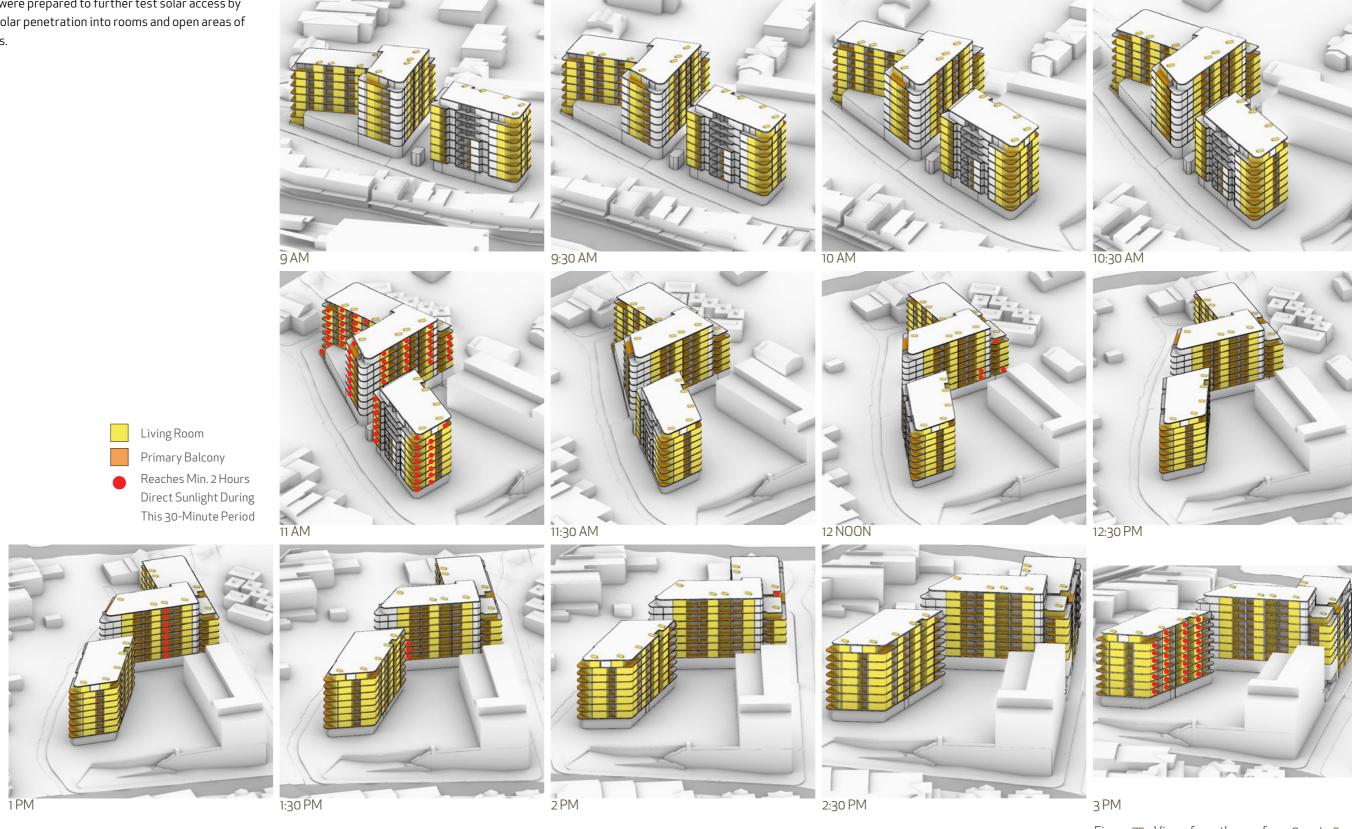


Figure 75: Views from the sun from 9am to 3pm

ADG ASSESSMENT SUMMARY

Based on an indicative unit layout totalling to 153 dwelling units, ADG compliance is met on either a building-by-building and all-ofsite analysis.

Note that the proposed residential floor space has been provided as a range, with the support and direction of the Local Planning Panel and KMC's independent urban designer's review.

Within that floor space, different unit size and mixes will provide different unit counts. For example, a range in average unit size of 90 to 100 GFA across a total residential GFA of 14,500 - 15,000m² represents a potential unit range of 145 - 167 units. The unit count shown here is roughly in the middle of that range.

ADG Assessment Result:

82% of relevant façades can receive ≥2 hours of sunlight 6% of relevant façades receive no direct sunlight 71% of units on the first 9-storeys can be cross-ventilated

		Dwelling Units	No Direct Sunlight		2 Hours Sunlight		Cross Ventilated	
	Level		D.U.s	/ total	D.U.s	/ total	D.U.s	/ total
Tower 1 (Northeast)	Woodford Level 1	9	1	11%	8	89%	5	56%
	Woodford Level 2	9	1	11%	8	89%	5	56%
	Woodford Level 3	9	1	11%	8	89%	5	56%
	Woodford Level 4	9	1	11%	8	89%	5	56%
	Woodford Level 5	8	-	0%	8	100%	6	75%
	Woodford Level 6	8	-	0%	8	100%	6	75%
	Woodford Level 7	8	-	0%	8	100%	6	75%
	Woodford Level 8	5	-	0%	5	100%	5	100%
Subtotal, Tower 1		65	4	6%	61	94%	43	66%
Tower 2 (South)	Drovers Ground	2	-	0%	-	0%	-	0%
	Drovers Level 1	3	-	0%	1	33%	1	33%
	Drovers Level 2	3	-	0%	1	33%	1	33%
	Woodford Level 1	12	1	8%	8	67%	9	75%
	Woodford Level 2	12	1	8%	8	67%	9	75%
	Woodford Level 3	12	1	8%	8	67%	9	75%
	Woodford Level 4	12	1	8%	9	75%	9	75%
	Woodford Level 5	12	1	8%	9	75%	9	75%
	Woodford Level 6	10	-	0%	10	100%	9	90%
	Woodford Level 7	5	-	0%	5	100%	5	100%
	Woodford Level 8	5	-	0%	5	100%	5	100%
Subtotal, Tower 2		88	5	6%	64	73%	66	75%

ADG Compliance	Dwelling Units	No Direct Sunlight		2 Ho Sunli		Cross Ventilated		
target		≤ 15	%	≥	70%	> 1	60%	
	153	9 69	%	125	82%	109	71%	

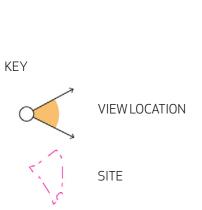
4.10 IMPACT ANALYSIS: VISUAL IMPACT

A number of locations were identified as important vantage points and vistas towards the site, with the potential impact of the indicative design on these views tested through photo-montages.

Views were set up by measuring the GPS coordinates of each photograph and its compass orientation, before digitally placing a virtual 'camera' at that location and orientation. Where there were clear markers to orient the photo, the camera was then hand-corrected to more closely match the photograph. An image was then taken from a digital model of the proposed massing and merged with the photograph. These views should be considered indicative only, and will not necessarily match the final built form outcome.

- View from the eastern side of Pacific Highway looking
- View from the eastern side of Pacific Highway looking 2.
- View from the entry of Lindfield Train Station on 3. Pacific Highway looking west
- View looking toward the site from the eastern side of Pacific Highway
- View from the intersection of Drover's Way & 5. Beaconsfield Pde looking north towards the site
- View from the corner of Balfour St and Bent St looking east up Bent St

Overall, the indicative design is considered to have an acceptable visual impact.



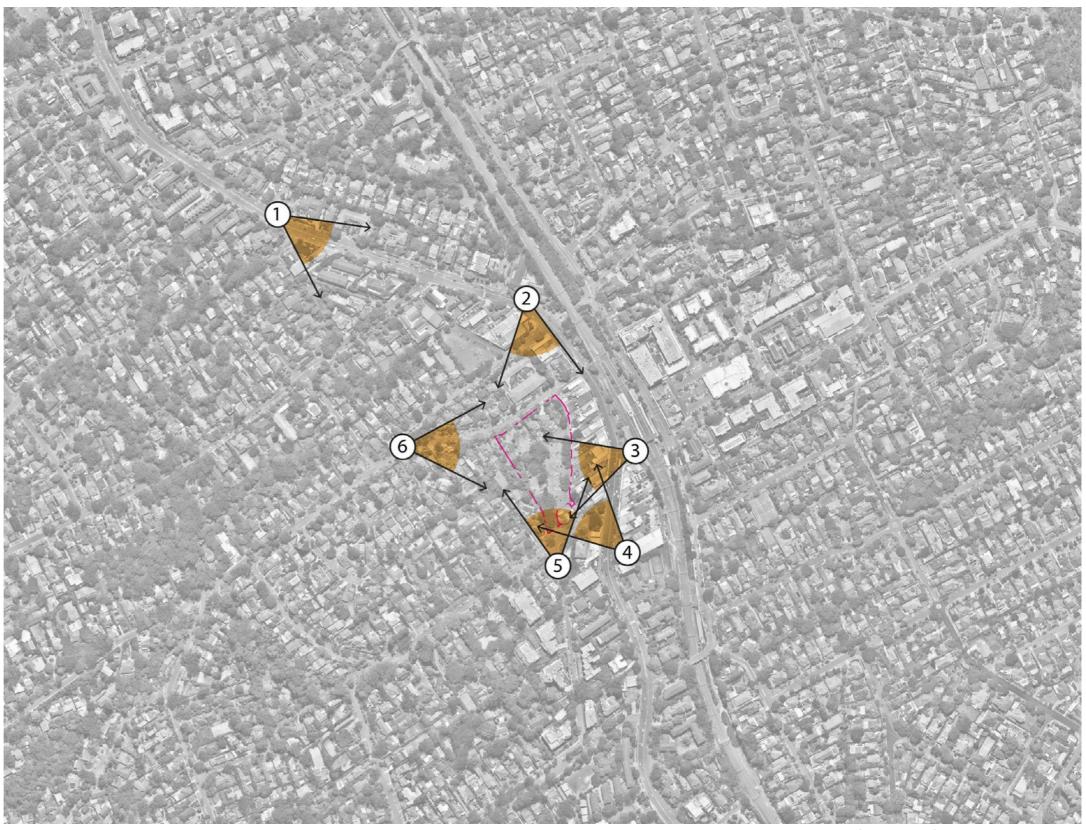


Figure 76: Location of photographs on next page







Figure 78: View Two Figure 79: View Three







Figure 81: View Five

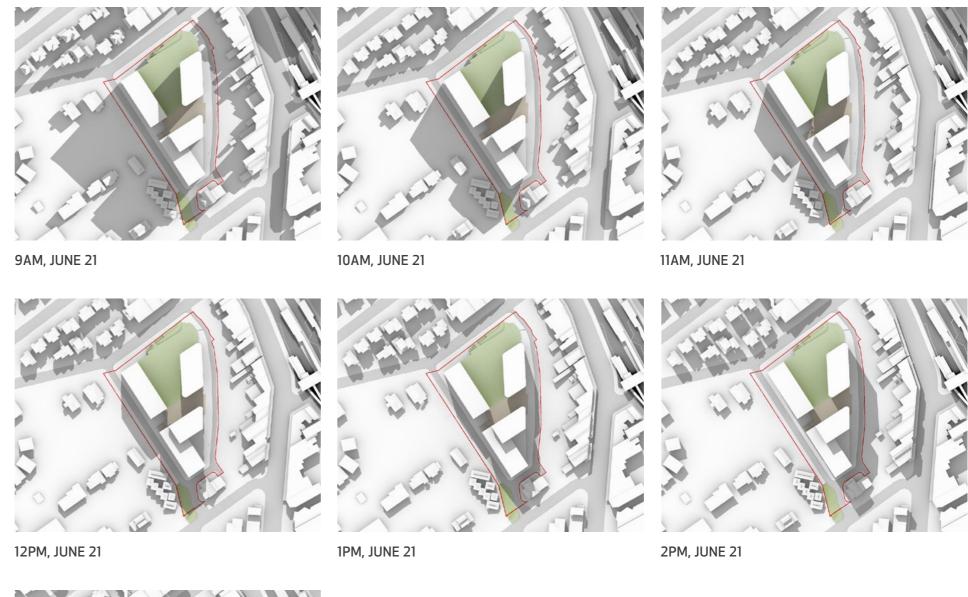


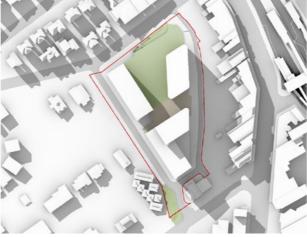
Figure 82: View Six

4.11 IMPACT ANALYSIS: OVERSHADOWING

Analysis of the overshadowing impact of the indicative design shows that it is acceptable when considered over the course of the day. The largest impact is to the properties to the west in the morning, due to the site orientation and the slope of the land. All affected properties to the west are free of overshadowing by 12pm or 1pm.

The rear car parks of the Pacific Highway shops begin to be impacted at 2pm, but the façades are largely un-impacted.





3PM, JUNE 21

Figure 83: Overshadowing Impact Analysis

RECOMMENDED PLANNING FRAMEWORK

PROPOSED LEP CONTROLS

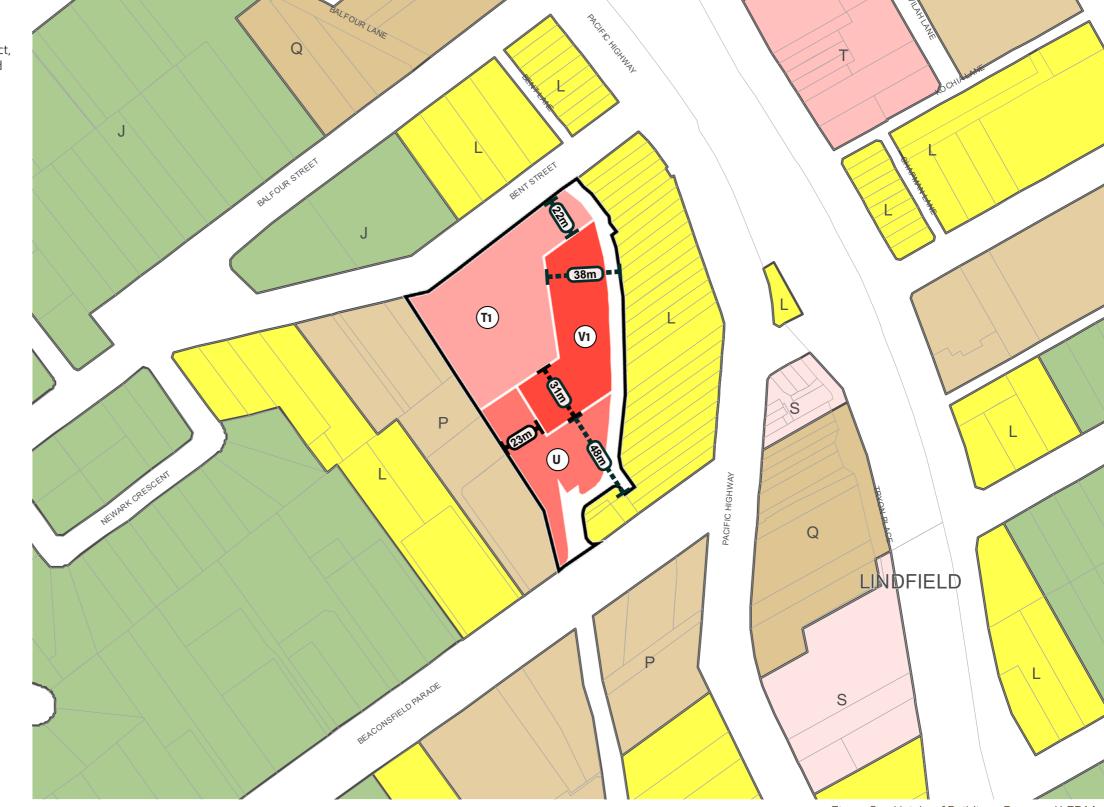
1. PROPOSED HEIGHT OF BUILDINGS CONTROL

In order to deliver the preferred outcome, it is proposed that $\label{eq:condition} % \[\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{$ three height controls be applied to the Hub site.

Following DPIE advice in the Gateway Conditions for this project, these are provided as Height of Building (HOB) limits measured in metres above existing natural ground level:

T1 29.5m U 31.5m

V1 37.0m





PROPOSED LEP MAP: HOB

Figure 84: Height of Buildings, Proposed LEP Map

5.1 PROPOSED LEP CONTROLS

BASIS OF PROPOSED HEIGHT OF BUILDINGS CONTROL

The column and images on the right explain how the Height of Buildings (HOB) Controls have been established.

The three height zones proposed are based on the finished roof level of the indicative design compared against the closest existing ground contour, with an additional height allowance for a lift overrun.

The critical level used to establish the roof height is the park level of RL 96.5. Building storeys are then added above or below the park depending on program, based on the following floor-to-floor heights:

Typical Parking Level	2.8m
Parking Level Under Retail	3.1m
Supermarket Retail Level	6.5m
Street Level Retail	5.0m
Library/Community	5.0m
Child Care	3.6m
Typical Residential Level	3.1m
Roof & Overrun Allowance	1.5m

This establishes the tallest point of the envelope as an RL. To then calculate the HOB control measured from existing ground that supports this envelope, the lowest crossing contour across each of the roofs is subtracted from the RL. These are then rounded to the nearest 0.5 for clarity in LEP mapping.

HOB Area '**T1**' 29.5m Community Building

Roof RL Calculation: Plaza RL + 3 x Community/Library Levels + Child Care Level + Lift Overrun 96.5 + (3 x 5.0) + 3.6 + 1.5 = 116.60

Height of Building Calculation: Roof RL - Lowest Contour, Rounded 116.60 - 87.0 = 29.6 \approx 29.5

--

HOB Area '**U**' 31.5m Drovers Way Residential

Roof RL Calculation: Level 1 of Woodford Lane Residential + $6 \times Residential$ Levels + Lift Overrun $101.5 + 5.0 + (6 \times 3.1) + 1.5 = 121.60$

Height of Building Calculation: Roof RL - Lowest Contour, Rounded

121.60 - 90.0 = 31.6 ≈ 31.5

--

HOB Area '**V1**' 37.0m Woodford Lane Residential

Roof RL Calculation: Plaza RL + Street Retail Level +8 x Residential Levels + Lift Overrun 96.5+5.0+(8 x 3.1)+1.5=127.80

Height of Building Calculation: Roof RL - Lowest Contour, Rounded 127.80 - 91.0 = 36.8 \approx 37.0

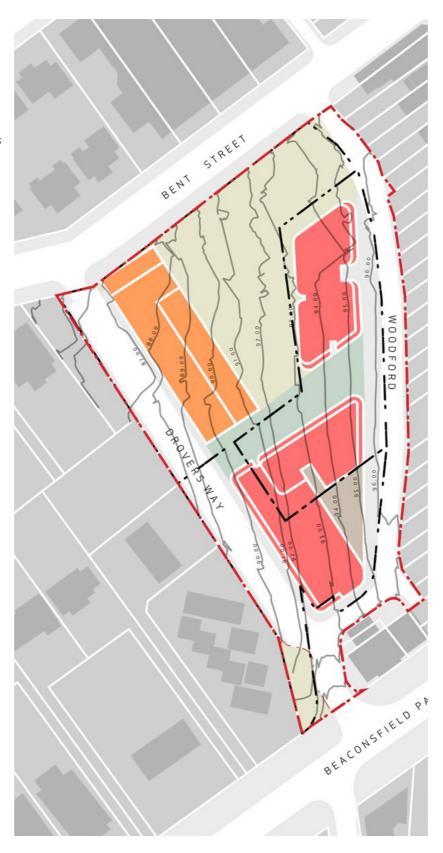




Figure 85: Basis of Proposed Height of Building Control

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PROPOSED LEP CONTROLS

3. PROPOSED FLOOR SPACE RATIO CONTROL

The indicative design requires an allowable FSR of ${\bf 2.31:1}$. This is based on a site area of 11,075m². The site area basis excludes the existing Woodford Lane road reserve as well as leftover area west of the future Drovers Way extension.

4. BASIS OF FSR CONTROL

The proposed FSR control is based on the following allocation of $\,$ Gross Floor Areas:

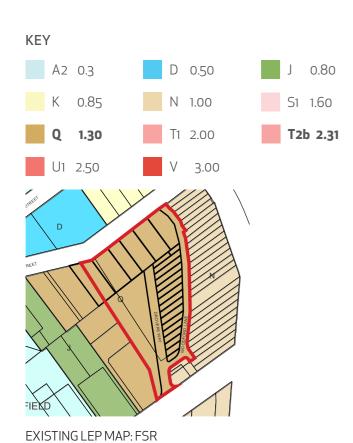
Community Uses: 3000m²

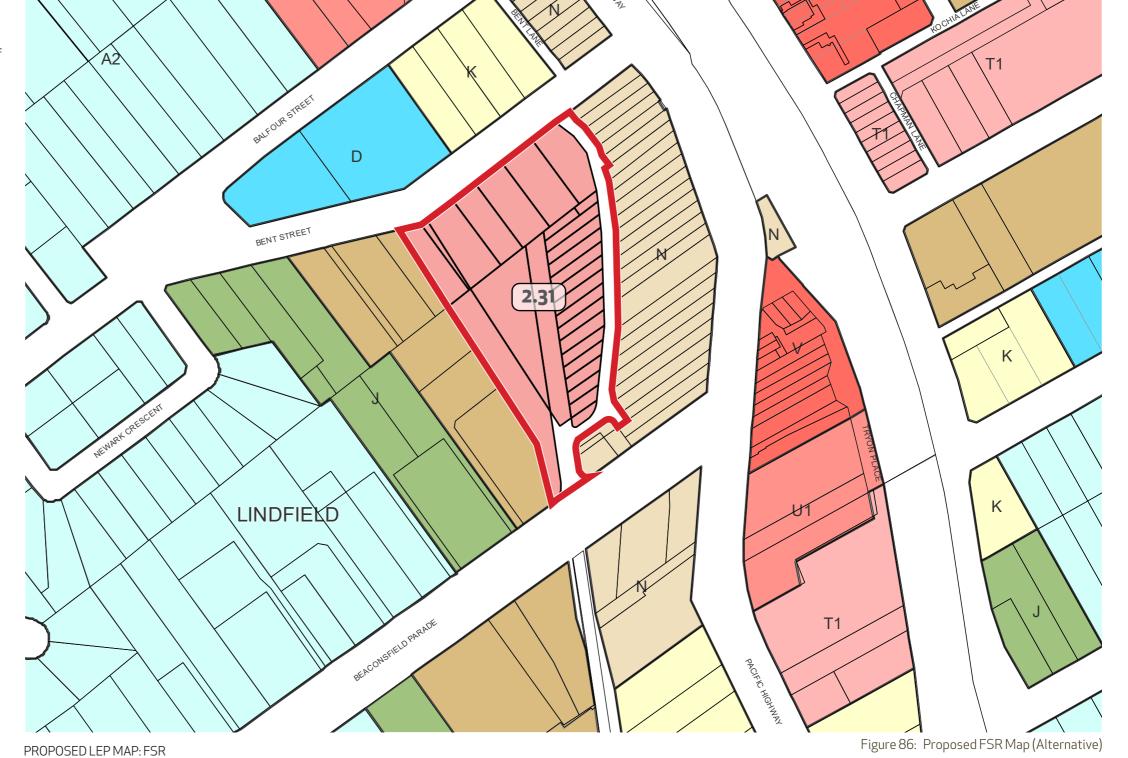
Retail / Commercial: 5000-8000m²

Residential: 14,500 - 15,000m²

Maximum total GFA: 25,600m²

Ranges have been allocated with the support of the Local $\,$ $Planning\ Panel\ and\ KMC's\ independent\ urban\ designer's\ review.$





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5.2 PROPOSED DCP CONTROLS

Changes to the current site-specific DCP are included with the main Planning Proposal document. The key diagrams proposed to be included are shown here, being:

- · Simplified structure plan (Figure 87) identifying location of public open spaces, buildings (without attribution of building use), extent of street activation, and main access routes into/through the site.
- · Movement diagram (Figure 89) showing ubiquitous pedestrian links across the main public open spaces, future pedestrian links through the Pedestrian Highway shops, a two-way Drovers Way, one-way Woodford Lane and changed intersections at Beaconsfield and Bent with the Pacific Highway.
- · Access diagram (Figure 90) indicating that all parking/loading should be condensed and located in Drovers Lane, and that pedestrian access points into the park be provided from Bent St, Drovers Way and Woodford Lane via at-grade entries, ramps, stairs and public elevators (such as part of the community building).
- · Public realm plan (Figure 91) showing the combined park and plaza.
- · Setbacks diagram (Figure 92) identifying the setbacks detailed in the previous chapter.
- · Frontages diagram (Figure 93) indicating that primary activation should occur around all public spaces and along Woodford Lane, with secondary frontages to Drovers Way and Bent St.
- · Street sections (Figures 94-97) identifying the character of each street within and adjacent to the Hub site.

These diagrams are explained in detail in the proposed DCP document submitted with the Planning Proposal.



Figure 87: Proposed DCP Figure 12.1 - Structure Plan



Figure 90: Proposed DCP Figure 12.4 - Public Realm Plan

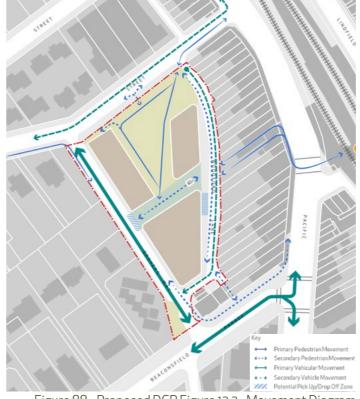


Figure 88: Proposed DCP Figure 12.2 - Movement Diagram



Figure 91: Proposed DCP Figure 12.6 - Setbacks

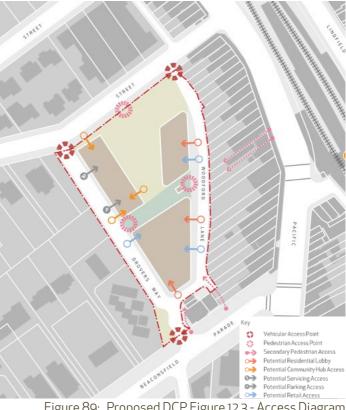


Figure 89: Proposed DCP Figure 12.3 - Access Diagram



Figure 92: Proposed DCP Figure 12.7 - Frontages

5.2 PROPOSED DCP CONTROLS



Figure 93: Proposed DCP Figure 12.8 - Woodford Lane Figure 94: Proposed DCP Figure 12.9 - Woodford Lane South



Figure 95: Proposed DCP Figure 12.10 - Drovers Way

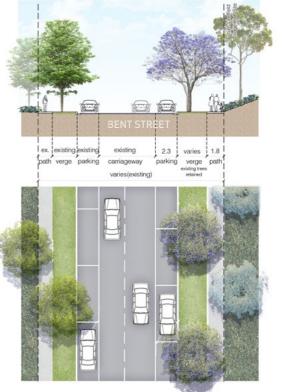


Figure 96: Proposed DCP Figure 12.11 - Bent Street

APPENDICES

APPENDIX 1

IMPACT TESTING

& SCALE COMPARISONS

6.1 VIEW IMPACT ANALYSIS

A number of view locations were identified as important vantage points and vistas towards the site. The potential impact of height distributed at different positions on the site was then tested through photo-montages from these locations.

Views were set up by measuring the GPS coordinates of each photograph and its compass orientation, before digitally placing a virtual 'camera' at that location and orientation. Where there were clear markers to orient the photo, the camera was then hand-corrected to more closely match the photograph. An image was then taken from a digital model of the proposed massing and merged with the photograph. These views should be considered indicative only, and will not necessarily match the final built form outcome.

TEST ONE: HEIGHT TO NORTHWEST

The view for this height location is taken from the corner of Balfour St and Bent St looking east up Bent St. The view impact analysis tests the height of a north western building at 8 storeys, 9-storeys, 10 storeys, 12 storeys and 14 storeys.



Figure 98: 8 STOREY (RL26.5m)



Figure 99: 9 STOREY (RL29.6m)



Figure 100: 10 STOREY (RL32.7m)

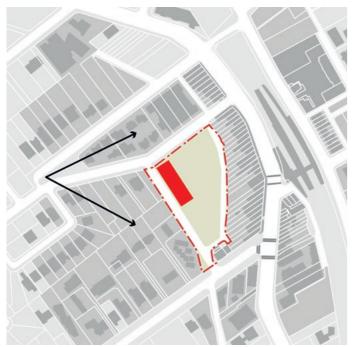


Figure 97: Key Plan



Figure 101: 12 STOREY (RL38.9m)



Figure 102: 14 STOREY (RL45.1m)

6.2 VIEW IMPACT ANALYSIS

TEST TWO: HEIGHT TO NORTHEAST

The view for this height location is taken from the eastern side of Pacific Highway looking south. The view impact analysis tests the height of a north eastern building at 8 storeys, 9-storeys, 10 storeys, 12 storeys and 14 storeys.







Figure 105: 9 STOREY (RL29.6m)



Figure 106: 10 STOREY (RL32.7m)

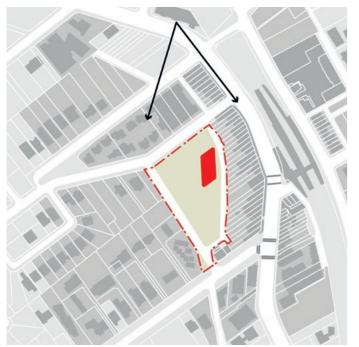


Figure 103: Key Plan



Figure 107: 12 STOREY (RL38.9m)



Figure 108: 14 STOREY (RL45.1m)

6.3 VIEW IMPACT ANALYSIS

TEST THREE: HEIGHT TO CENTRE

The view for height location 3 is taken from the intersection of Drover's Way & Beaconsfield Pde looking north towards the site. The view impact analysis tests the height of an east-west oriented building in the centre of the site at 8 storeys, 9-storeys, 10 storeys, 12 storeys and 14 storeys.



Figure 110: 8 STOREY (RL26.5m)



Figure 111: 9 STOREY (RL29.6m)



Figure 112: 10 STOREY (RL32.7m)



Figure 109: Key Plan



Figure 113: 12 STOREY (RL38.9m)



Figure 114: 14 STOREY (RL45.1m)

6.4 VIEW IMPACT ANALYSIS

TEST FOUR: HEIGHT TO SOUTH

The view for this height location is taken from the intersection of Drover's Way & Beaconsfield Pde looking north towards the site. The view impact analysis tests the height of a southern building at 8 storeys, 9-storeys, 10 storeys, 12 storeys and 14 storeys.



Figure 116: 8 STOREY (RL26.5m)



Figure 117: 9 STOREY (RL29.6m)



Figure 118: 10 STOREY (RL32.7m)

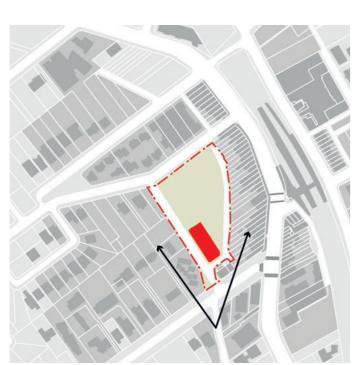


Figure 115: Key Plan



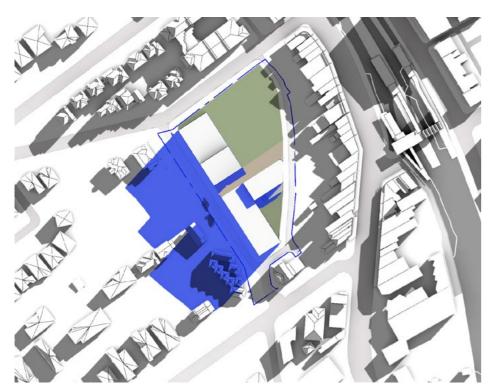
Figure 119: 12 STOREY (RL38.9m)



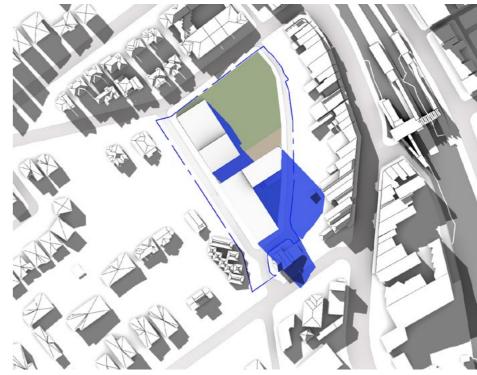
Figure 120: 14 STOREY (RL45.1m)

6.5 OVERSHADOWING IMPACT ANALYSIS

DCP MASTER PLAN







9AM, JUNE 21 12PM, JUNE 21 3PM, JUNE 21 Figure 121: Shadow Diagrams, DCP Master Plan

KEY

EXISTING OVERSHADOWING

OVERSHADOWING BY DCP MASTER PLAN

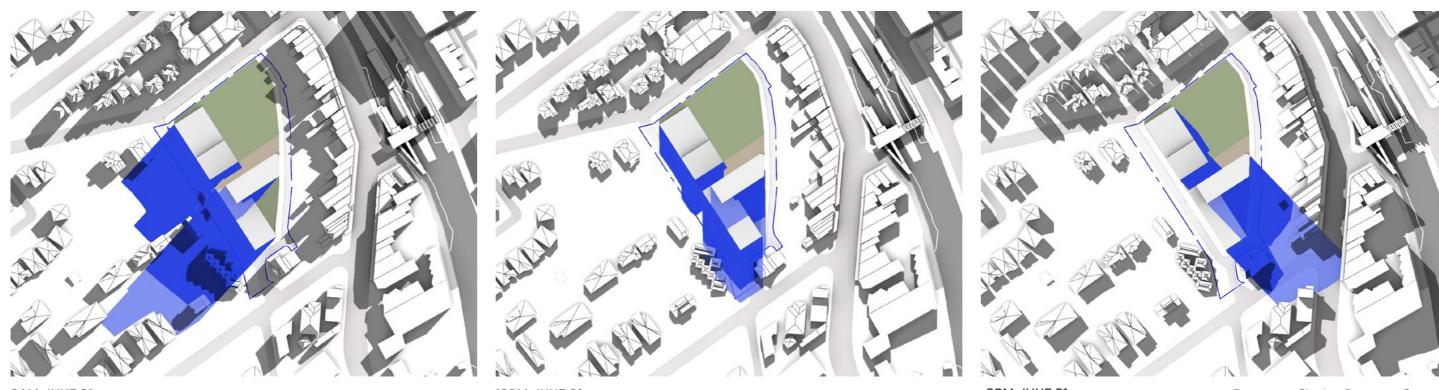


MASSING



EXISTING OVERSHADOWING

OVERSHADOWING BY DCP MASTER PLAN



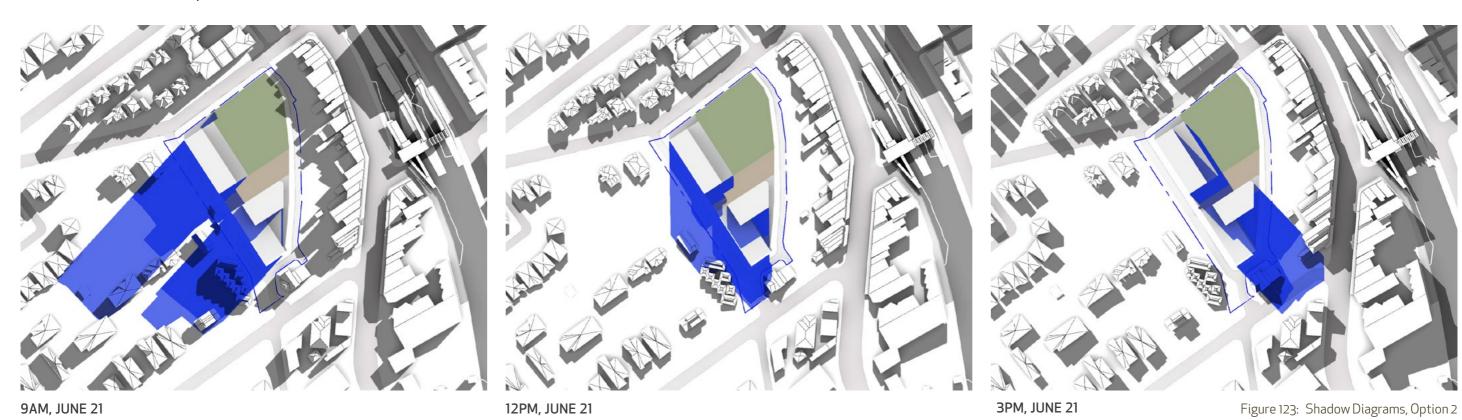
3PM, JUNE 21 9AM, JUNE 21 12PM, JUNE 21 Figure 122: Shadow Diagrams, Option 1

KEY

- EXISTING OVERSHADOWING
- OVERSHADOWING BY DCP MASTER PLAN
- ADDITIONAL OVERSHADOWING



MASSING



KEY

EXISTING OVERSHADOWING

OVERSHADOWING BY DCP MASTER PLAN



MASSING



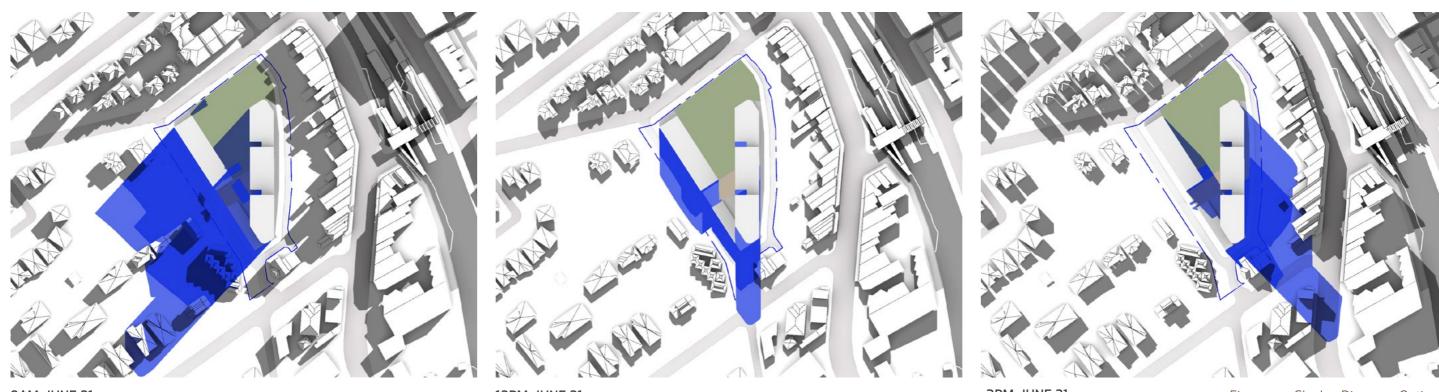
KEY

EXISTING OVERSHADOWING

OVERSHADOWING BY DCP MASTER PLAN



MASSING



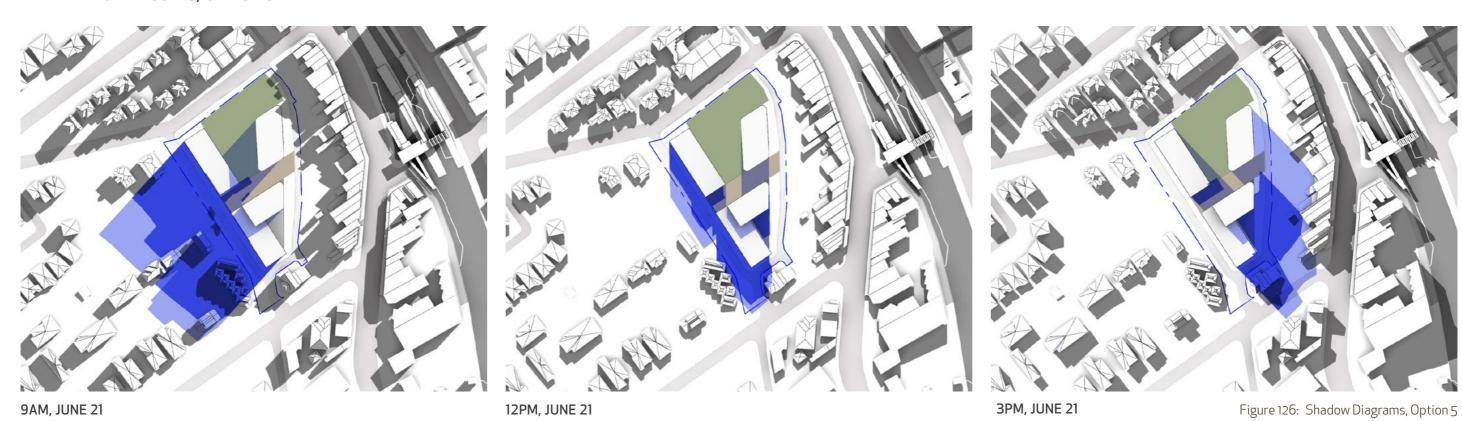
3PM, JUNE 21 9AM, JUNE 21 12PM, JUNE 21 Figure 125: Shadow Diagrams, Option 4

KEY

- EXISTING OVERSHADOWING
- OVERSHADOWING BY DCP MASTER PLAN
- ADDITIONAL OVERSHADOWING



MASSING



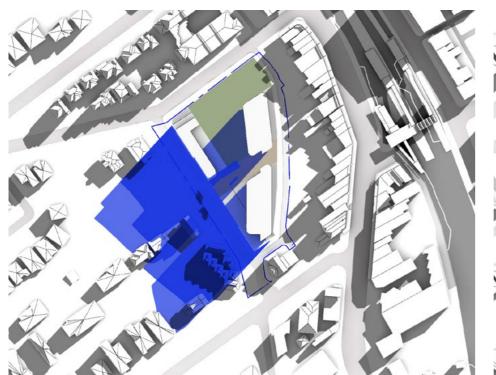
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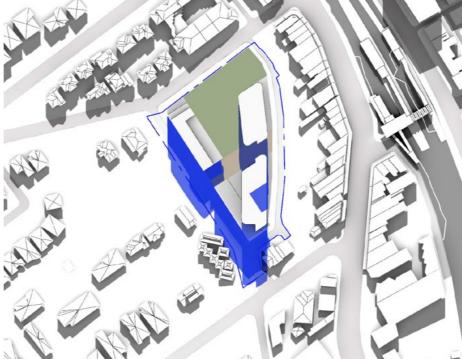
EXISTING OVERSHADOWING

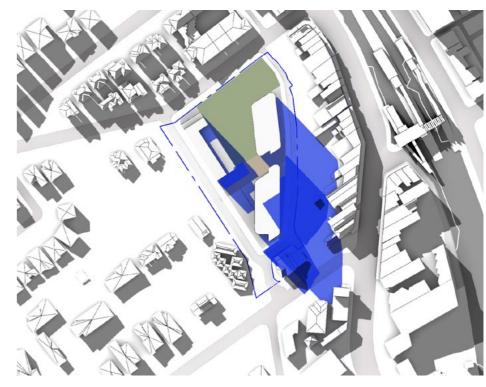
OVERSHADOWING BY DCP MASTER PLAN



MASSING







3PM, JUNE 21 9AM, JUNE 21 12PM, JUNE 21 Figure 127: Shadow Diagrams, Option 6

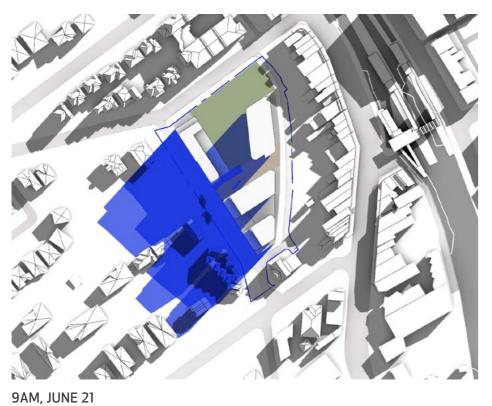
KEY

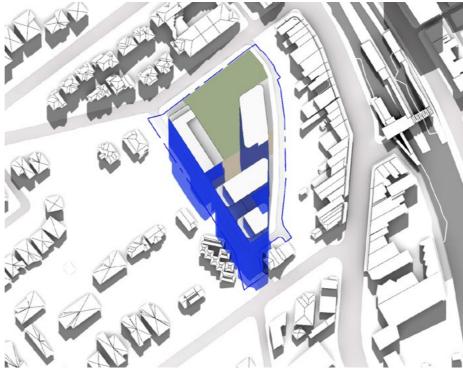
EXISTING OVERSHADOWING

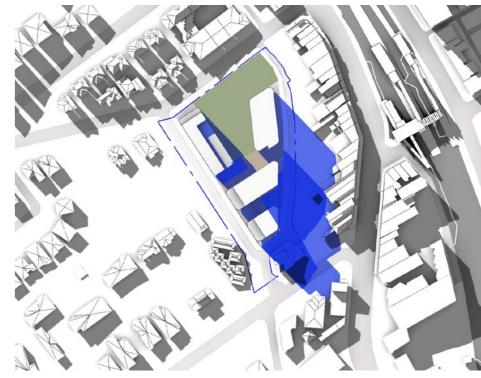
OVERSHADOWING BY DCP MASTER PLAN



MASSING







3PM, JUNE 21 12PM, JUNE 21 Figure 128: Shadow Diagrams, Option 7

KEY

EXISTING OVERSHADOWING

OVERSHADOWING BY DCP MASTER PLAN



IMPACTS ON SOUTHWESTERN BOUNDARY: BULK AND SCALE

As a condition of Gateway Approval, DPIE requested this report examine the impact on neighbouring property Lot 3 DP 318518, which adjoins the southwest boundary of the Planning Proposal site.

The adjoining Lot is zoned R4 - High Density Residential, with a Height of Building Limit of 17.5m, representing an approximately 5-storey residential building. The Lot is currently occupied by a two-storey seniors living community that faces onto the existing Council Car Park (the Planning Proposal site). The sites are visually separated by domestic landscaping, much of which is within the Council property.

The current statutory framework shows much of this domestic landscaping removed by the future Drovers Way, and a new 7to-8 storey residential building constructed on the southern end of the car park site. Based on reference designs prepared for the current DCP, the lower storeys of this 7-storey residential building created an unbroken length of service frontage and driveways fronting Drovers Way Beaconsfield Pde.

The Planning Proposal follows a similar structure plan as the current framework, but with several key improvements. The future street network is very similar, however it is shown with an indicative bend around an existing high-value Tallowwood Tree on the south-western corner of the site. This would mean much more of the existing landscaping could be retained as screening than the reference design in the current statutory framework

The future residential building positioned at Drovers Way has also been retained in the Planning Proposal, with its height increased from 7 to 9-storeys when viewed from the street. However, the bottom two residential storeys largely replace service frontage, resulting in a far better contribution to the street and so creating a less negative impact on the adjoining landowners to the west. A 2m upper level setback on the top Drovers Way storey is also shown, which results in a building bulk very similar to that of the existing statutory framework.

The future extension of Drovers Way, with a constant minimum width of 15m, will ensure appropriate building separation between the Lindfield Village Hub buildings and any future residential flat developments (RFB) west of Drovers Way. Any future RFBs in this location will be capped at 5-storeys by the LEP's height limit, meaning they require 18m separation between habitable rooms. With a DCP setback of 6-metres, the minimum separation distance will be 21m, well in excess of requirements.

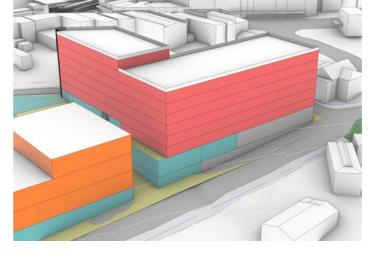
The existing buildings on Lot 3 DP 1318518 will be impacted by the Lindfield Village Hub Project. However, we consider that the impact of the current Planning Proposal is largely an improvement from what could be delivered under the current controls. The Planning Proposal design creates a minor increase in perceptible bulk and scale compared to the current controls, but will offer a much more contributory street frontage.

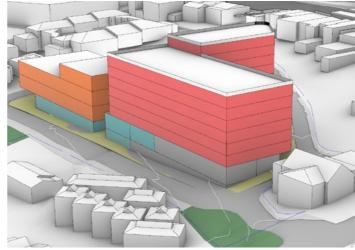
EXISTING DCP ENVELOPE

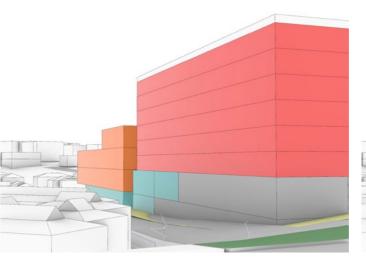




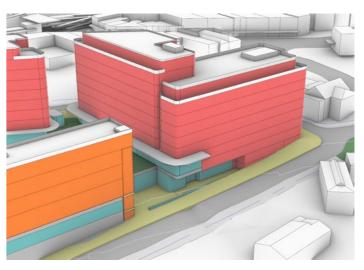
EXISTING DCP ENVELOPE







INDICATIVE DESIGN PROPOSAL





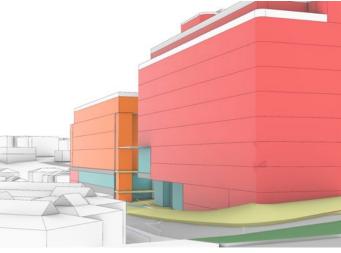
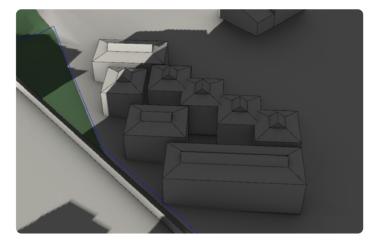


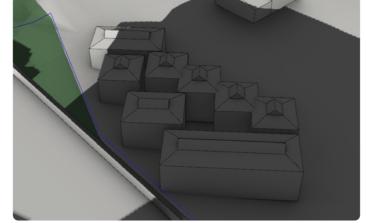
Figure 129: Impact study on Southwestern Boundary

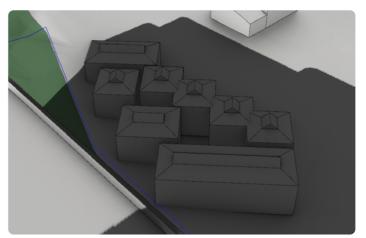
IMPACTS ON SOUTHWESTERN BOUNDARY: ELEVATIONAL SHADOW STUDY

This elevational shadow study identifies that the approximate shadow impacts of the Planning Proposal massing have largely passed by the southwestern neighbour between 12 and 1pm.

This indicates both that the overshadowing impacts on the existing neighbour are acceptable, and that a future redevelopment of a 5-storey residential building (as indicated by that site's current R4 High Density Residential land use zoning) will be able to comply with ADG solar requirements.



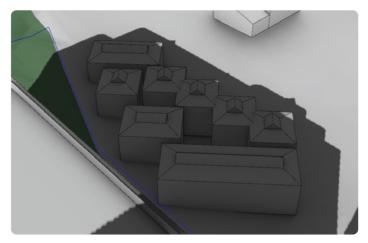


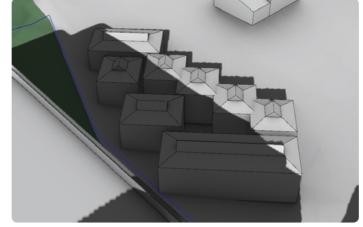


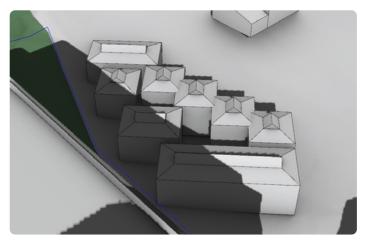
9 AM







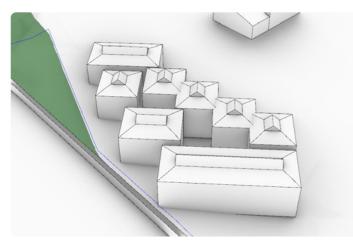




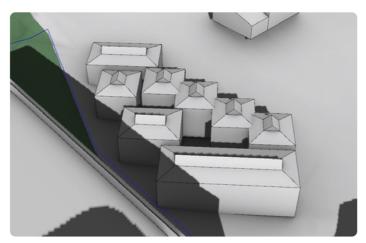
1030 AM

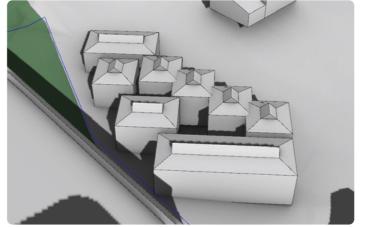
11 AM

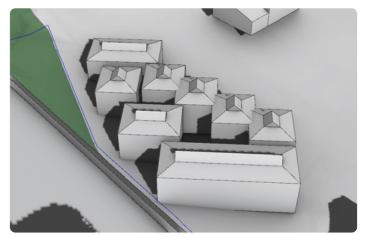
1130 AM



Reference







NOON

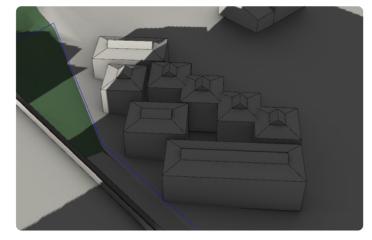
1230 PM

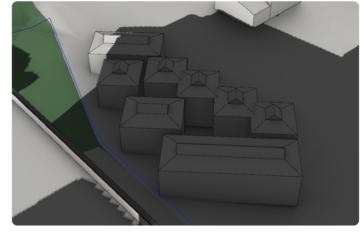
1PM

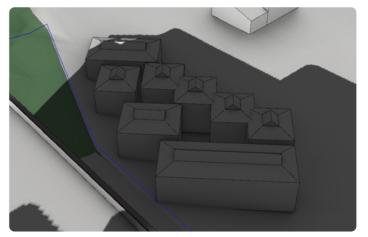
IMPACTS ON SOUTHWESTERN BOUNDARY: ELEVATIONAL SHADOW STUDY **COMPARISON WITH EXISTING CONTROLS**

At DPIE's request, the design team reviewed the impacts of reducing the proposed building height along Drovers Way. This study shows the effect of lowering the roof height along Drovers Way by one storey, which roughly aligns with the current HOB limit of 27.5m.

As can be seen, the reduction in overshadowing is minor.



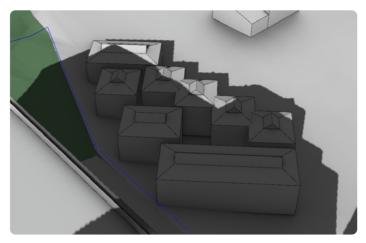


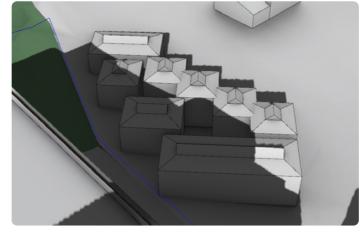


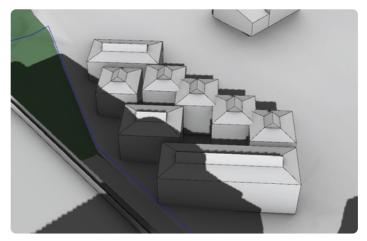
9 AM

930 AM

10 AM



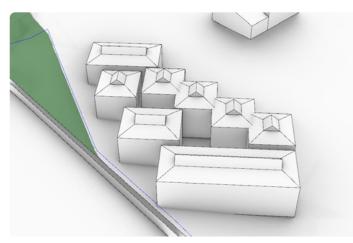




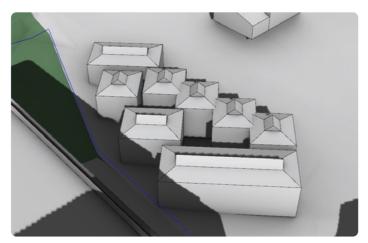
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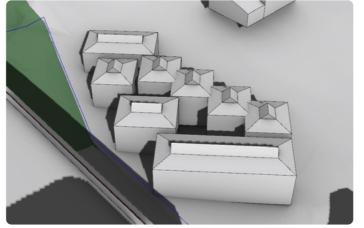
11 AM

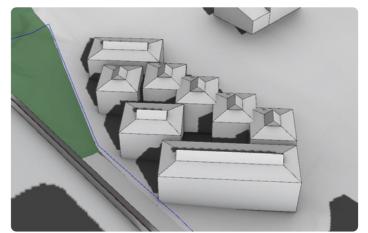
1130 AM



Reference







NOON

1230 PM

1PM

APPENDIX 2

COMPARISON OF INDICATIVE DESIGN TO KLCDCP & BETTER PLACED

6.6 COMPARISON OF INDICATIVE DESIGN TO KLCDCP MASTER PLAN

6.5.1 STRUCTURE PLAN

As shown in Chapter 3, the indicative design largely repeats the structure of the DCP Master Plan with a few key changes:

- The park and plaza are combined on a single level, brought up to the level of Woodford Lane to be directly accessible from the corner of Bent & Woodford, as well as mid-block at Woodford.
- Drovers Way has been modified to avoid an existing retaining wall in order to retain a high value Tallow-wood tree. This change is subject to design development.
- An additional building has been introduced along the eastern edge of the park, in the north-eastern quadrant of the site, to further activate Woodford Lane.

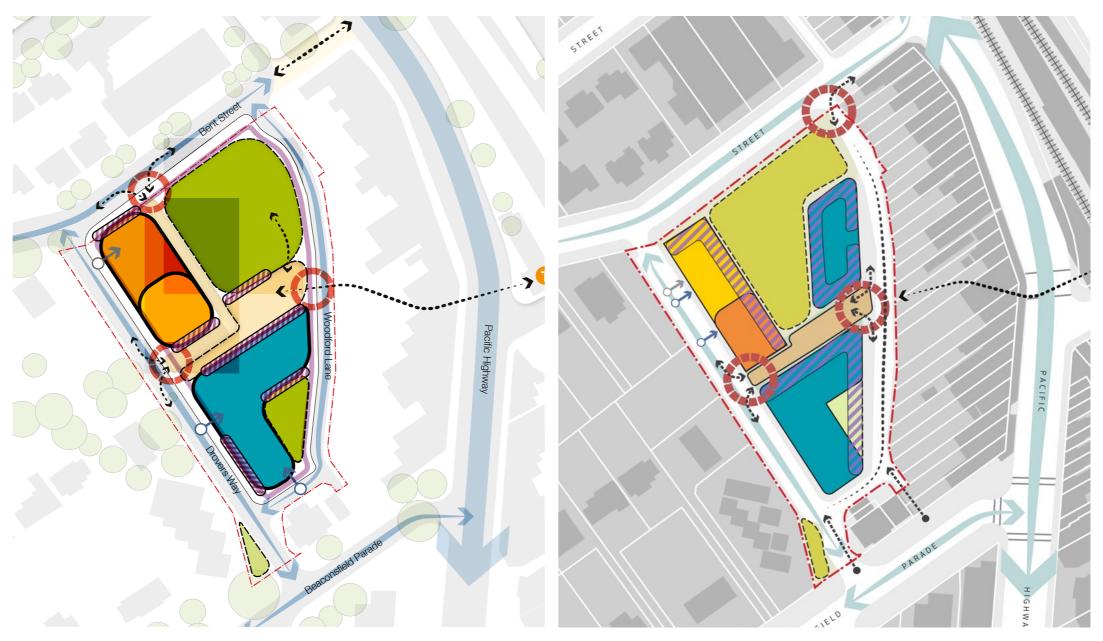
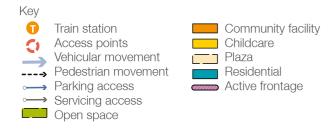


Figure 132: Current Approved Master Plan - Structure Plan, image source: Source: p14-159 of KMC Local Centres DCP

Figure 133: Indicative Design - Structure Plan

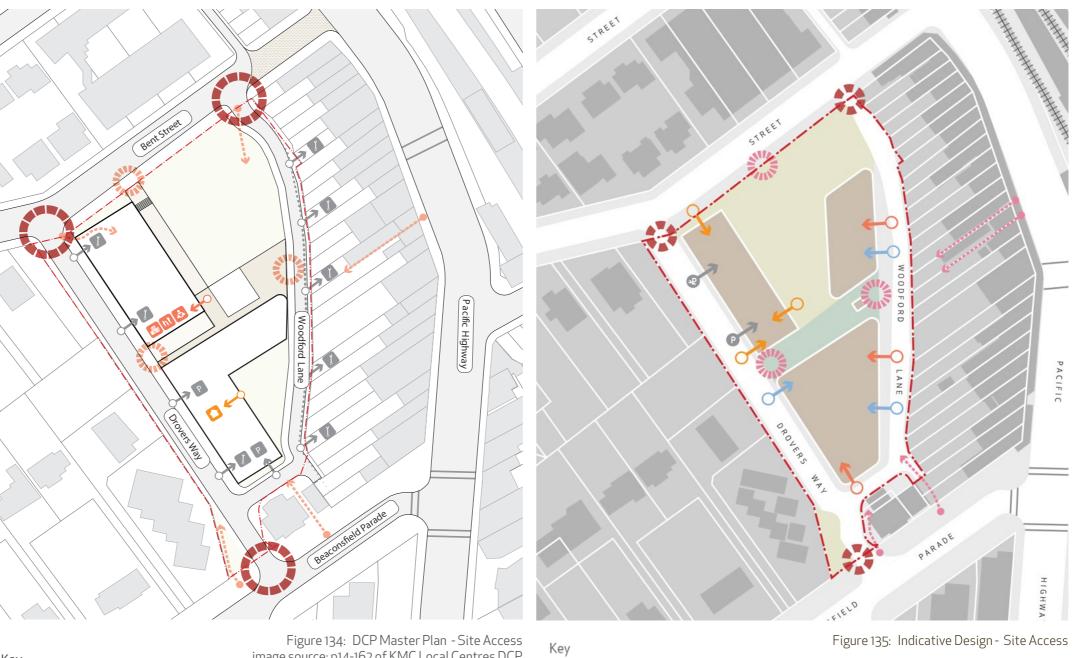


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6.6.1 ACCESS

Vehicular and pedestrian access remains largely consistent between the $\dot{\text{DCP}}$ Master Plan and the current indicative design. The main access points to and from Drovers Way are unchanged.

The most significant change is the consolidation of parking and servicing to the northern part of Drovers Way, which will result in a significant reduction of blank street frontage and less points of hazard for pedestrians. Where the DCP Master Plan had five points of vehicular entry spread across the full extent of Drovers Way and the first section of Woodford Lane, the current proposal consolidates vehicular access to two shared entries.



Key

Vehicular access point

Pedestrian access point Secondary pedestrian point

Community hub access Residential access

Servicing access

Figure 134: DCP Master Plan - Site Access image source: p14-162 of KMC Local Centres DCP

Library

Community centre

Childcare

Р Public parking

Hub services

Residential

Servicing

Vehicular Access Point

Pedestrian Access Point

Secondary Pedestrian Access Potential Residential Lobby

Potential Community Hub Access

Potential Servicing Access Potential Parking Access

Potential Retail Access

6.6.2 BUILDING SETBACKS

The proposed setbacks of the indicative design remain consistent with the objectives of the DCP Master Plan. The minimum 3-metre setback south of Bent St and east of Woodford Lane remain unchanged, as does the 6-metre setback west of the future Drovers Way (identified in a different KLCDCP chapter).

The DCP Master Plan's 0-metre setback along Woodford Lane is proposed to be removed. This is in order to permit allow straight building lines rather than following exactly the 'kinks' in the current street boundary, which a 0-metre setback would suggest.

The DCP Master Plan setback plan includes a note that all setbacks on the east of Woodford Lane are "subject to Apartment Design Guide".

Although the current LEP height limit caps development potential at 3-storeys, making ADG compliance relatively straightforward, future uplift should require additional upper level setbacks. As noted in the existing DCP, this may take the form of an additional 2 to 3m upper-level setback at 5-storeys and above. Further setbacks would be required if future building heights are permitted in excess of 8-storeys.



Figure 136: DCP Master Plan - Setbacks image source: p14-162 of KMC Local Centres DCP

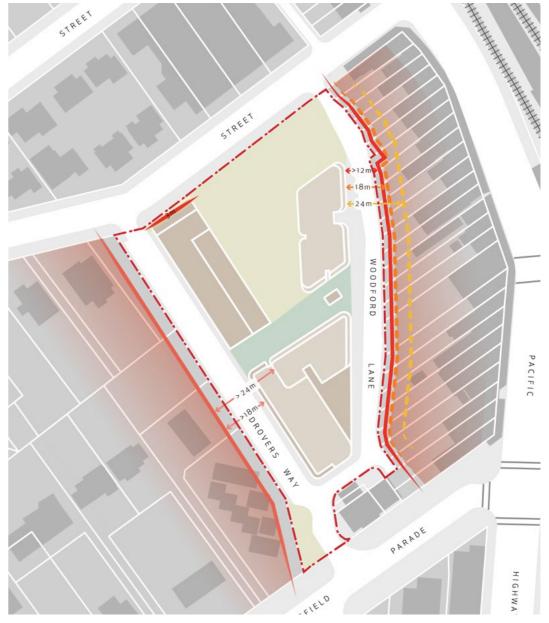


Figure 137: Indicative Design - Building Footprint & Setbacks Plan



6.6.3 ACTIVE FRONTAGE

The indicative design increases active frontage from the $\ensuremath{\mathsf{DCP}}$ Master Plan, with a significant portion of Woodford Lane proposed to become an active retail street. As was the case in the DCP Master Plan, all frontages along the park/plaza are to be

At the Drovers Way level there will be active frontage at the main mid-block pedestrian entrance, as was the case in the DCP Master Plan.

Although it was not shown in the DCP graphic, the majority of the Drovers Way frontage in the DCP Master Plan was identified for parking and loading and so should have been noted as 'Dead

In the indicative design of this Current Proposal, basement parking and services have been consolidated to occupy a smaller portion of Drovers Way.

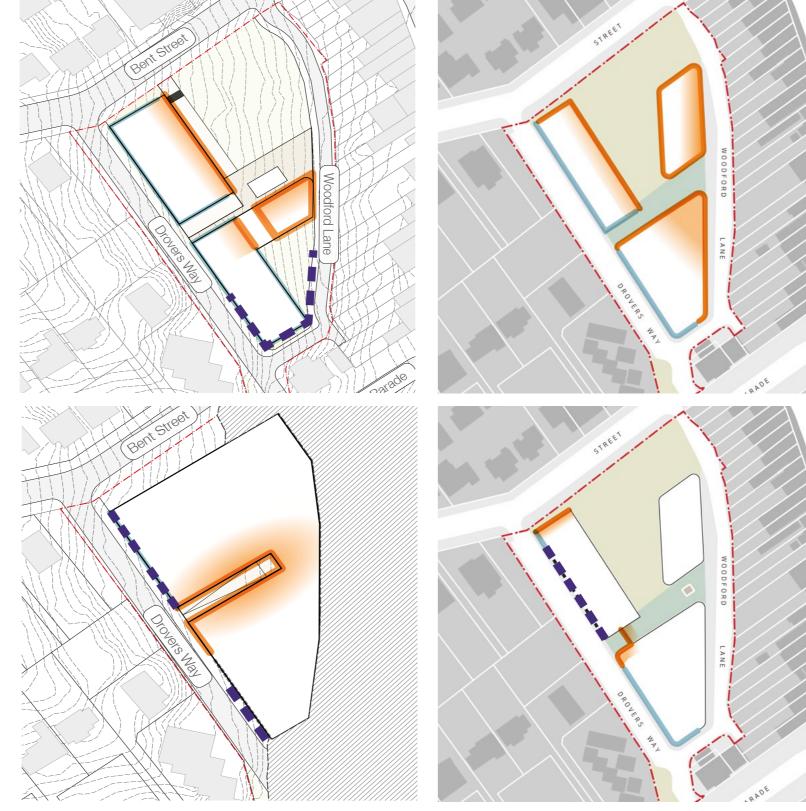


Figure 138: DCP Master Plan - Active Frontages image source: p14-170 of KMC Local Centres DCP with additional 'blank frontage' overlay

Figure 139: Indicative Design - Active Frontage Top: Woodford Lane Ground Level Bottom: Drovers Way Ground Level

Active Frontages Passive Frontages ---- Inactive Frontages

6.6.4 MASSING & POTENTIAL USE DISTRIBUTION

The distribution of uses in the indicative design is largely in line with the DCP Master Plan, with changes to the ground/park level and building heights. In both schemes the supermarket/retail level is underneath the park, the Library/Community/Child Care uses are located in the building west of the park, and the L-shaped building is nominated as residential. The additional building proposed in this Planning Proposal is identified as a further chanten regidential. further shoptop residential.

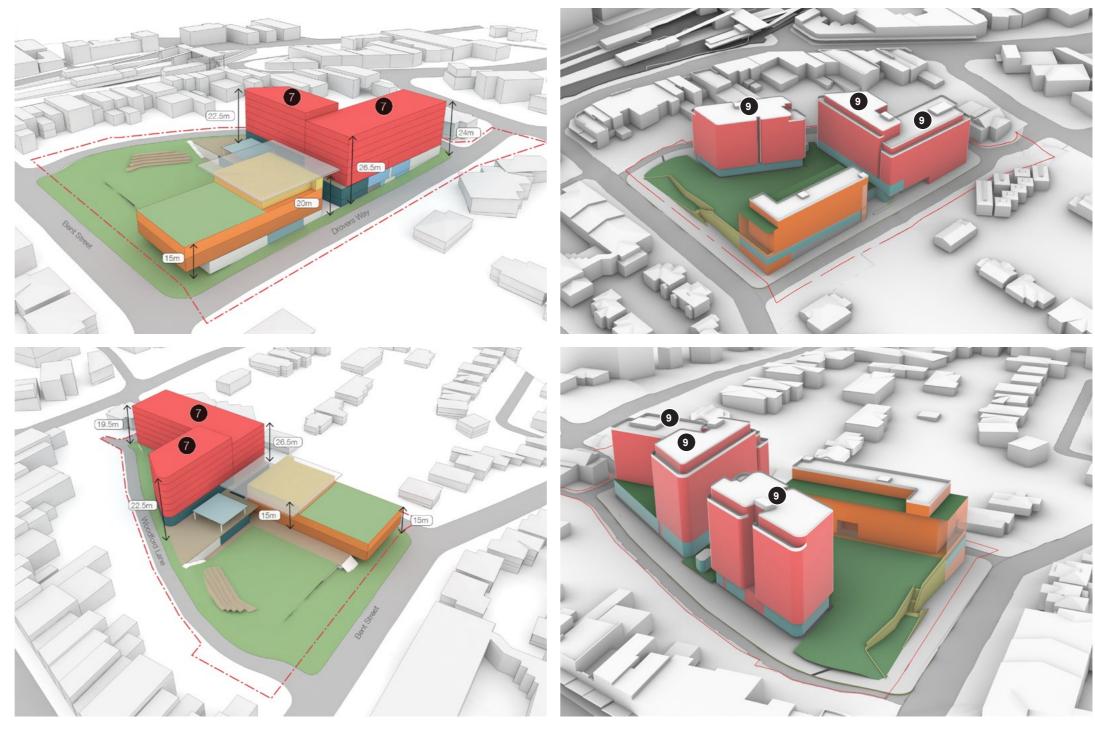


Figure 140: DCP Master Plan, image source: p14-170 of KMC Local Centres DCP

Figure 141: Indicative Design

Note: colour scheme digitally modified to match NSW standard land use zoning colours.

KEY RESIDENTIAL COMMUNITY/LIBRARY/CHILDCARE RETAIL/COMMERCIAL

ALIGNMENT WITH BETTER PLACED - GANSW

Better Placed is a document developed by the Government Architect NSW (GA NSW), outlining their strategy for achieving well designed buildings and public spaces.

The following assessment of the GA NSW's seven objectives against the proposed Lindfield Village Hub demonstrates that the indicative design is consistent with Better Placed.

Objective 1: Better Fit - contextual, local and of its place

The proposal is an appropriate design for the Lindfield neighbourhood in terms of scale, form and function. Due to the close proximity of Lindfield Train Station, the proposed density of the site is fitting and is consistent with the suburb's projected population growth.

Objective 2: Better Performance - sustainable, adaptable and durable

A commitment to environmental sustainability is evident in the proposal. The design incorporates natural ventilation, a significant amount of green spaces, low maintenance planting and an excess of deep soil zones than is recommended in the ADG.

Objective 3: Better for Community - inclusive, connected and diverse

The proposal provides a significant public domain that promotes social engagement between a broad range of people. The variety of community spaces, both internal such as the Library, and external, such as the park, will promote interaction between residents and the wider Lindfield community.

Objective 4: Better for People - safe, comfortable and liveable

The development plans to achieve a high level of safety, through the passive overlooking of streets and public open spaces. The highest standards of amenity and well-being are also aimed for - with air quality, access to natural light, ventilation and views all addressed in the design.

Objective 5: Better Working - functional, efficient and fit for purpose

Significant consideration has been undertaken to ensure that space is being used in an efficient manner. The design process of the buildings have centred around maximising the open green space that will allow people to enjoy the site.

Objective 6: Better Value - creating and adding value

ESD strategies will be incorporated into the building process and the final product, to minimise costs over time. Durable and low maintenance materials will be utilised, both internally and externally, to ensure longevity. These initiatives will safeguard the site's value going forward.

Objective 7: Better Look and Feel - engaging, inviting and attractive

A playground, outdoor dining terraces and library will create a vibrant atmosphere that will invite people into the public space. A combination of soft and hard landscaping and appropriate materials and finishes will create a built environment complementary to the local context.



Figure 142: Precedent - New Acton, Oculus



Figure 143: Precedent - Surry Hills Community Centre, FJMT