LINDFIELD
VILLAGE
HUB

Ku·ring·gai Council

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LINDFIELD VILLAGE HUB
URBAN DESIGN REPORT

16 JULY 2020 | PLANNING PROPOSAL ISSUE 5 | KU-RING-GAI COUNCIL

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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 change
- 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.

1.0

PLANNING FRAMEWORK

1.1 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 connections.*

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

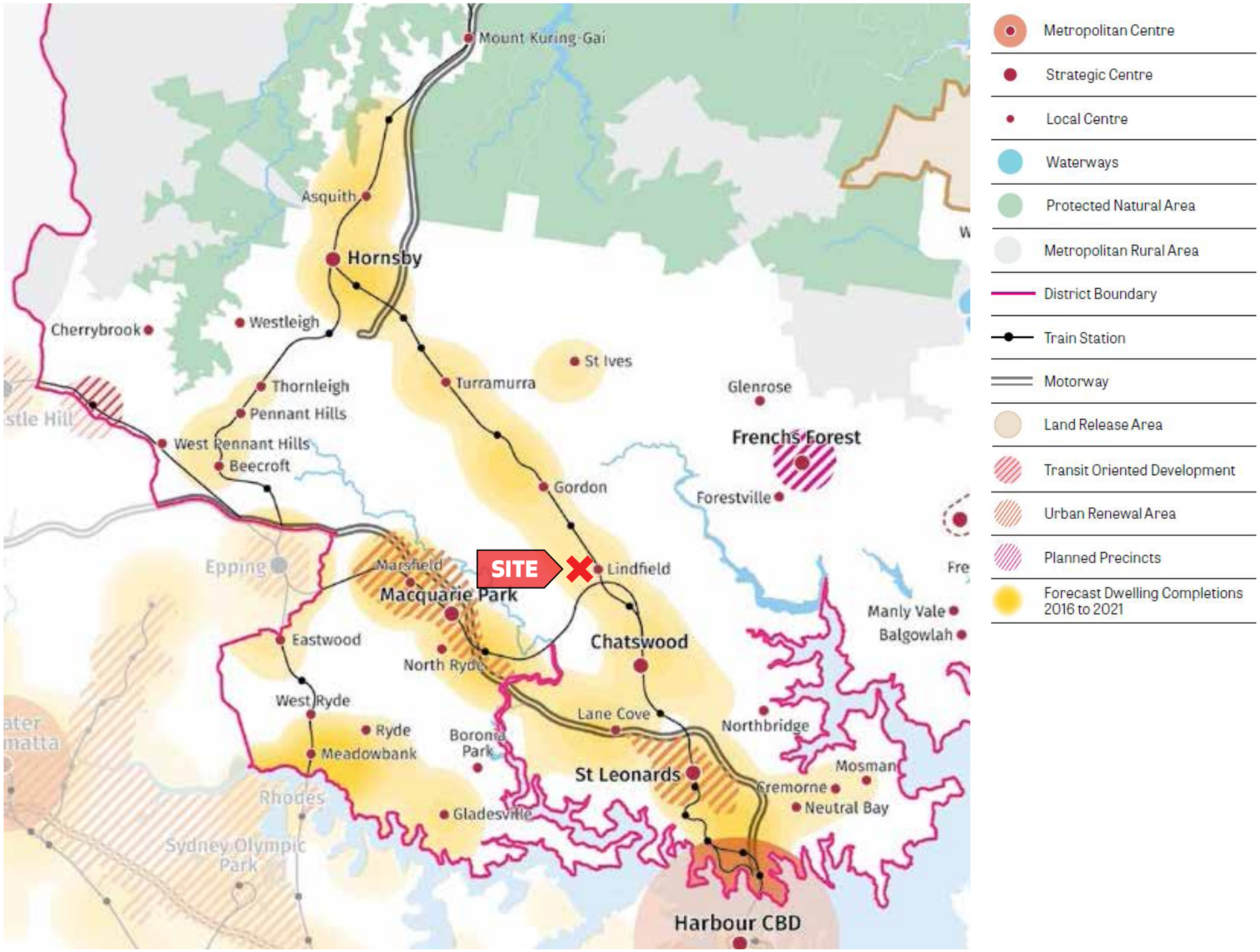


Figure 01: North District Future Housing Supply Map
Source: North District Plan (GSC, 2018)

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 with Bent Street*
- *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.*

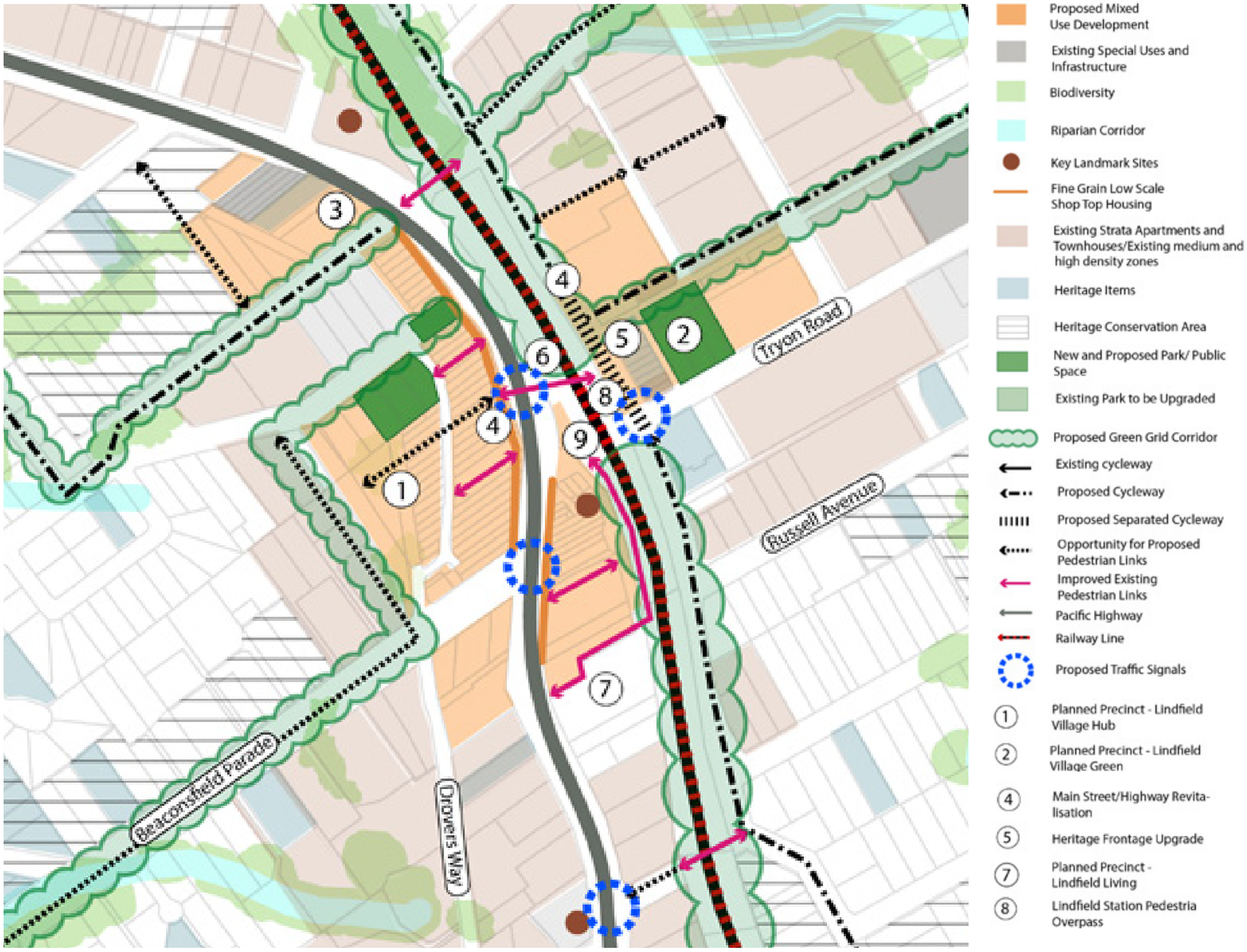


Figure 02: Lindfield Local Centre Structure Plan
Source: Ku-ring-gai Draft Local Strategic Planning Statement, p79 (KMC, 2019)

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.

KEY

LAND ZONING

B2 B5 E2
E4 RE1 R2
R3 **R4** SP2

FLOOR SPACE RATIO

A2 0.3 D 0.50 J 0.80
K 0.85 N 1.00 S1 1.60
Q 1.30 T1 2.00 U1 2.50
V 3.00

HEIGHT OF BUILDINGS

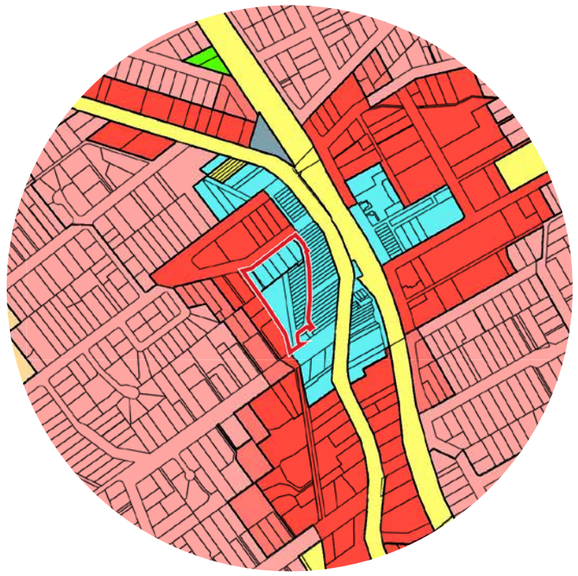
J 9.5 L 11.5 P 17.5
S 23.5 **T 26.5**

HERITAGE

Item - General Conservation Area - General

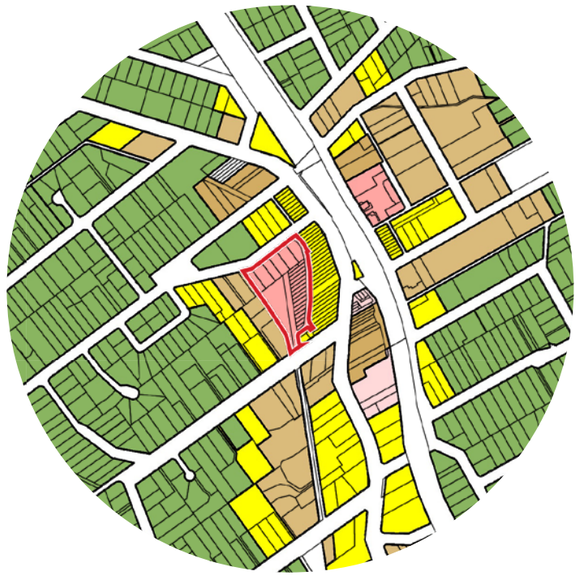
BIODIVERSITY

Areas of Biodiversity Significance



LAND ZONING

FLOOR SPACE RATIO



HEIGHT OF BUILDINGS

HERITAGE

BIODIVERSITY

Figure 03: LEP Controls

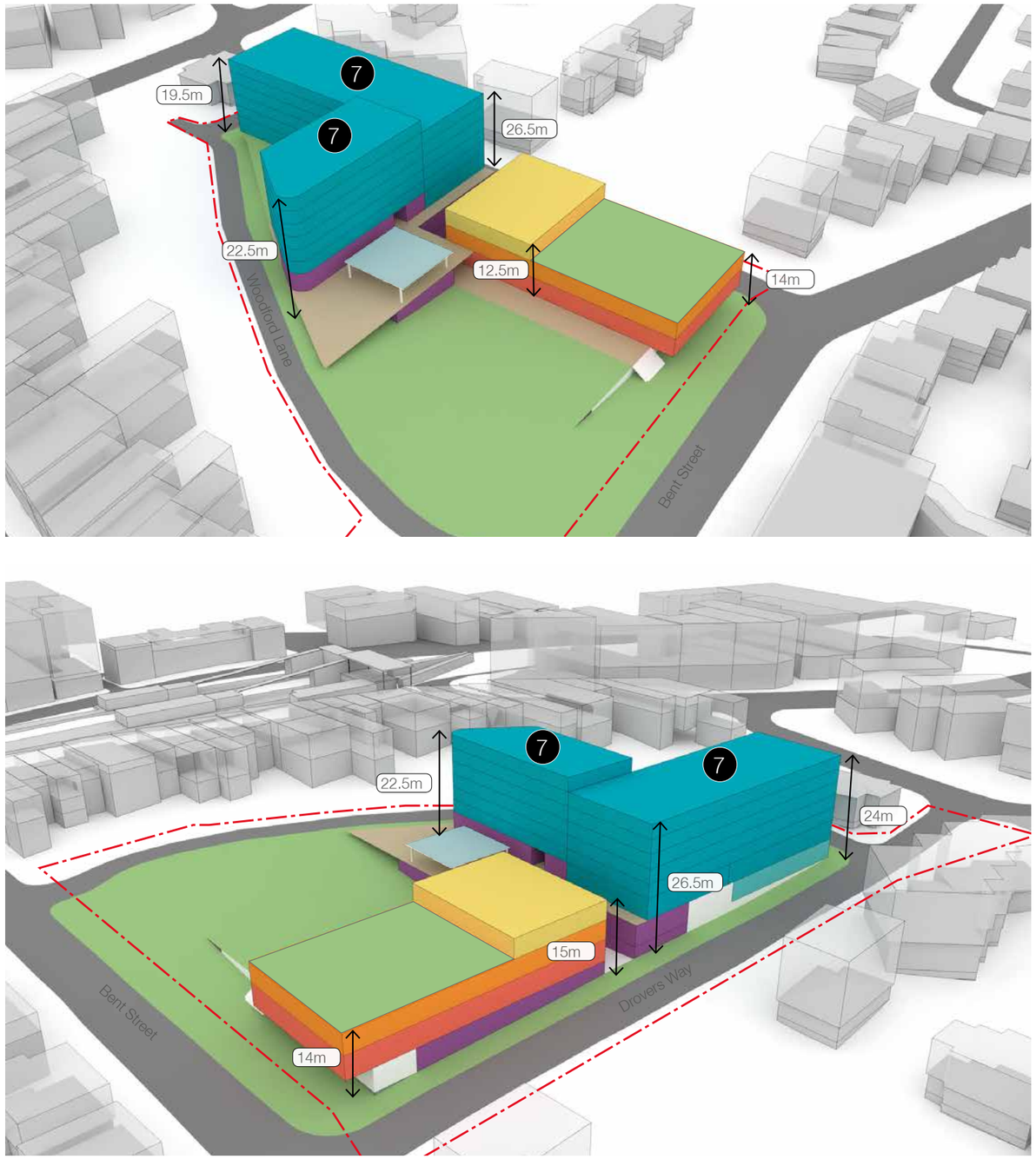
KMC LOCAL CENTRES DEVELOPMENT CONTROL PLAN

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 site
- 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.



Community facility
Library
Residential
Retail
Open space
Commercial
Childcare

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:

- 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 north-west 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.
- 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 ACCESS LEGEND

- Pedestrian through site link
- Entry plaza/forecourt
- Awnings
- Awnings where possible
- Colonnade or awning
- New/realigned road

SETBACKS LEGEND

- 15m setback
- 13m setback
- 11m setback
- 10m setback
- 9m setback
- 6m setback
- 5m setback
- 4m setback
- 3m setback
- New/realigned road
- Land dedication

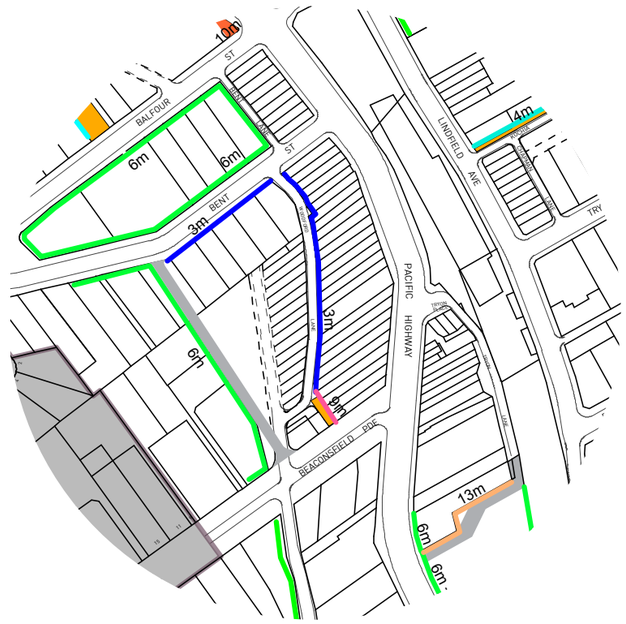
BUILT FORM LEGEND

- Principal active frontage
- Supporting active frontage
- 3 storey street wall
- 4m upper level setback above street wall height
- Landmark building
- Heritage item
- Public open space
- New/realigned road

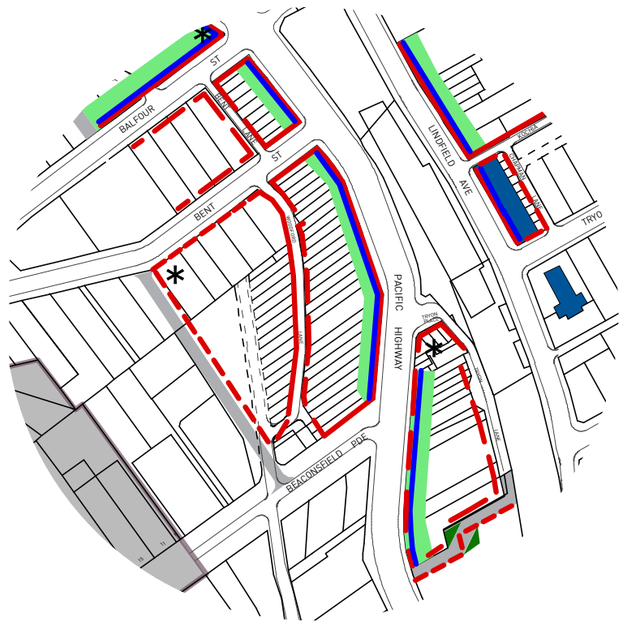
ENTRIES & ACCESS

- Vehicular access to site
- Pedestrian access to site
- New/realigned road

BUILT FORM



SETBACKS



ENTRIES & ACCESS

Figure 05: DCP Controls

2.0

SITE CONTEXT

2.1 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 north-south 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.
- The Macquarie Centre, a regional retail and leisure centre, is accessible from the site by rail.
- 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

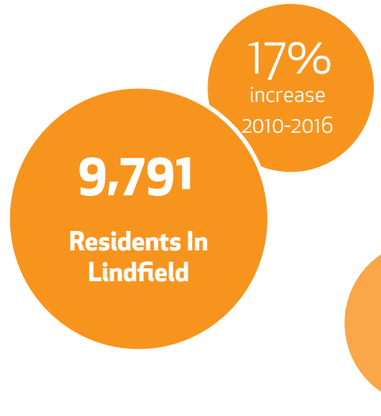
2.2 DISTRICT CONTEXT: DEMOGRAPHICS

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:

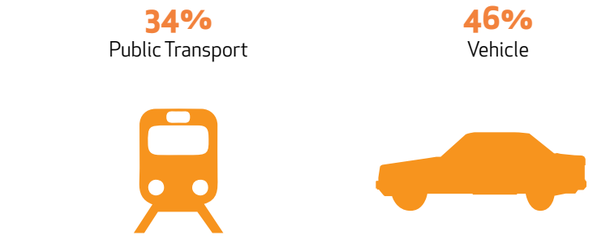
- A greater proportion of residents in Family Households
  79% in Lindfield vs. 69% in Greater Sydney
- A greater population 50 and over
  34.9% vs. 31.2%
- Similar household sizes
  2.77 vs. 2.72
- More residents living in high density housing
  33.2% vs. 23.5%
- A similar percentage of residents living 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

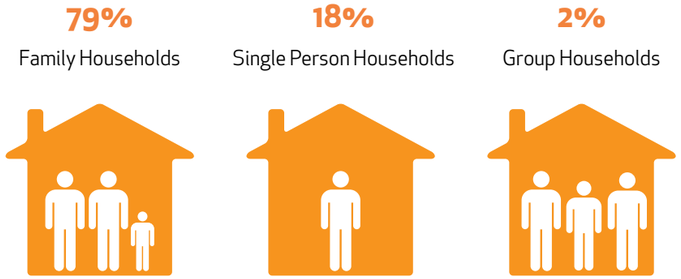
Ku-ring-gai's Draft Local Strategic Planning Statement (2019) further notes that the increase in population over the last ten years has resulted in greater demand for high density housing along the main transport corridor. The Draft LSPS expects this trend to continue with a population growth of 25%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



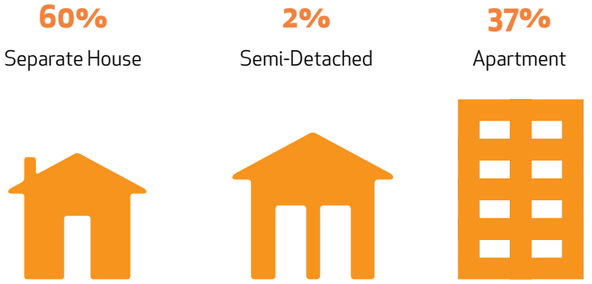
Commuting Mode



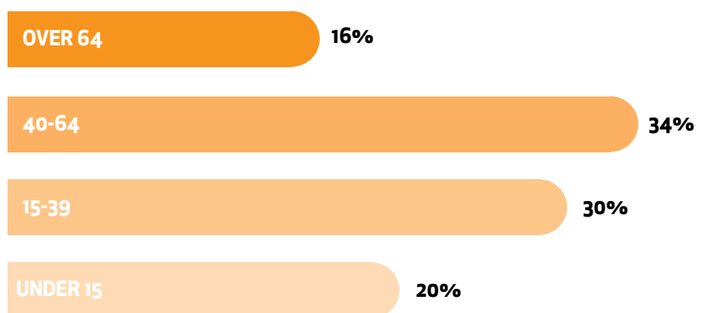
Household Type



Housing Type



Age Distribution



Employment Status

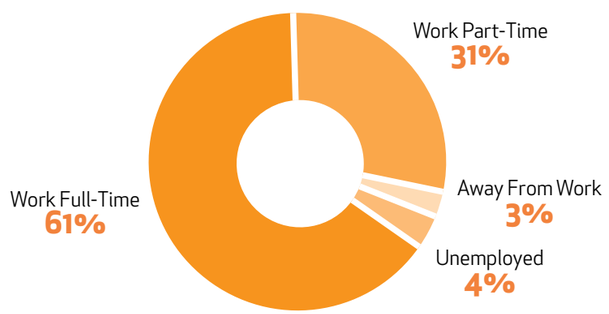


Figure 07: Lindfield Demographics
Source: 2016 Australian Census, ABS

2.3 DISTRICT CONTEXT: OPEN SPACE

The NSW Government Architect advises that low- to medium-density 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).

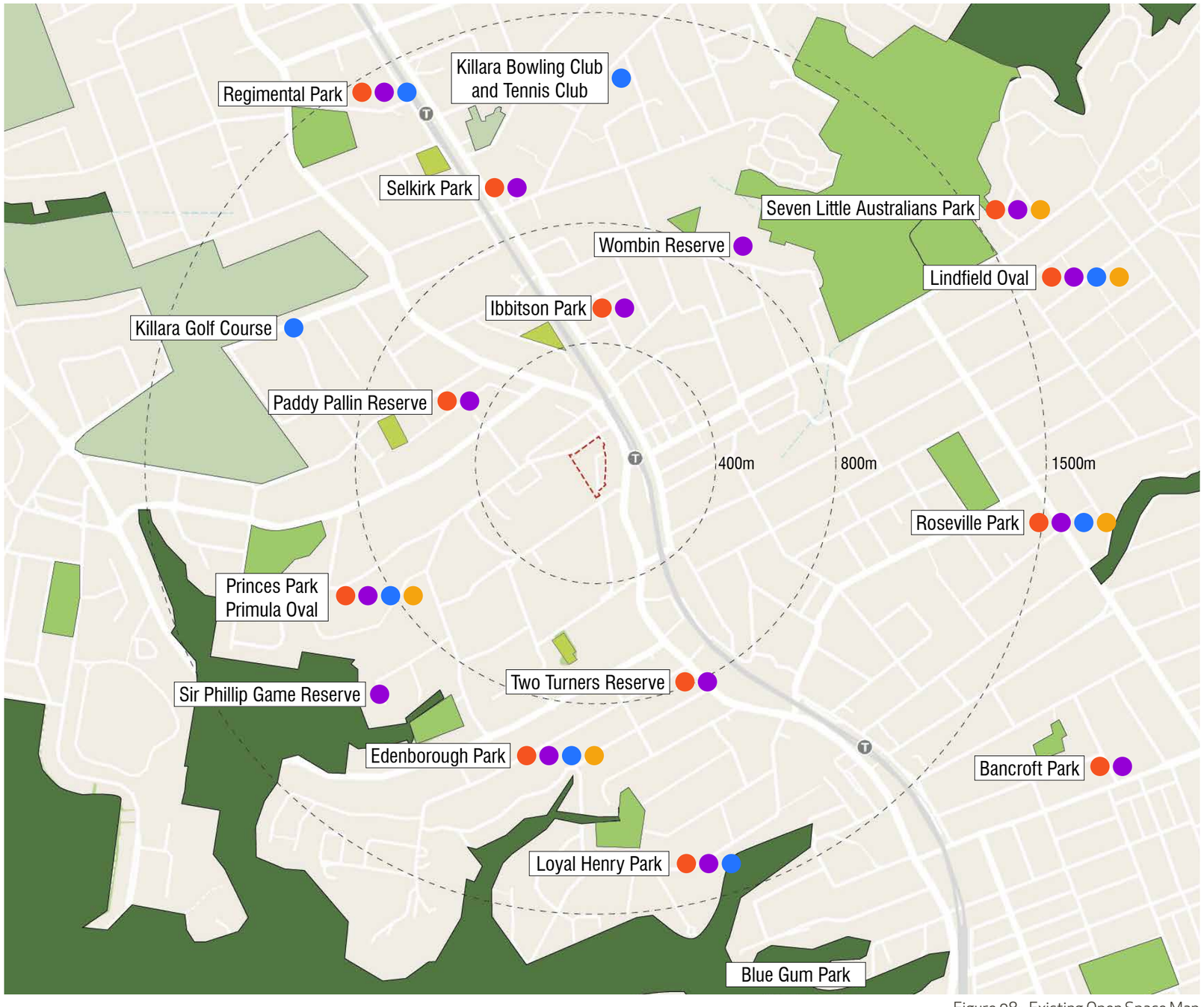


Figure 08: Existing Open Space Map

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" (p74).

Within Lindfield, this is being addressed by several current KMC-led 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.

- Site Boundary
- Regional Park
- District Park
- Local Park
- Private Recreation
- Playground
- Informal activity / seating
- Sports and active recreation
- Dog off leash area

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

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.

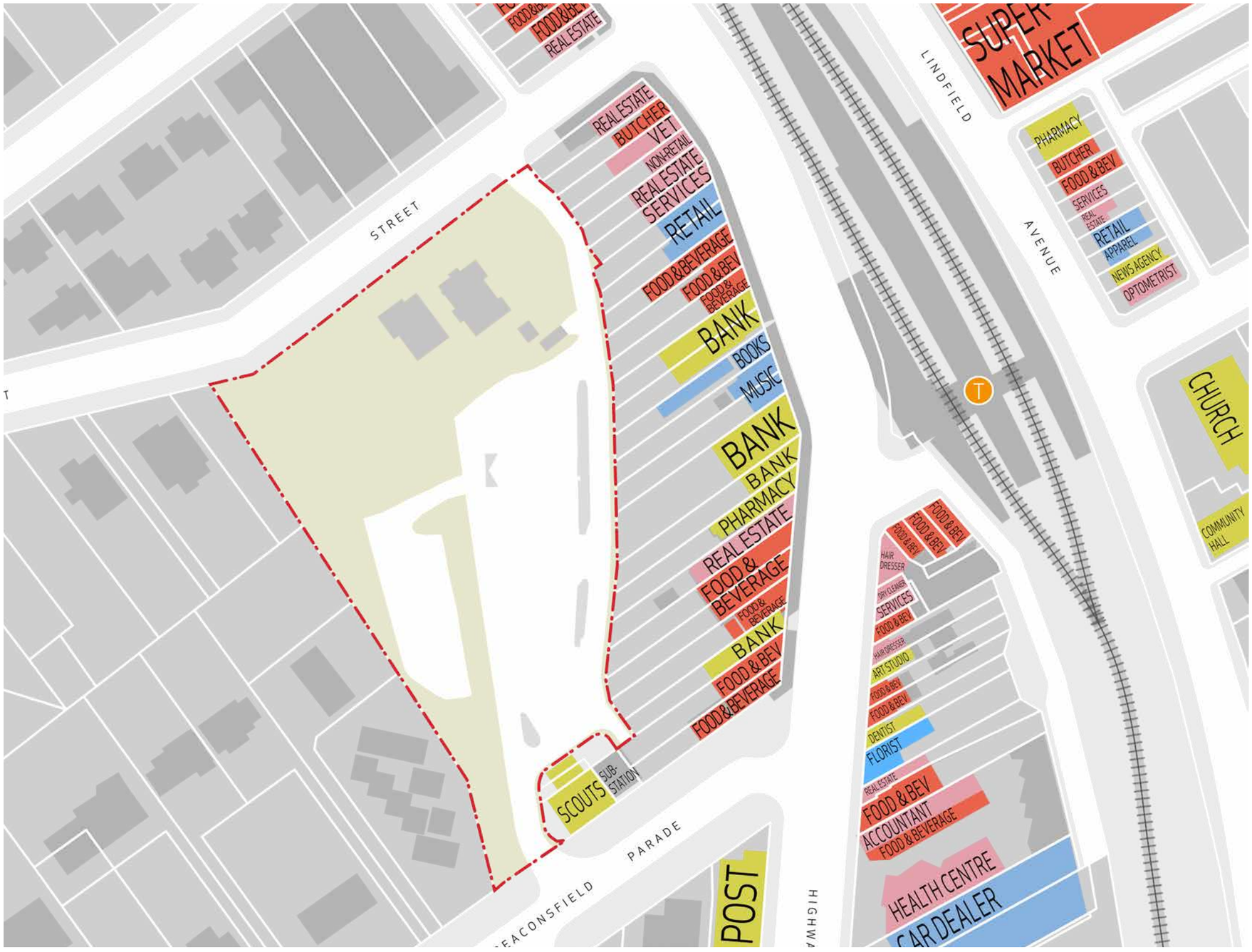


Figure 10: Map of Lindfield Shops

N

1:1,250 at A3

0 12.5 25 50

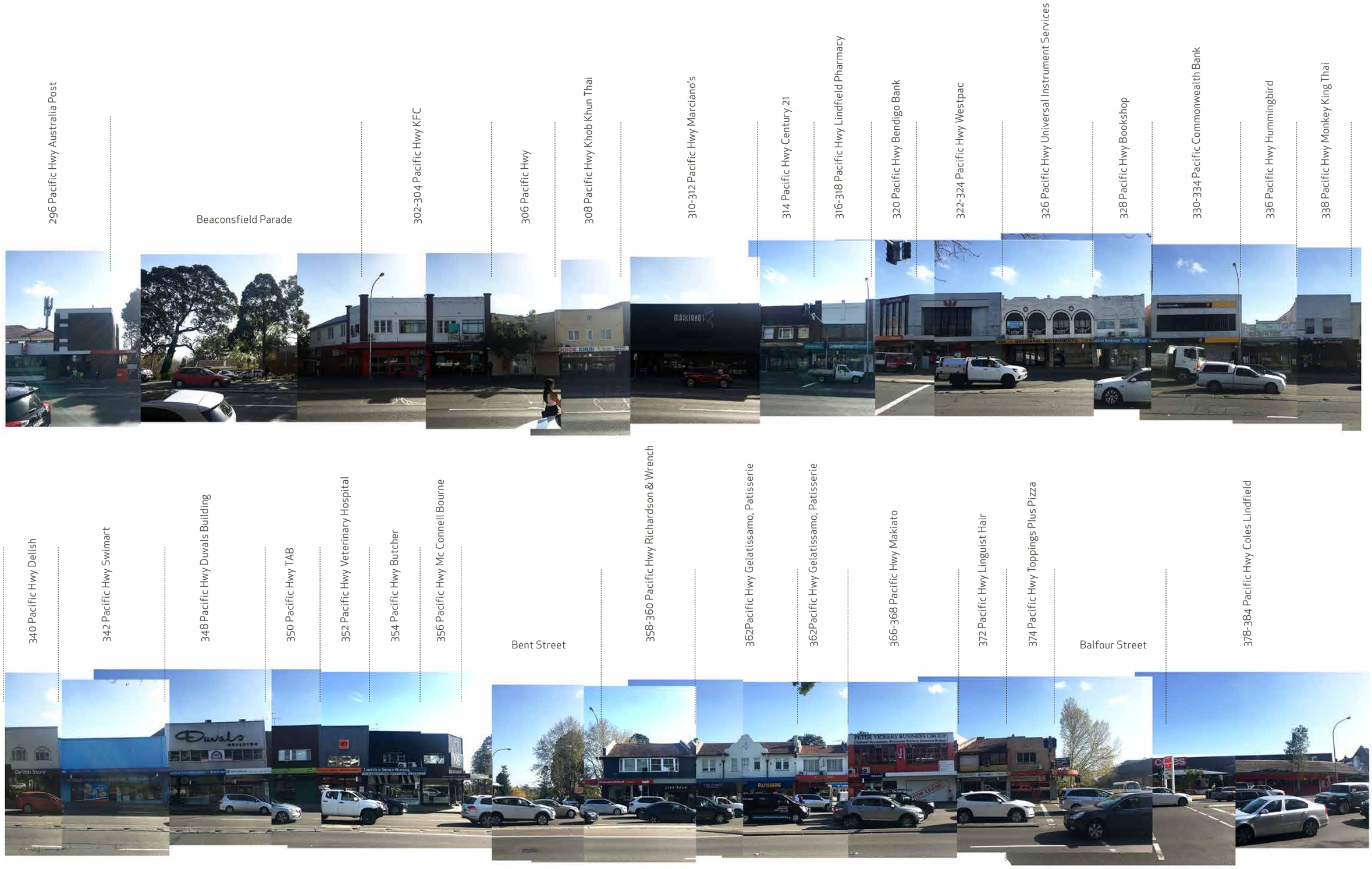


Figure 11: Pacific Highway Streetscape

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 through-block 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.

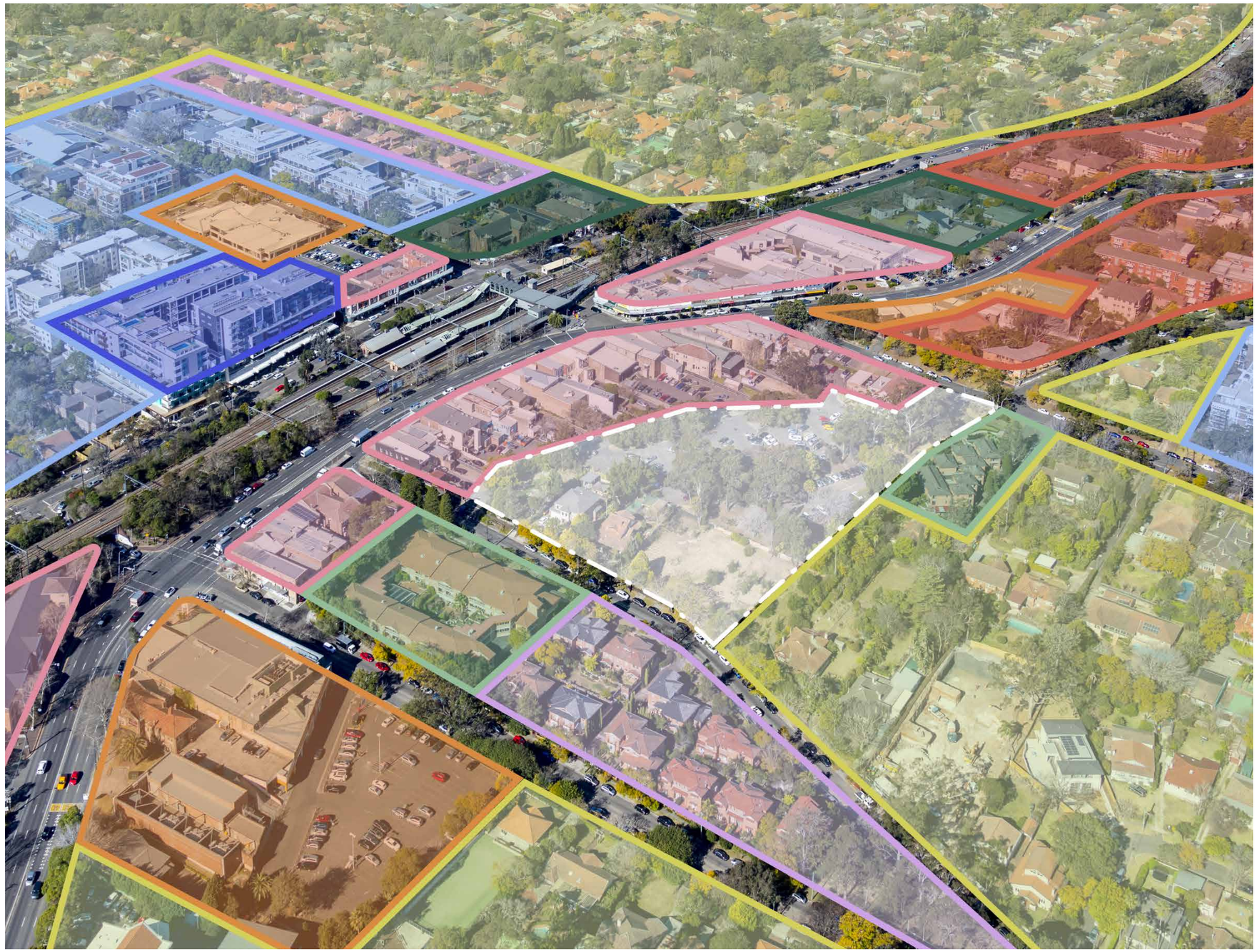


Figure 12: Aerial of Lindfield Built Form

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 multi-residential buildings. It is a narrow street with high fences and few street trees.

Figure 13: Locations of photographs on next page

Key

Photograph Views

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)

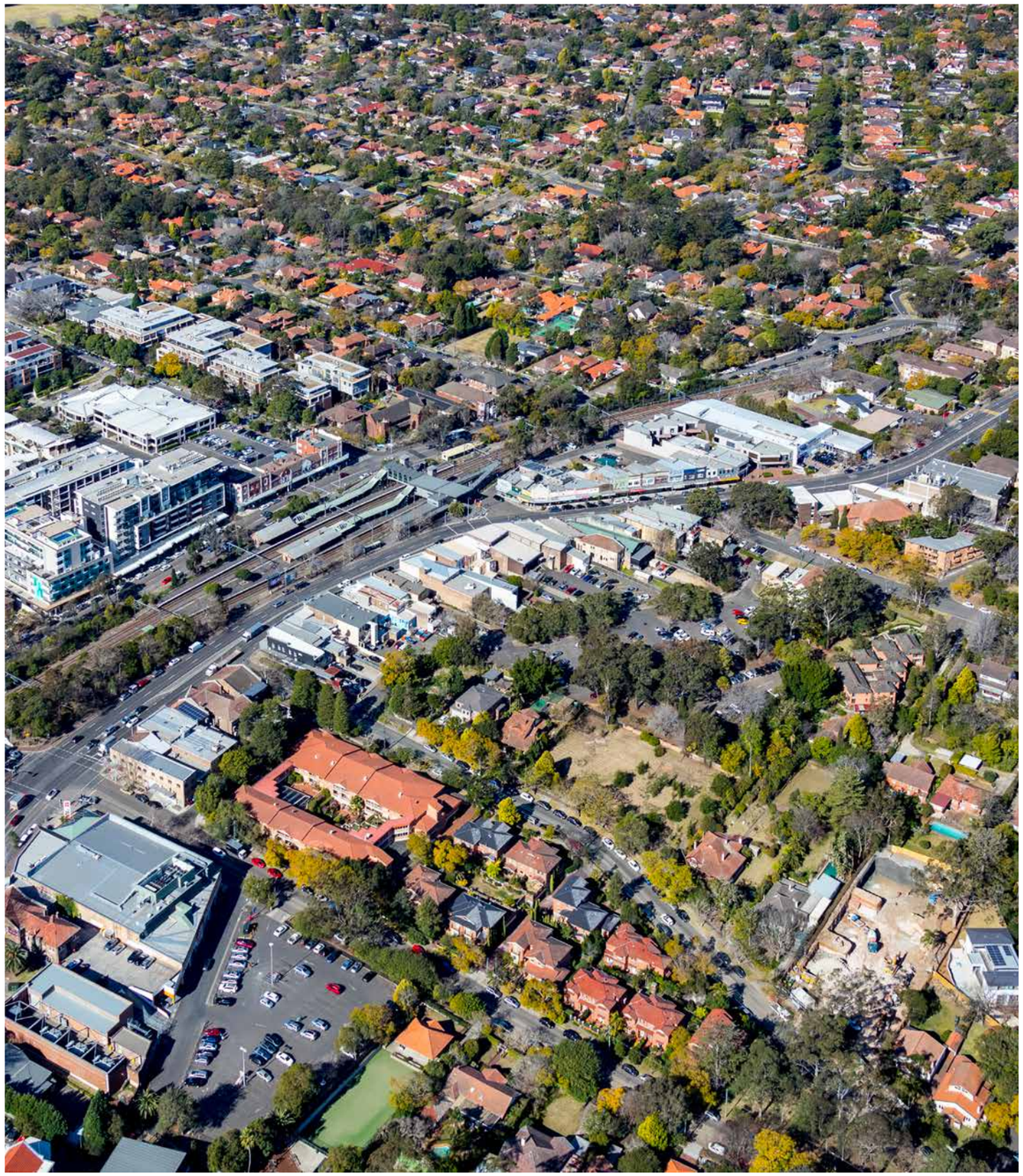


Figure 15: Site Photographs (aerial)

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 site.

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
- There is an inactive interface along the eastern boundary, with the rear car parks of the Pacific Highway retail strip facing the site
- 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 site.

Figure 17: Site Constraints

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
- The shops along Pacific Highway could be an asset to the site if they turn to also face Woodford Lane
- 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
- The alignment of the eastern edge is beneficial for solar access
- Site trees could minimise the visual impact of future development from the lower-density areas to the west and south
- 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

Key

- Solar Access
- Existing Site Trees
- Train Station
- Existing Town Centre
- Pedestrian Link Through Train Station
- Pedestrian Links

N

1:1,250 at A3

0 12.5 25 50

Figure 18: Site Opportunities

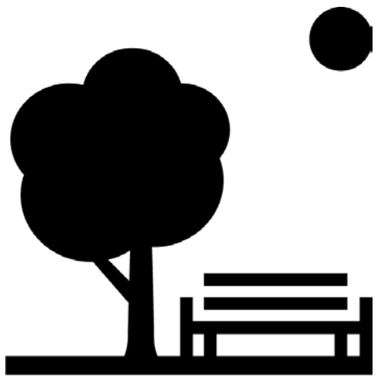
3.0

DESIGN PRINCIPLES + OPTIONS TESTING

3.1 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.

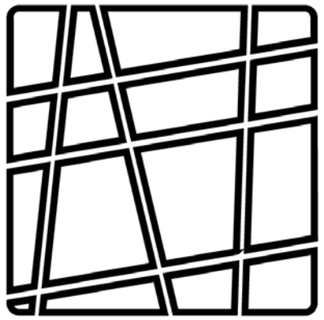


PRINCIPLE **#1**

NEW PUBLIC PARK

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.

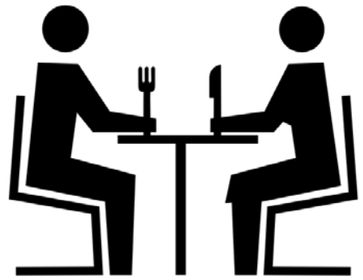


PRINCIPLE **#2**

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.

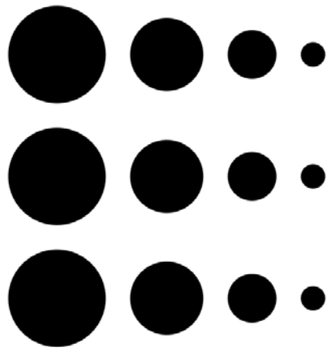


PRINCIPLE **#3**

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.



PRINCIPLE **#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).

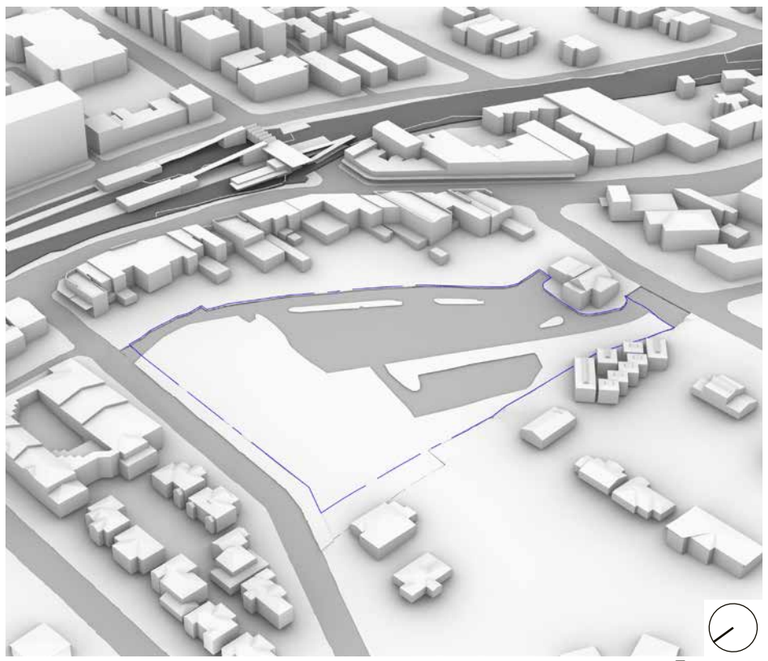


Figure 19:

EXISTING SITE

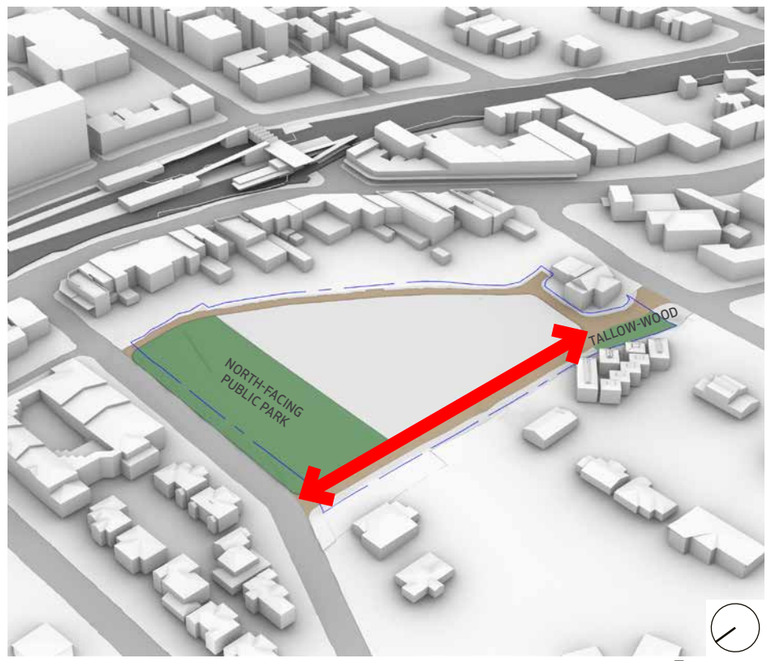


Figure 20:

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.

Figure 21:

LINKAGES, ACTIVATION

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

Active frontage is provided along the park and Woodford Lane.

Figure 22:

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.

Figure 23:

RESULTING STRUCTURE PLAN

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

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.

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.

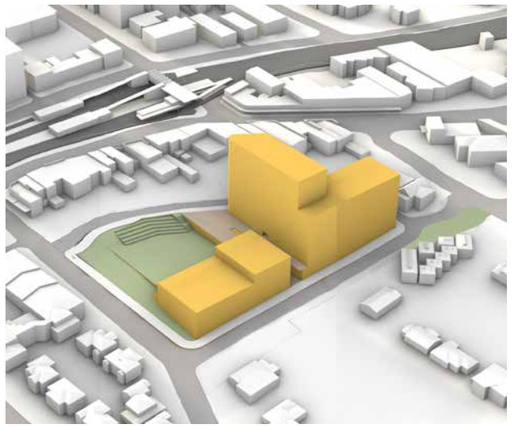


Figure 24: Option One

Figure 25: Option Two Massing

Figure 26: Option Three Massing

Figure 27: Option Four Massing

Figure 28: Option Five Massing

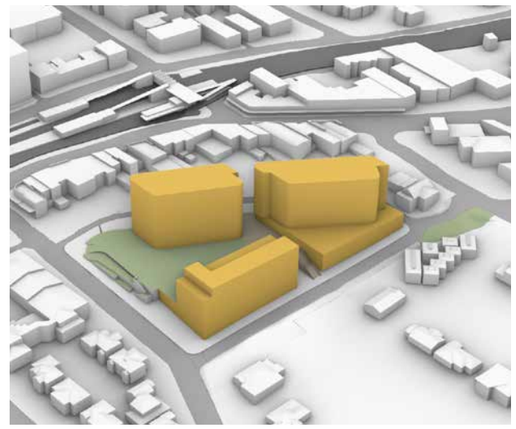


Figure 29: Option Six Massing

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

- 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.
- 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.
- 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

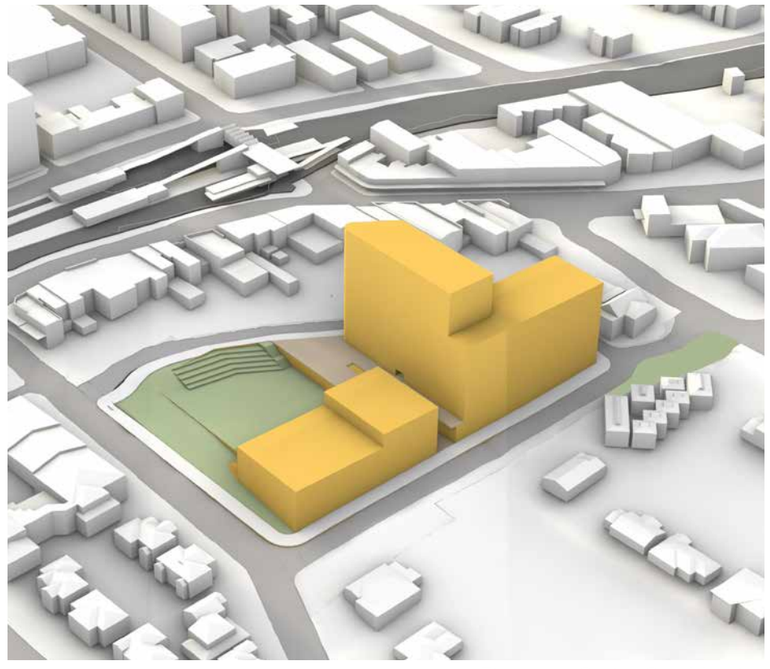


Figure 32: Option One, Massing

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.

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

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.

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

Figure 35: Option Three, Plan

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/south-western 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.

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

Figure 37: Option Four, Plan

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 north-eastern 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 heights.
- 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.

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

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 Lane.

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

- Continues strengths identified in Option 4 at lower heights.
- 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 park.
- Reduces street definition along Drovers Way.
- Less variety in massing to other Options.

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

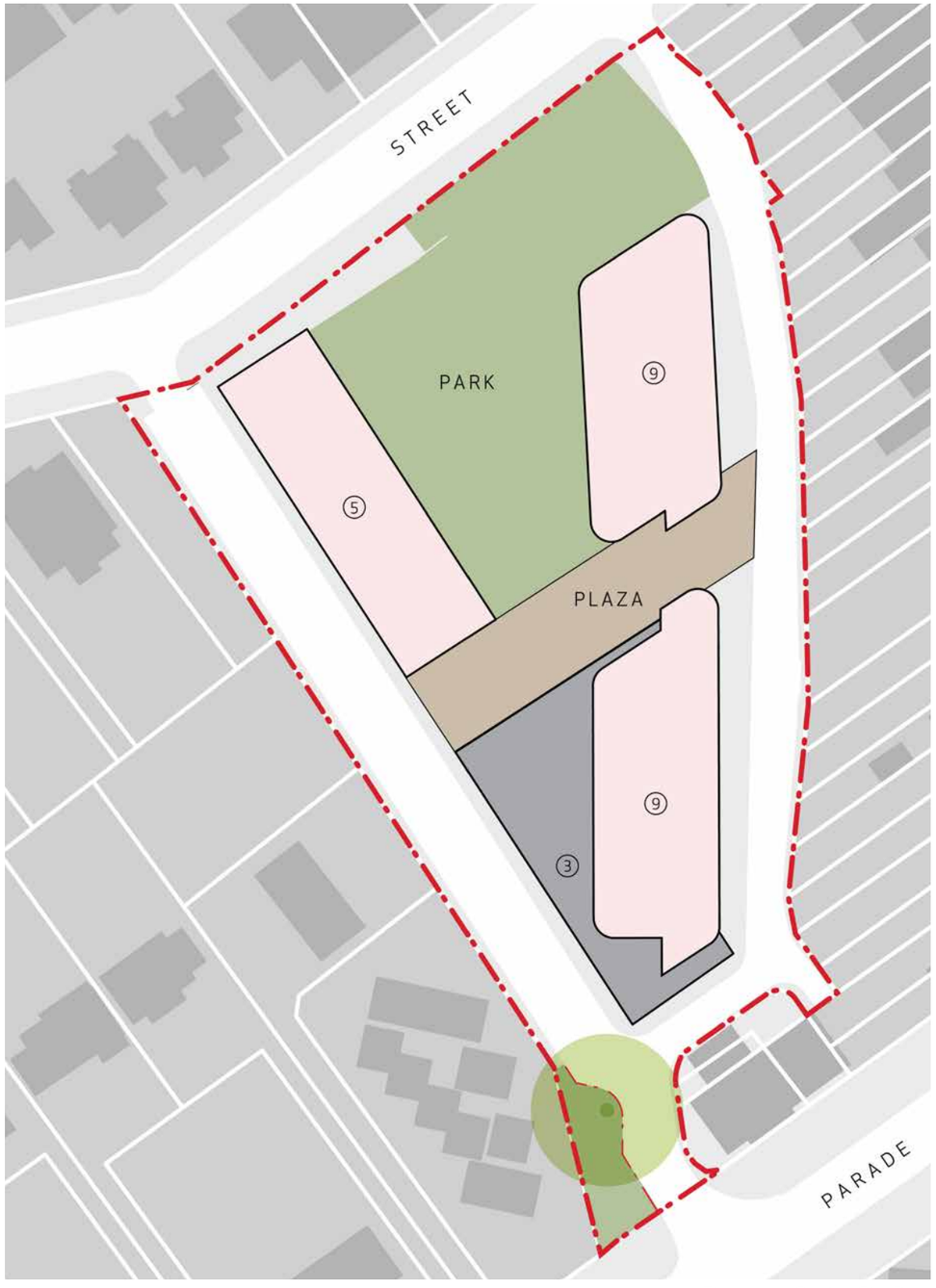


Figure 41: Option Six, Plan

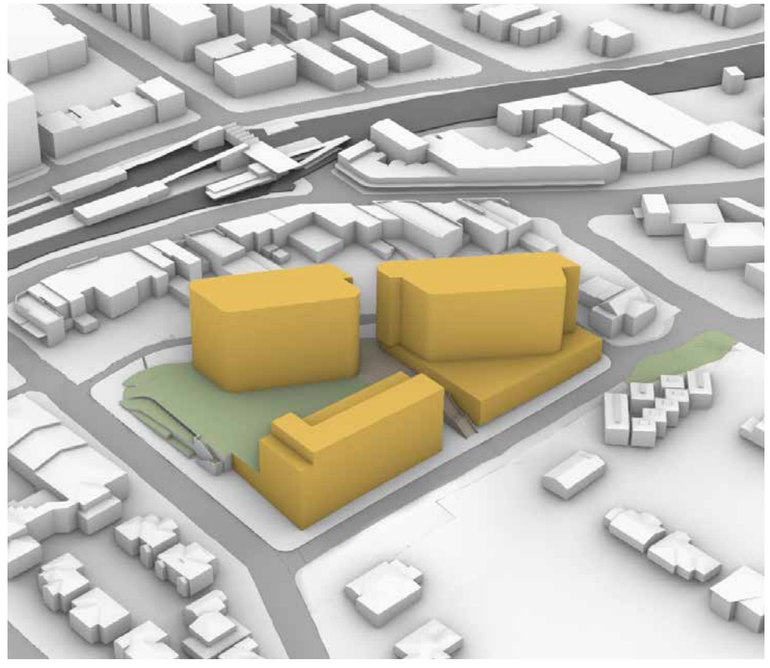


Figure 42: Option Six, Massing

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

- Continues strengths identified in options 1,2 & 3 at lower heights.
- 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

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

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

Figure 43: Option Seven, Plan

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.
- 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 Council.

Alignment with Design Principles:

✓ Creates a north-facing park, protected from overshadowing

✓ Extends the public street network and create through-site 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 change

✓ 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

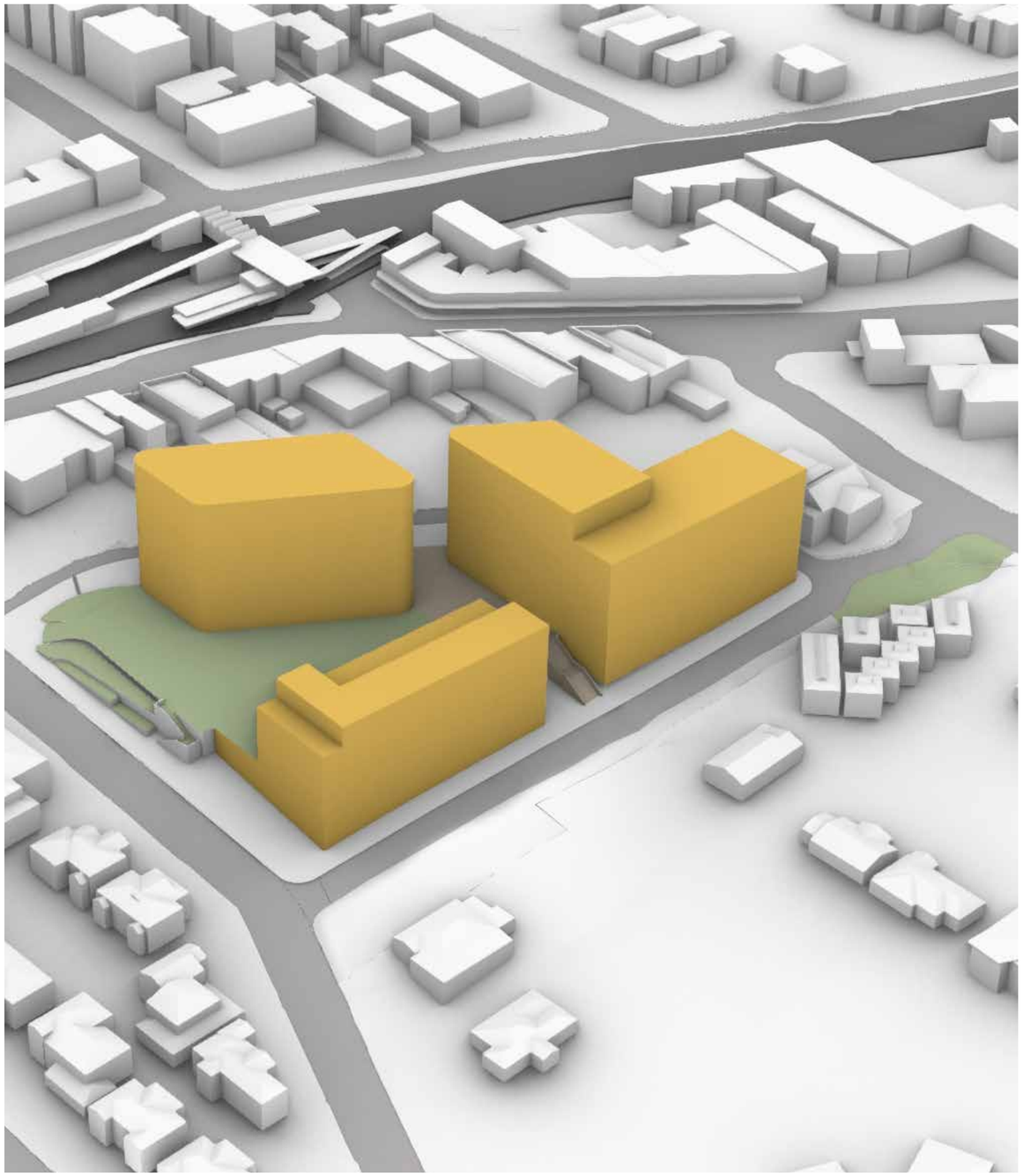


Figure 45: Selected Option, Massing

4.0

DETAILED STUDY OF INDICATIVE DESIGN PROPOSAL

4.1 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.

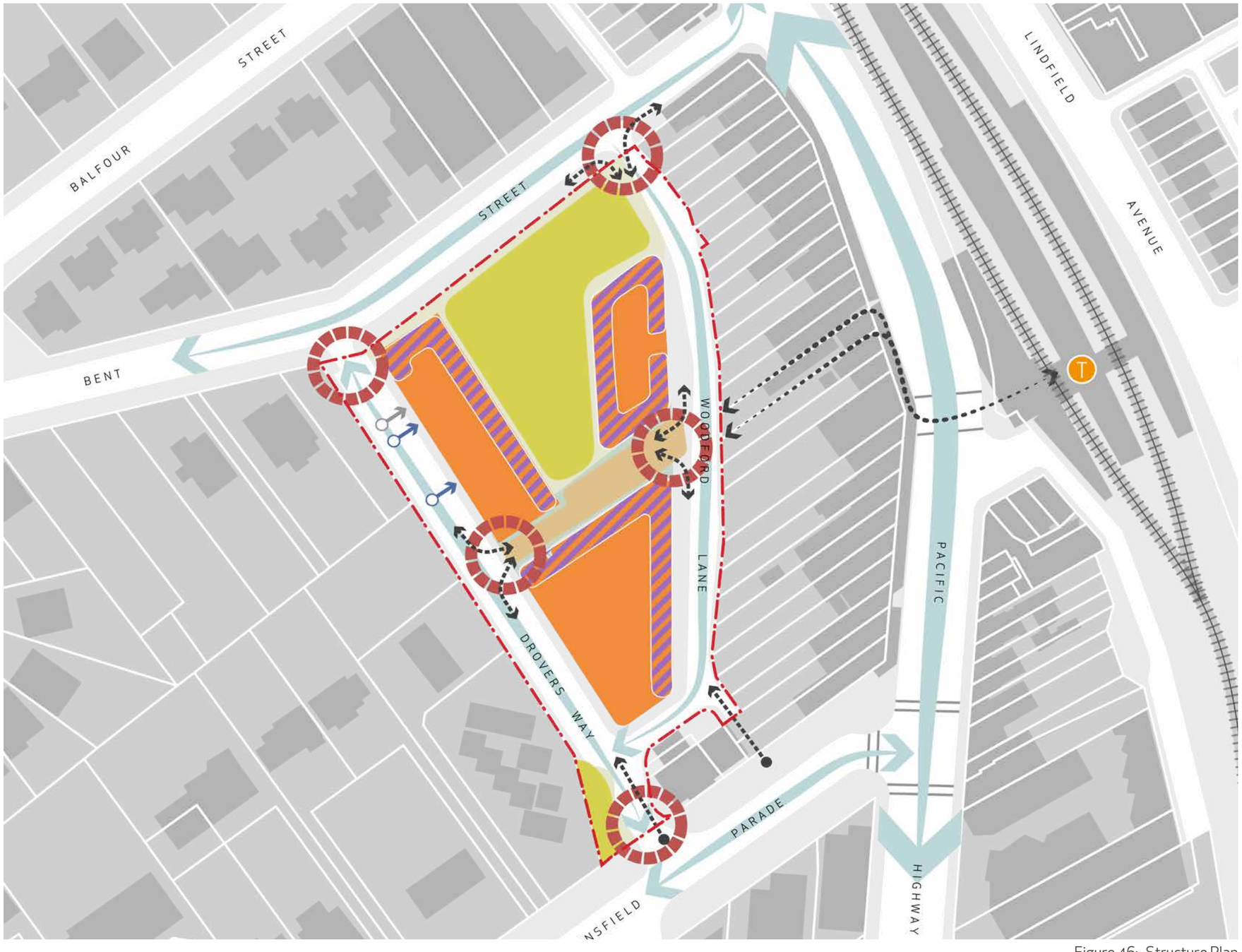


Figure 46: Structure Plan

4.2 INDICATIVE ENVELOPE SECTIONS

The buildings proposed are a consistent 9-storeys, based on residential floor-to-floor heights. A 9-storey residential building is similar in scale to that of a 6- or 7- storey community building (including child care, retail and parking).

In the indicative design, the buildings are intended 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.

Potential future context of the Lindfield Local Centre is shown in the indicative envelope sections in Figure 48 and 49. Ku-ring-gai Council is developing a Local Housing Strategy to identify how to accommodate Population Growth Projections, which we understand is largely focused on the areas around train stations on the T1 Northern Line. We have therefore envisaged potential changes to the properties around the Hub site, with future height increases of up to 8-storeys shown.

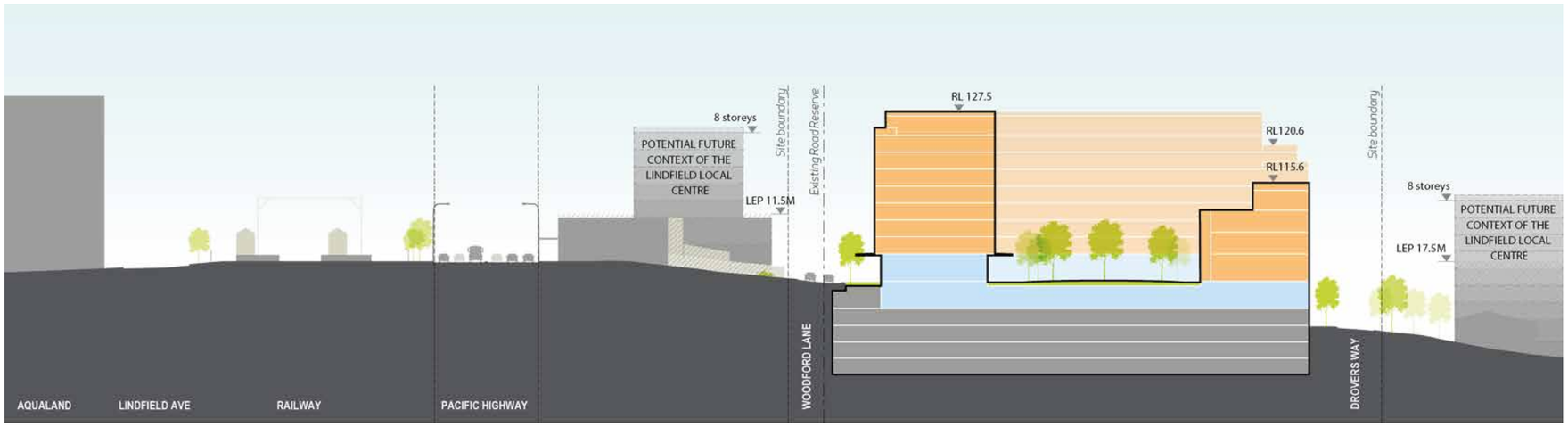


Figure 48: Section AA

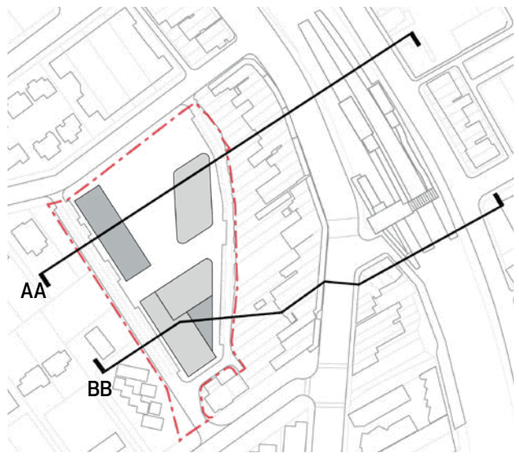


Figure 47: Key Plan

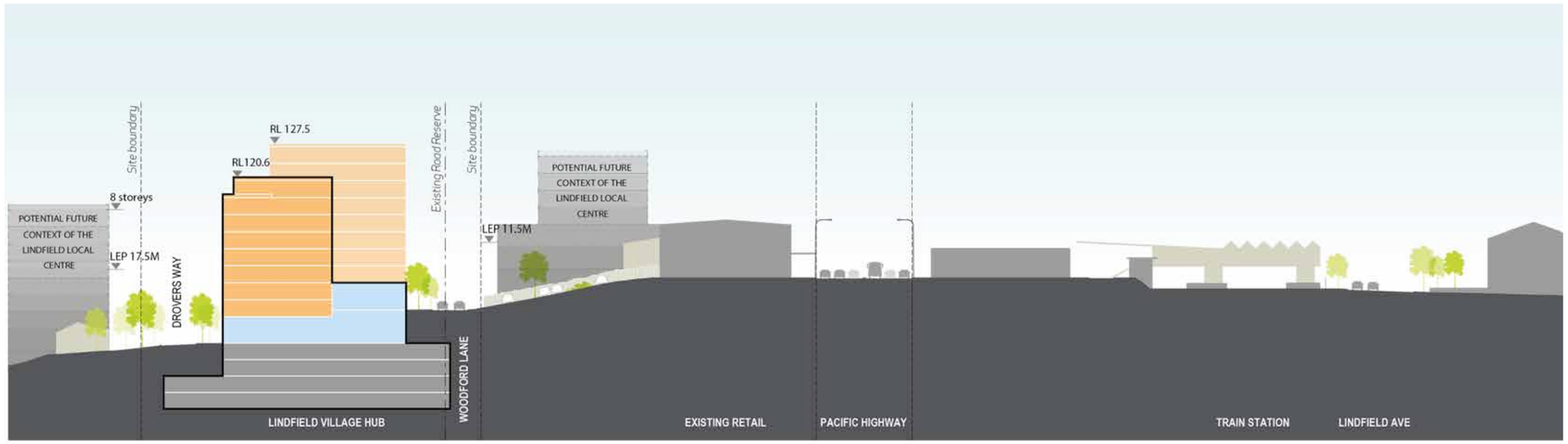


Figure 49: Section BB

4.3 INDICATIVE PUBLIC OPEN SPACE

This indicative, illustrative open space plan shows the potential 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:

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

Figure 50: Illustrative Open Space Plan

4.4 INDICATIVE LANDSCAPE CHARACTER

CENTRAL LAWN

Figure 51: 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 is set down from the surrounding park and pathways by approximately 500mm in order to provide a gently sloped bank to the northern edge and seating steps along the east and west sides of the lawn. 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 52: Central Lawn Precedents

PLAZA

Figure 53: Key Plan

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

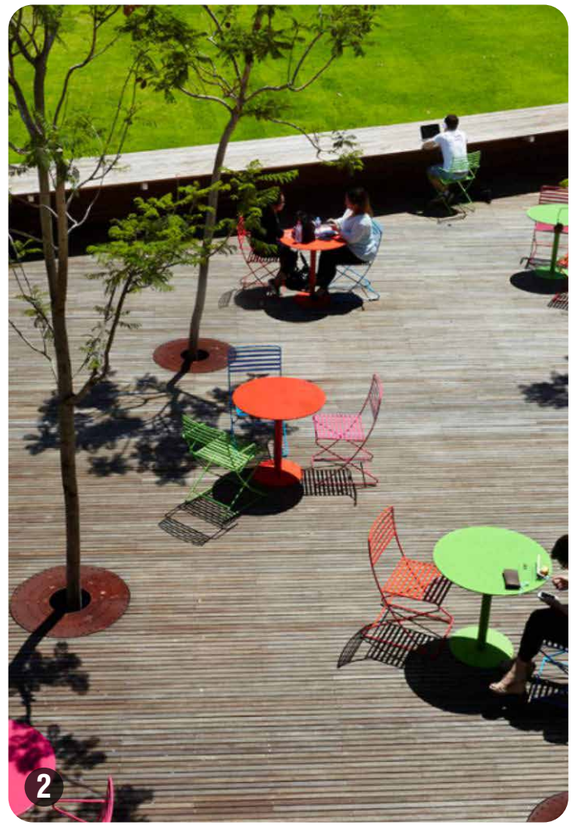
Design and Approach:

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 the Hub.
- A combination of fixed and moveable furniture will provide flexibility of use.



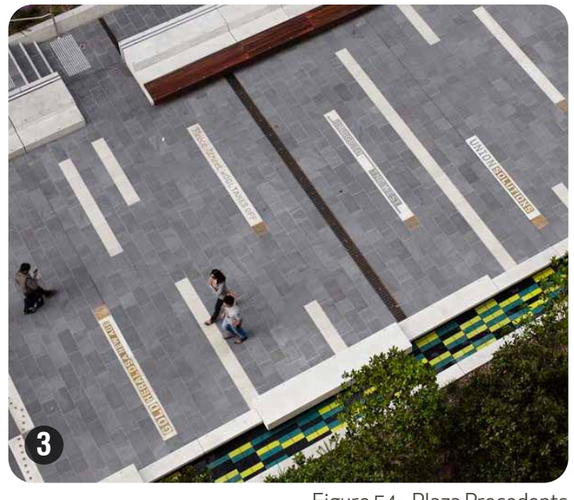


Figure 54: Plaza Precedents

COMMUNITY & DINING TERRACES

Figure 55: 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 urban character.
- 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.

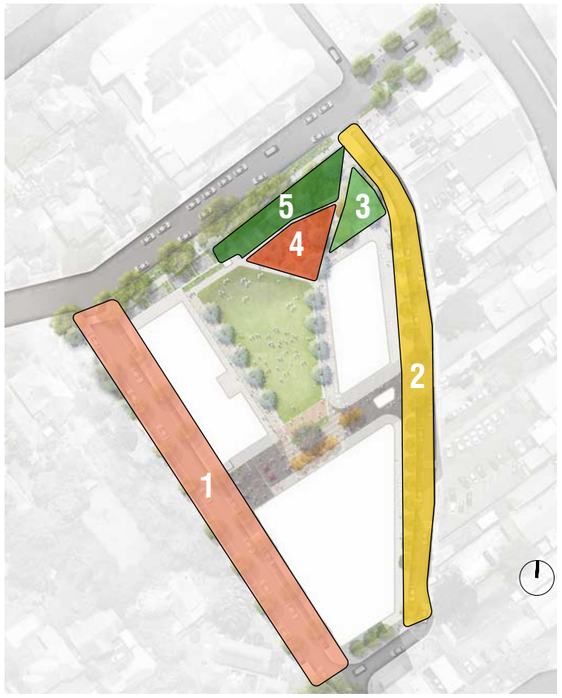
Figure 56: Community and Dining Precedents

4.5 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, preferring broad shallow soil rather than narrow, deep soil. This makes them appropriate for planting on deck, as will partly be the case at the Hub site.

Note that the planting list provided on the following pages should be expanded on in the future detailed design.

PLANTING ZONES 1-5

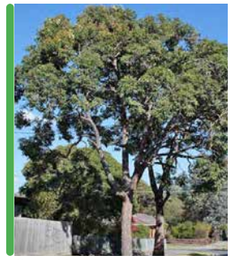


1. Drovers Way
2. Woodford Lane
3. Entry garden
4. Playground
5. Bent Street terraces

AREA	SPECIES	COMMON NAME
Zone 1	**DROVERS WAY**	
	Trees	
	Auranticarpa rhombifolia	Diamond Leaf Pittosporum
Zone 2	**WOODFORD LANE**	
	Trees	
	Flindersia australis	Crows Ash
Zone 3	**ENTRY GARDEN**	
	Trees	
	Corymbia eximia	Yellow Bloodwood
	Corymbia gummifera	Red Bloodwood
	Harpulia pendula	Tulipwood
	Native Planting Mix	
	Anigozanthos hybrid 'Amber Velvet'	Velvet Kankaroo Paw
	Carex appressa	Sedge
	Plectranthus argentatus	Silver Plectranthus
	Dietes iridioides	Fortnight Lily
	Lomandra 'Little Con'	Lomandra cultivar
	Pennisetum alopecuroides 'Nafray'	Dwarf fountain grass
	Westringia fruticosa 'Jervis Gem'	Coastal Rosemary
Zone 4	**PLAYGROUND**	
	Trees	
	Backhousia citriodora	Lemon Scented Myrtle
	Buckinghamia celisissma	Ivory Curl
	Fraxinus oxycarpa 'Raywood'	Claret Ash
	Pyrus calleryana 'Chanticleer'	Callery Pear
	Ornamental Planting Mix	
	Acacia cognata 'Limelight'	Bower Wattle
	Alternanthera dentata	Alternanthera
	Dietes grandiflora	Fairy Iris
	Grevillea lanigera	Woolly Grevillea
	Lomandra 'Katie Belles'	Lomandra cultivar
	Myoporum parvifolium 'Yareena'	Myoporum cultivar
	Pennisetum alopecuroides 'Nafray'	Dwarf fountain grass
	Nandina domestica 'Obsession'	Nandina cultivar
	Trachelospermum jasminoides	Star Jasmine
Zone 5	**BENT STREET TERRACES**	
	Trees	
	Harpullia pendula	Tulipwood
	Jacaranda mimosifolia	Jacaranda
	Feature Shrubs	
	Doryanthus excelsa	Gymea lily
	Ornamental Planting Mix (Medium)	
	Acacia cognata 'Limelight'	Bower Wattle
	Callistemon 'Little John'	Callistemon
	Correa alba	White Correa
	Pennisetum alopecuroides 'Purple Lea	Purple Fountain Grass
	Grevillea 'Ivanhoe'	Grevillea 'Ivanhoe'
	Grevillea rhyolitica x juniperina	Grevillea Cherry Cluster
	Callistemon viminalis 'Slim'	Callistemon cultivar
	Ornamental Planting Mix (Small)	
	Alternanthera dentata	Alternanthera
	Grevillea poorinda 'Royal mantle	Grevilea Royal Mantle
	Grevillea 'Gaudichaudii'	Prostrate Grevillea
	Hardenbergia violacea 'Meema	Happy Wanderer
	Hibbertia scandens	Snake Vine
	Myoporum parvifolium 'Yareena'	Myoporum cultivar
	Nandina domestica 'Obsession'	Nandina cultivar
	Trachelospermum jasminoides	Star Jasmine


Auranticarpa rhombifolia


Flindersia australis


Corymbia eximia


Corymbia gummifera


Lomandra 'Little Con'


Dietes iridioides


Buckinghamia celisissma


Grevillea lanigera


Alternanthera dentata 'Little Ruby'


Pennisetum alopecuroides 'Nafray'


Harpullia pendula


Jacaranda mimosifolia


Doryanthes excelsa


Grevillea 'Ivanhoe'


Hardenbergia violacea 'Meema'

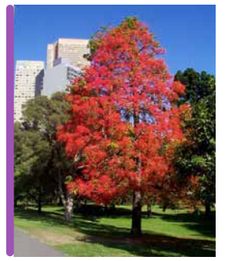

Trachelospermum jasminoides

PLANTING ZONES 6-8

6. Central lawn
7. Central Plaza
8. Bent Street shared zone

AREA	SPECIES	COMMON NAME
Zone 6	**CENTRAL LAWN**	
	Trees	
	Fraxinus oxycarpa 'Raywoodii'	Claret Ash
	Groundcovers Planting Mix	
	Trachelospermum jasminoides 'Tricolour'	Star Jasmine
Zone 7	**CENTRAL PLAZA**	
	Trees	
	Brachychiton acerifolius	Illawarra Flame Tree
	Brachychiton populneus	Kurrajong
	Pyrus calleryana 'Aristcrat'	Ornamental Pear
Zone 8	**BENT STREET PEDESTRIAN PLAZA**	
	Trees	
	Platanus x acerifolia	Plane Tree
	Ornamental Planting Mix (Medium)	
	Buxus sempervirens	Box Hedge
	Clivia miniata	Clivia
	Kalanchoe orgyalis 'Copper Spoons'	Copper Spoon
	Nandina domestica 'Obsession'	Nandina cultivar
	Pennisetum alopecuroides 'Purple Lea	Purple Fountain Grass
	Grevillea rhyolitica x juniperina	Grevillea Cherry Cluster
	Rhaphiolepsis indica	Indian Hawthorn
	Trachelospermum jasminoides	Star Jasmine


Fraxinus oxycarpa 'Raywoodii'


Brachychiton acerifolius


Brachychiton populneus


Pyrus calleryana 'Aristcrat'


Platanus x acerifolia


Buxus sempervirens


Clivia miniata


Kalanchoe orgyalis


Trachelospermum jasminoides

4.6 INDICATIVE STREET CHARACTER

WOODFORD LANE

Figure 57: 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.

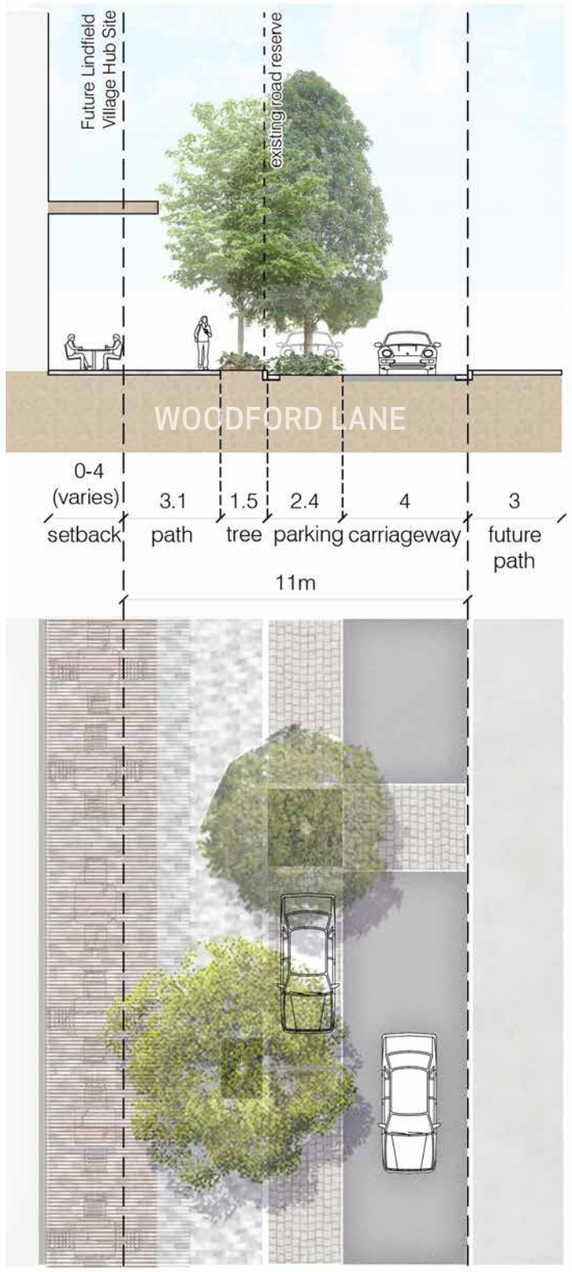


Figure 58: Woodford Lane Section and Plan

Figure 59: Precedent Images

DROVERS WAY

Figure 60: 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.

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.

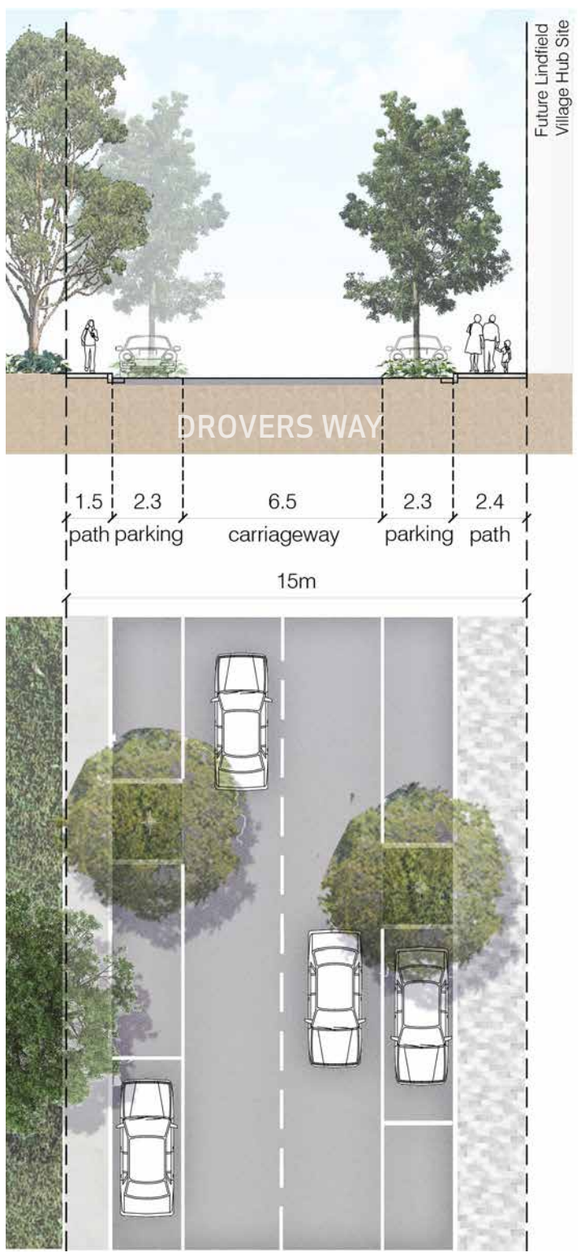


Figure 61: Drovers Way Section and Plan

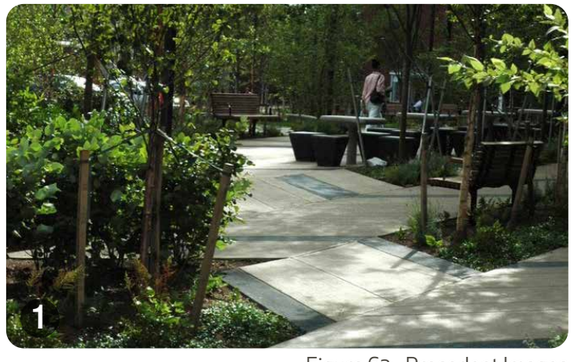


Figure 62: Precedent Images

BENT STREET

Figure 63: 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.

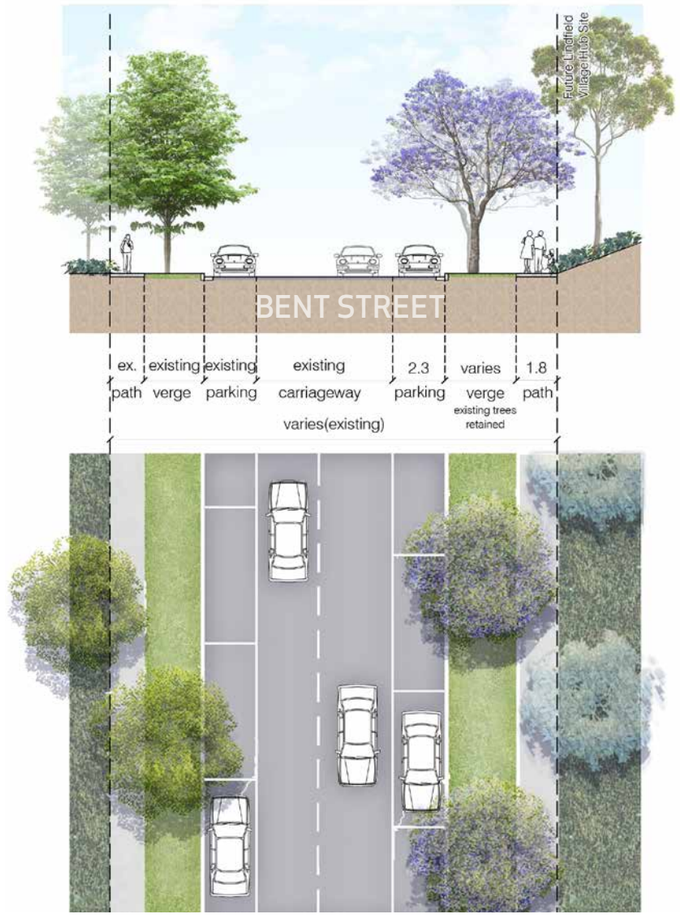


Figure 64: Bent Street Site Section

Figure 65: Precedent Images

4.7 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
- 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.

Figure 66: Access and Servicing Diagram

4.8 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 Way.
- 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.

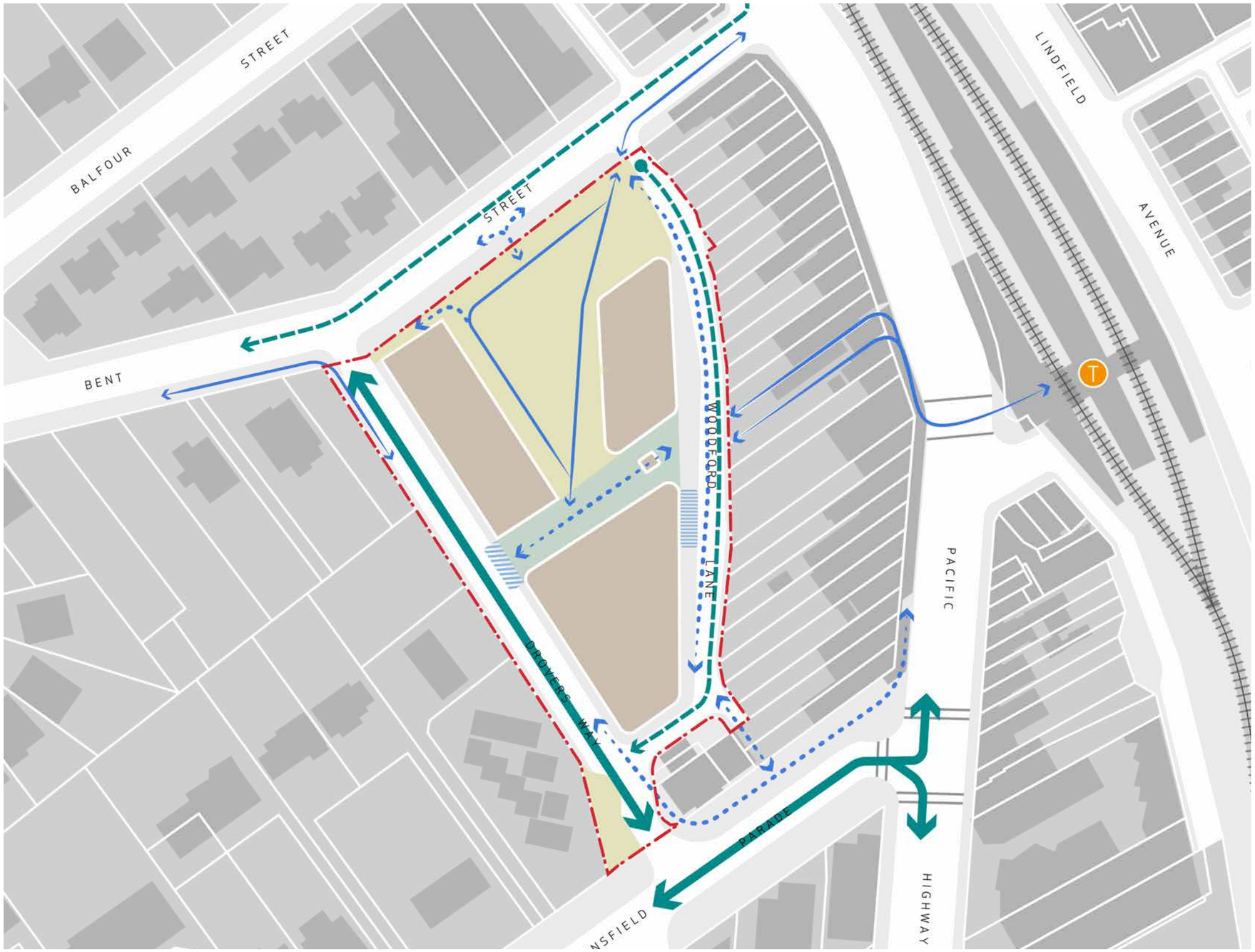


Figure 67: Access and Servicing Diagram

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 68: Precedent - Chippendale Green

Figure 69: 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 inbetween. The ground level is again library, community or childcare, providing street activation.
- The three buildings sit on a podium which contains a full-line 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.

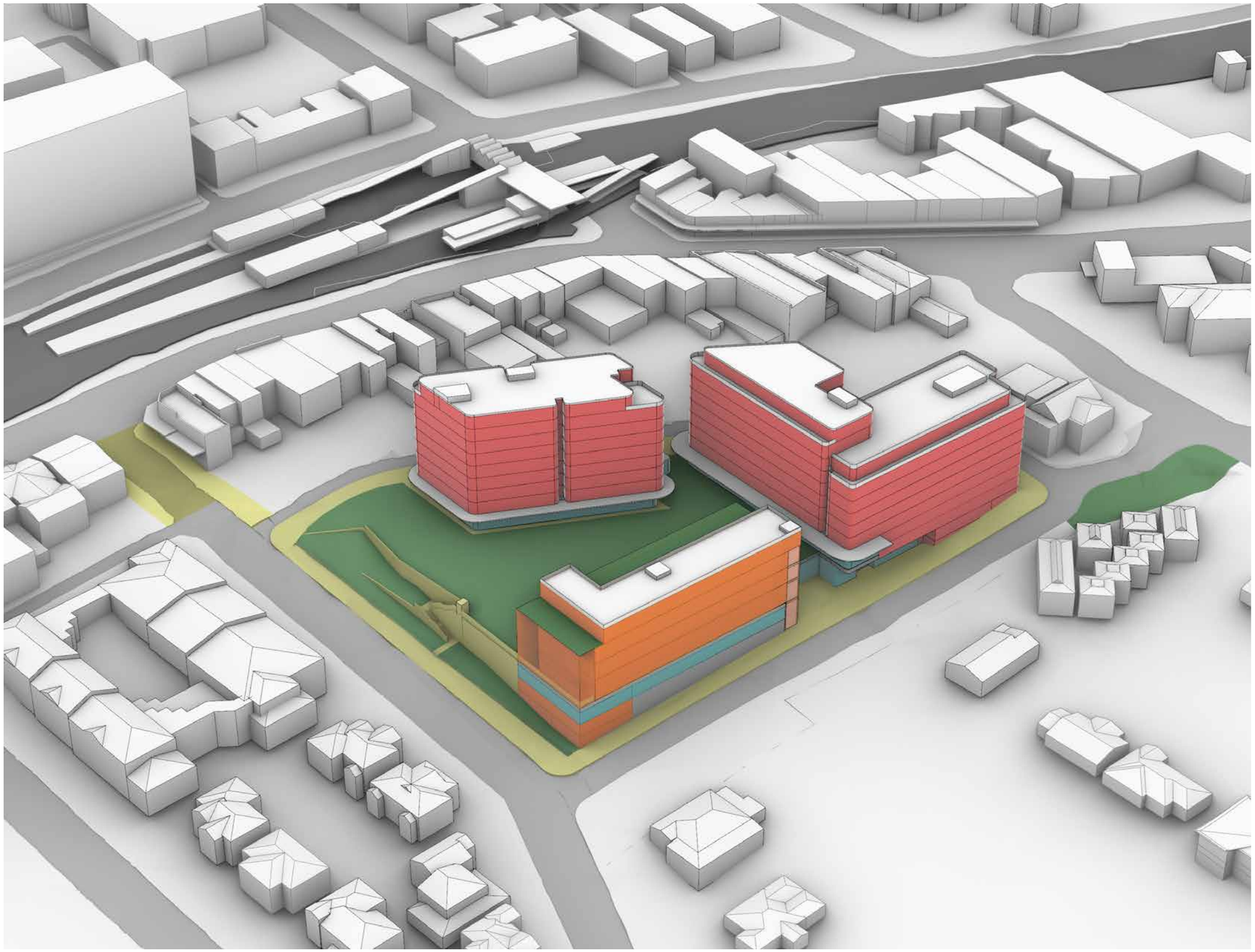


Figure 70: Potential Use Distribution Massing

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 DCP, neighbouring properties between Woodford Lane and the Pacific Highway have a 3-metre setback control. If these properties are given larger height-of-building controls in future, it is proposed that they be paired with new upper level setbacks that ensure ADG compliance, e.g:
    - *An additional 2-metre upper-level setback (5-metres total) at 5- to 8- storeys*
- Neighbouring properties west of the future Drovers Way have an existing 6-metre setback control in the existing DCP. If these properties are given larger height-of-building controls in future, it is possible that they also may need to be paired with new upper level setbacks to ensure ADG compliance.

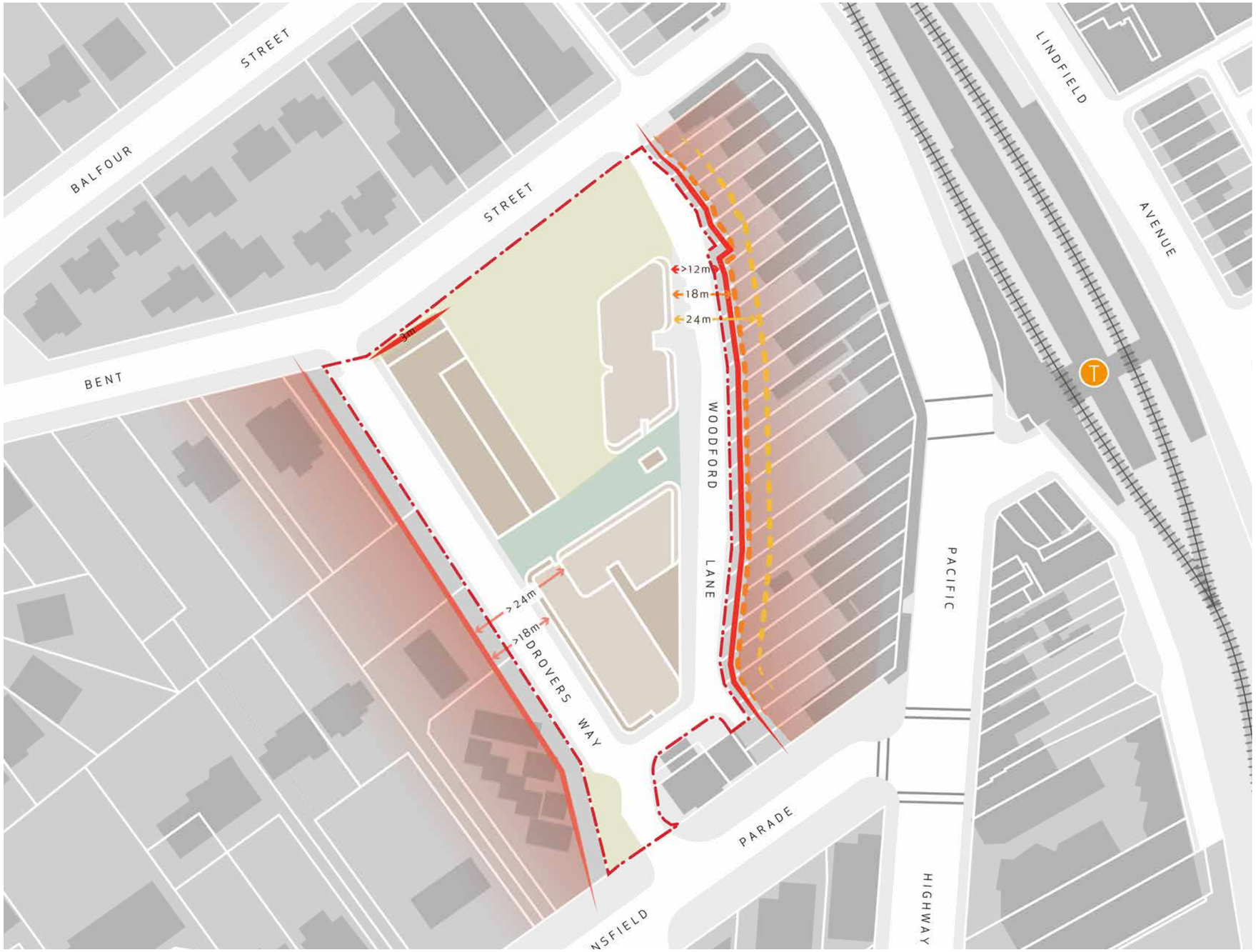


Figure 71: Setbacks Diagram

POSSIBLE FUTURE HEIGHT INCREASES ON NEIGHBOURING SITES

Separation distances to neighbouring buildings, should they be given increases to their allowable Height-of-Building controls, are shown here.

It is expected that the Pacific Highway Shops to the east of the site are likely to benefit from future Height-of-Building controls that allow up to 8-storeys, given existing precedent in the Lindfield Local Centre. This should require an upper level setback (shown here as 3m, as identified in the existing KLDCP), or a site design that positions the built form away from the western boundary.

It is not considered likely that surrounding buildings will exceed 8-storeys if the Lindfield Village Hub is capped at 9-storeys. The Hub will provide a public park, plaza, Library and Community Centre and should therefore be the most prominent building in the local centre. However, if further height increases are considered for neighbouring buildings, additional setbacks should be imposed above 8-storeys.

Key

Allowable under current controls

Potential height increase

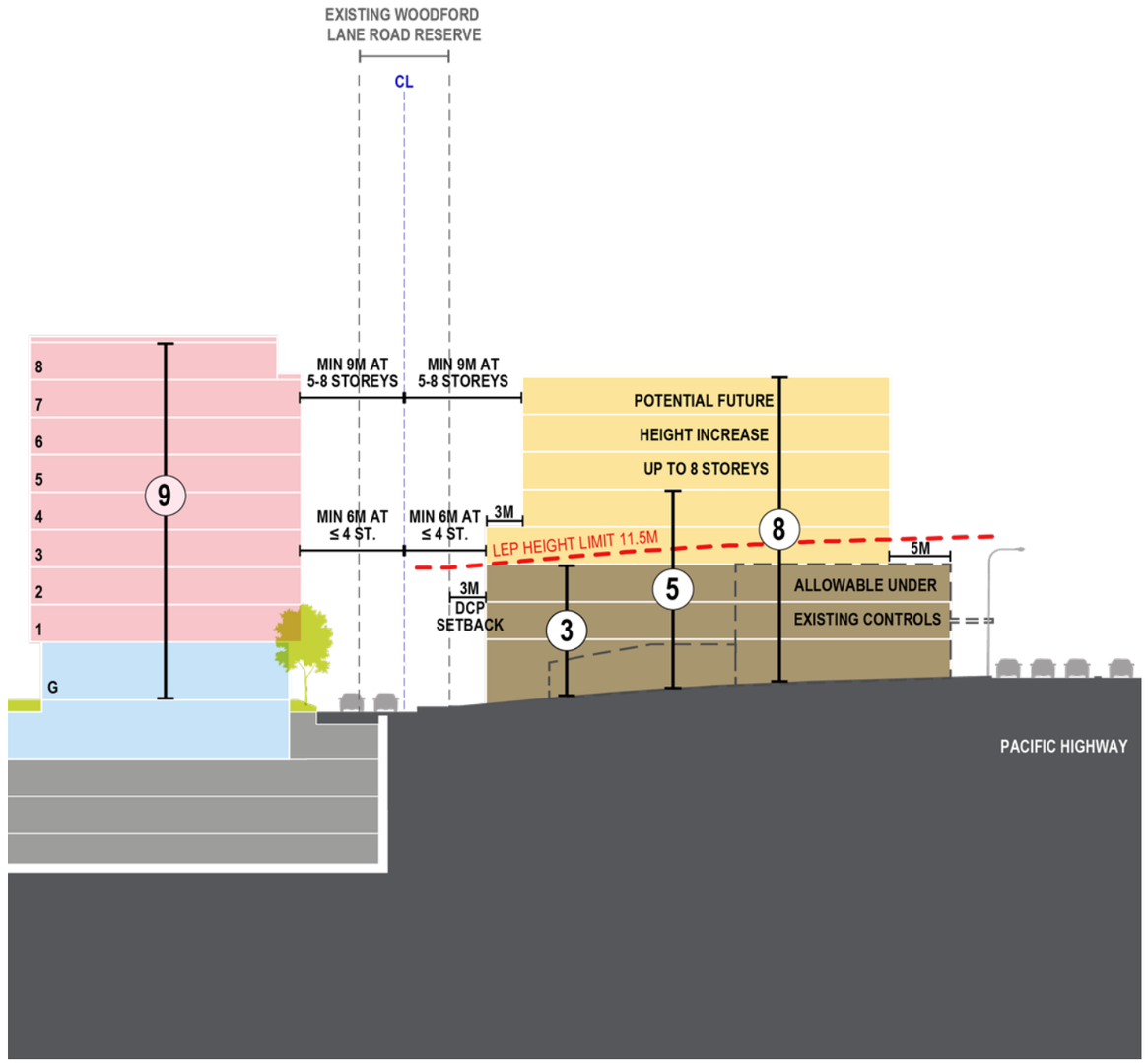


Figure 72: ADG Separation with Neighbouring Properties to the East (Future Upzoning Scenario)

POSSIBLE FUTURE HEIGHT INCREASES ON NEIGHBOURING SITES (CONTINUED)

The properties to the west of the Hub site may also be provided with more flexible Height of Building controls in future. A future scenario allowing up to 8-storeys is shown here, with heights transitioning down towards the properties within the conservation zone to the west.

Key

- Allowable under current controls
- Potential height increase

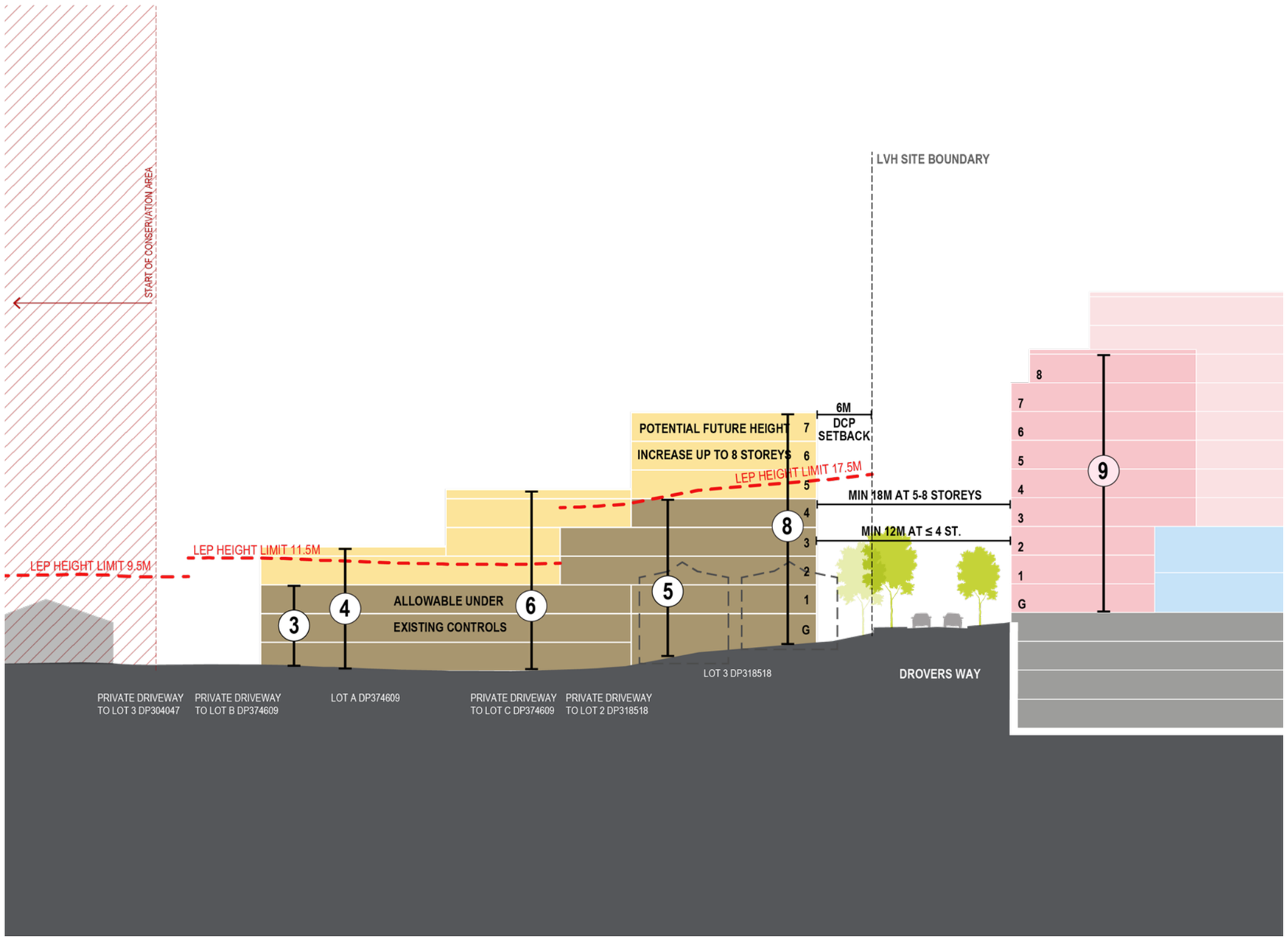


Figure 73: ADG Separation with Neighbouring Properties to the West (Future Upzoning Scenario)

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.

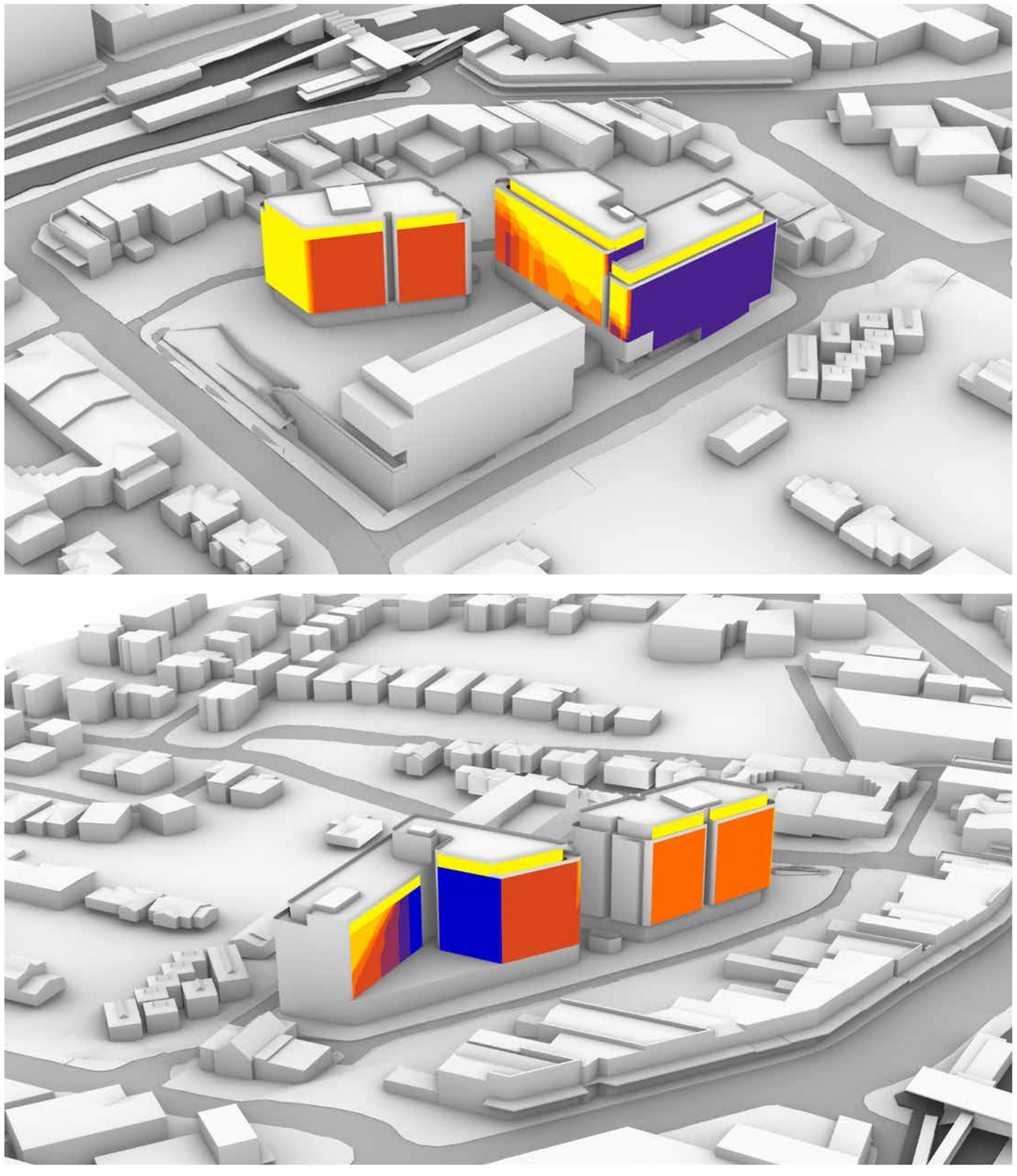


Figure 74: Facade Solar Access Model

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 achievable in this format.

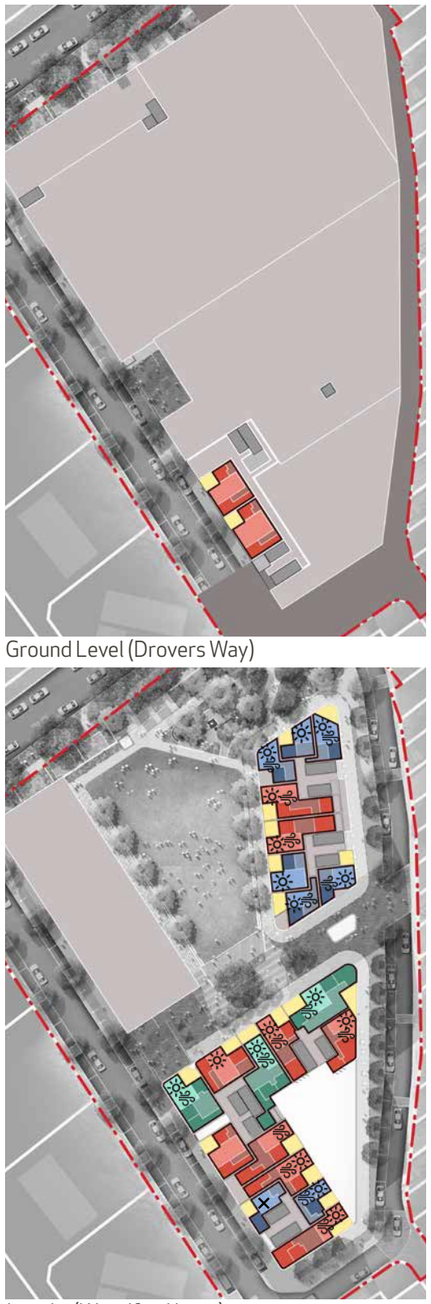
It is important to note that this layout or unit mix will not represent the final design outcome, and ADG compliance will be properly assessed at the D.A. stage.

1-Bedroom Units
- Living
- Bedroom
- Other Spaces

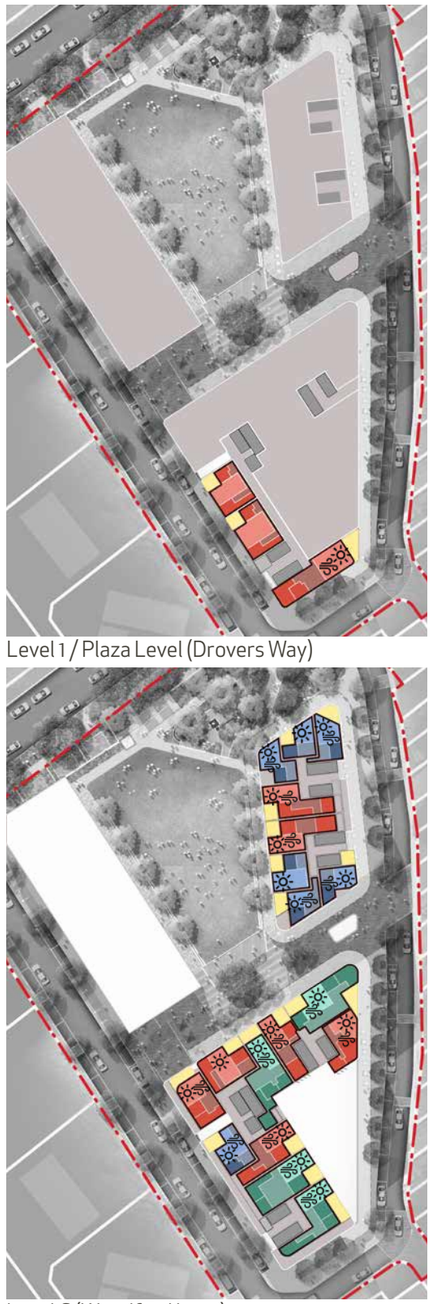
2-Bedroom Units
- Living
- Bedroom
- Other Spaces

3-Bedroom Units
- Living
- Bedroom
- Other Spaces

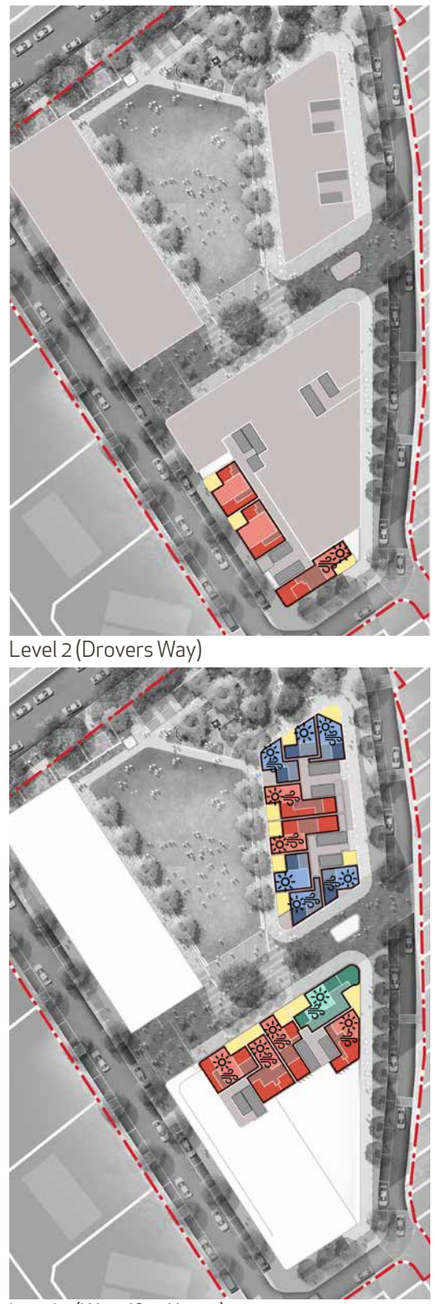
- Primary Open Space
- Cross-Ventilated
- 2 Hours Direct Sunlight
- No Direct Sunlight (Daylight Only)



Ground Level (Drovers Way)



Level 1 / Plaza Level (Drovers Way)



Level 2 (Drovers Way)

Levels 1-4 (Woodford Lane)

Level 5 (Woodford Lane)

Level 6 (Woodford Lane)

Level 7 (Woodford Lane)

Level 8 (Woodford Lane)

Figure 75: Indicative floor layouts for ADG

SUN EYE VIEWS

Sun eye views were prepared to further test solar access by analysing the solar penetration into rooms and open areas of the apartments.

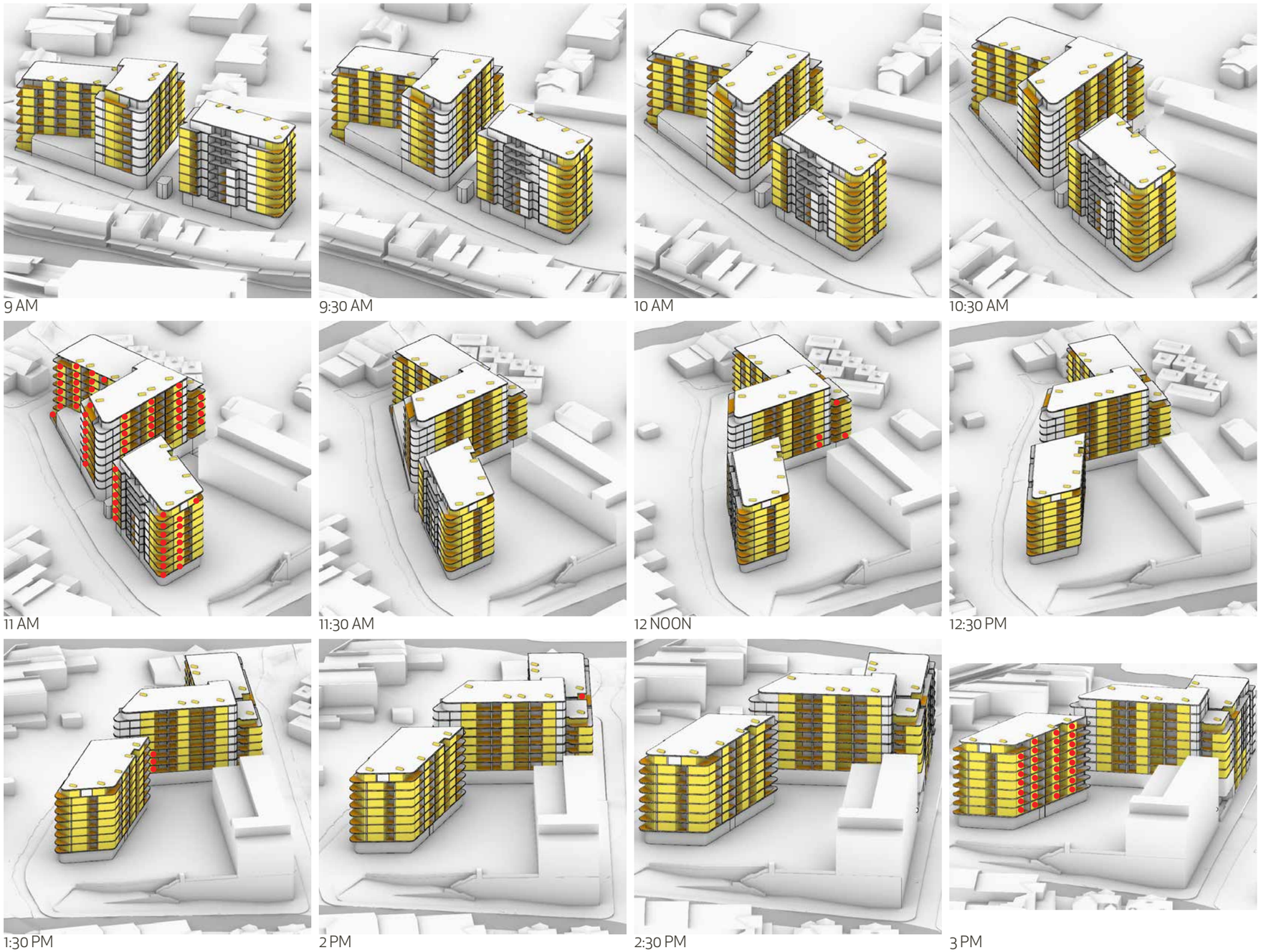


Figure 76: Views from the sun from 9am to 3pm

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-of-site 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 Hours Sunlight**		**Cross Ventilated**	
target		≤	*15%*	≥	*70%*	≥	*60%*
	153	*9*	**6%**	*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.

1. View from the eastern side of Pacific Highway looking south east
2. View from the eastern side of Pacific Highway looking south
3. View from the entry of Lindfield Train Station on Pacific Highway looking west
4. View looking toward the site from the eastern side of Pacific Highway
5. View from the intersection of Drover's Way & Beaconsfield Pde looking north towards the site
6. 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.

KEY

VIEW LOCATION

SITE

Figure 77: Location of photographs on next page

Figure 78: View One

Figure 79: View Two

Figure 80: View Three

Figure 81: View Four

Figure 82: View Five

Figure 83: 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 unimpacted.

9AM, JUNE 21

10AM, JUNE 21

11AM, JUNE 21

12PM, JUNE 21

1PM, JUNE 21

2PM, JUNE 21

3PM, JUNE 21

Figure 84: Overshadowing Impact Analysis

5.0

RECOMMENDED PLANNING FRAMEWORK

5.1 PROPOSED LEP CONTROLS

1. PROPOSED HEIGHT OF BUILDINGS CONTROL

In order to deliver the preferred outcome, it is proposed that three height controls be applied to the Hub site. These are expressed as Australian Height Datums:

- **AHD 115.6**
- **AHD 120.6**
- **AHD 127.5**

Dimension lines are provided in the Figure here, which are parallel to the existing lot lines they shown measured from.

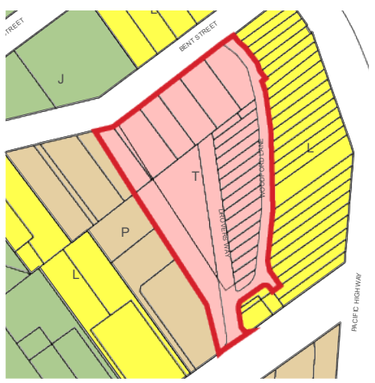
KEY

J 9.5 L 11.5 P 17.5

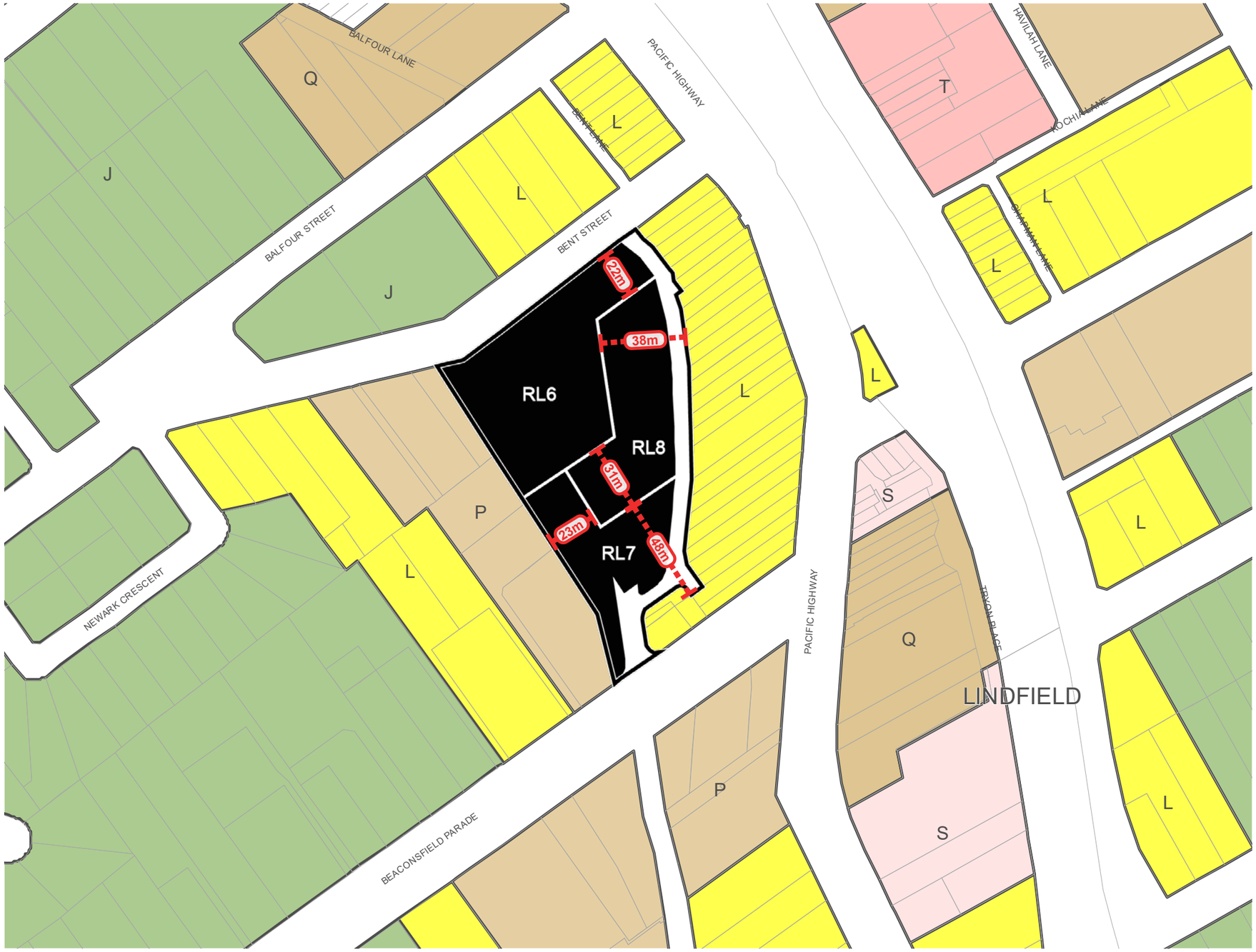
S 23.5

New Height Zones:

RL6 **115.6** RL7 **120.6** RL8 **127.5**



EXISTING LEP MAP: HOB



PROPOSED LEP MAP: HOB

Figure 85: Height of Buildings, Proposed LEP Map

5.1 PROPOSED LEP CONTROLS

2. BASIS OF PROPOSED HEIGHT OF BUILDINGS CONTROL

The three height zones proposed are based on the finished roof level of the indicative design. Due to the nature of this steeply sloping site, we have proposed that the Height-of-Buildings Controls be height datums, rather than metres above existing ground level.

Floor-to-floor heights are assumed to be:

- 6.5m for the supermarket level, including an allowance for 1m of soil for the park above
- 5m for ground-level retail
- 5m for community centre or library levels
- 3.1m for a typical residential level
- 3.6m for child care

An additional 0.5m of building height has been included above the top slab level to allow for increased construction thickness required at the roof. This is to provide sufficient room for a drainage fall, waterproofing and a minimum parapet above the slab.

No height allowance has been made for lift overruns, solar panels, rooftop mechanical or roof access, as these are proposed to be covered by a separate LEP clause (refer to Planning Proposal).

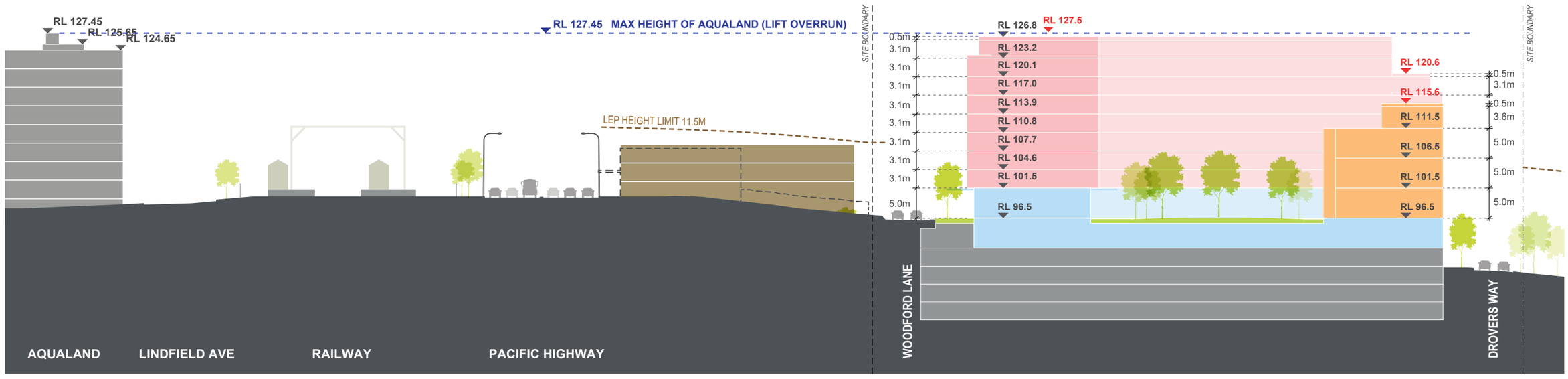


Figure 86: Basis of Proposed Height of Building Control

3. PROPOSED FLOOR SPACE RATIO CONTROL

The indicative design requires an allowable FSR of **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

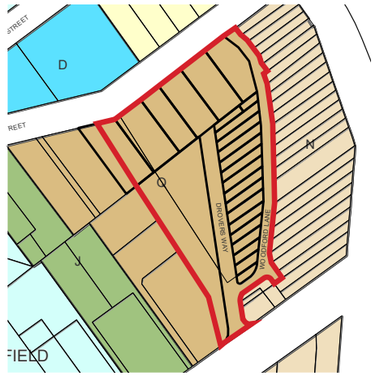
Residential: 14,500 - 15,000m²

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.

KEY

A2 0.3	D 0.50	J 0.80
K 0.85	N 1.00	S1 1.60
Q 1.30	T1 2.00	**T2b 2.31**
U1 2.50	V 3.00	



EXISTING LEP MAP: FSR

PROPOSED LEP MAP: FSR

Figure 87: Proposed FSR Map (Alternative)

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 88) 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.

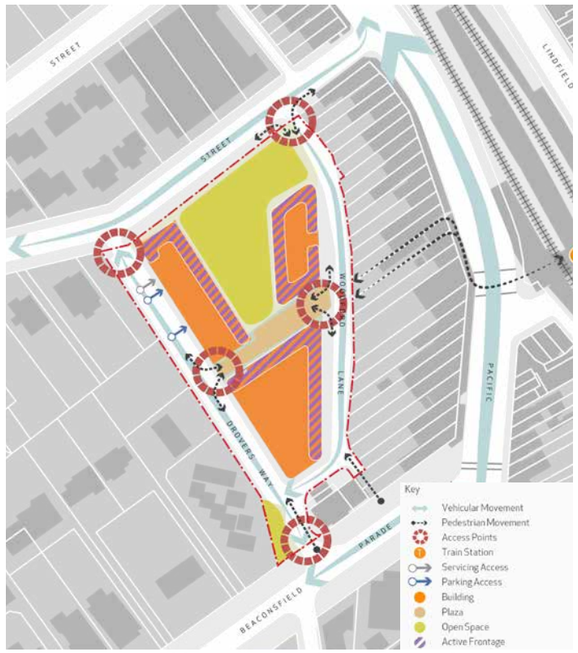


Figure 88: Proposed DCP Figure 12.1 - Structure Plan

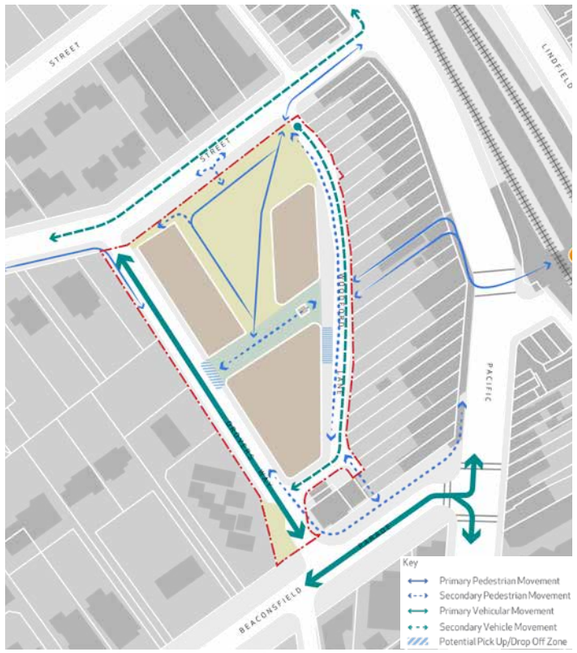


Figure 89: Proposed DCP Figure 12.2 - Movement Diagram

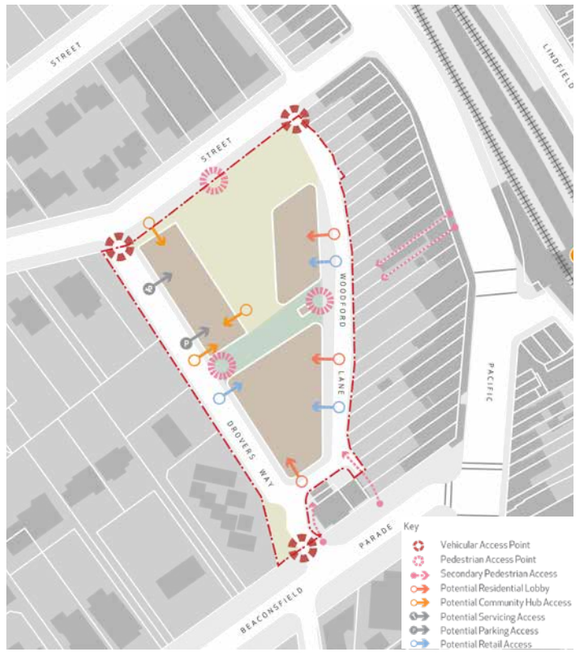


Figure 90: Proposed DCP Figure 12.3 - Access Diagram

Figure 91: Proposed DCP Figure 12.4 - Public Realm Plan

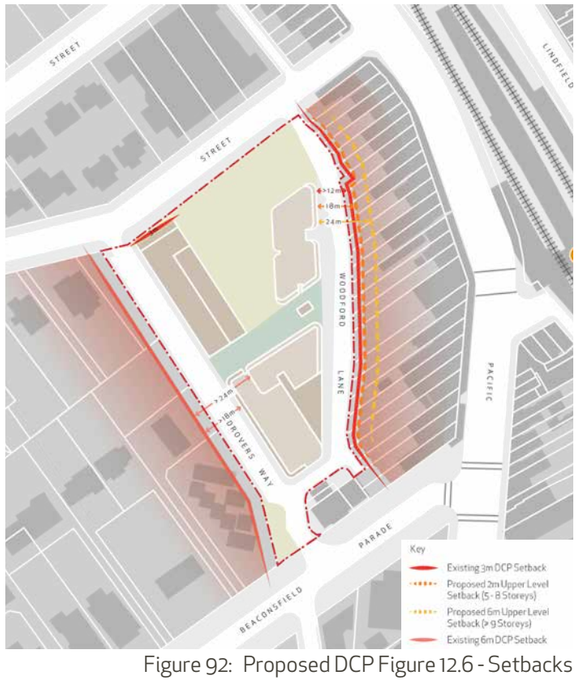


Figure 92: Proposed DCP Figure 12.6 - Setbacks

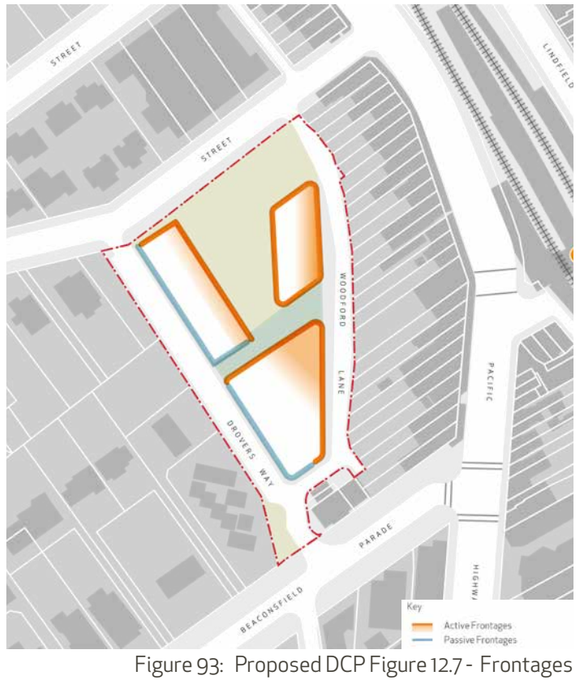


Figure 93: Proposed DCP Figure 12.7 - Frontages

5.2 PROPOSED DCP CONTROLS

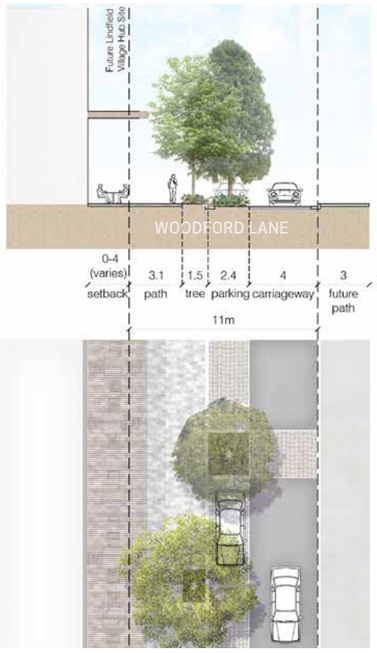


Figure 94: Proposed DCP Figure 12.8 - Woodford Lane

Figure 95: Proposed DCP Figure 12.9 - Woodford Lane South

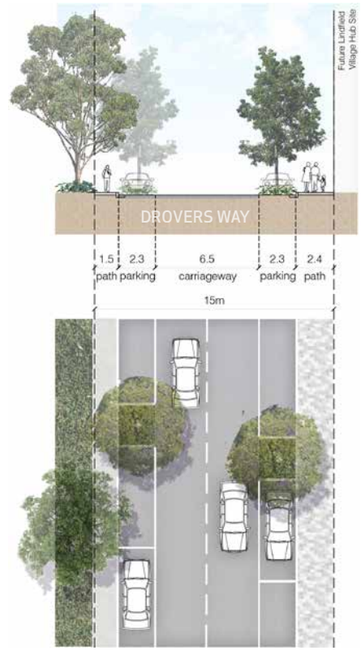


Figure 96: Proposed DCP Figure 12.10 - Drovers Way

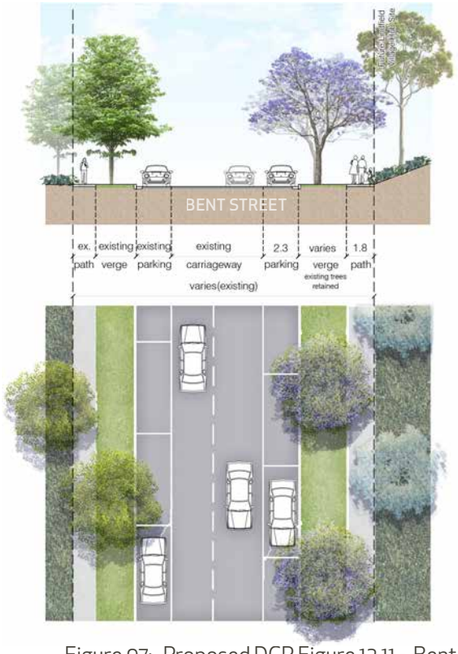


Figure 97: Proposed DCP Figure 12.11 - Bent Street

6.0

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.

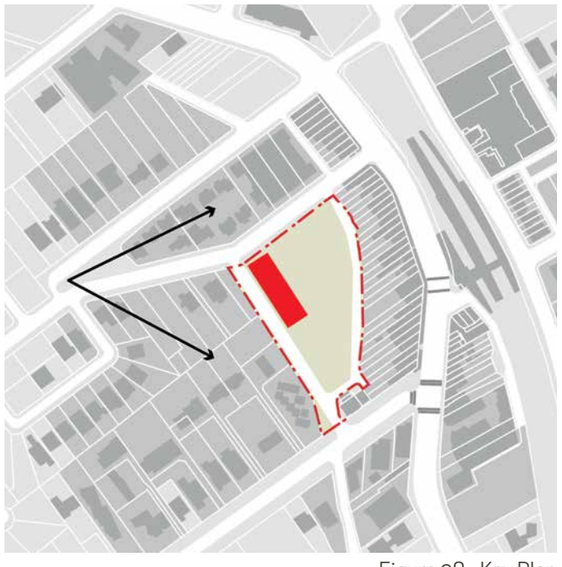


Figure 98: Key Plan

Figure 99: 8 STOREY (RL26.5m)

Figure 100: 9 STOREY (RL29.6m)

Figure 101: 10 STOREY (RL32.7m)

Figure 102: 12 STOREY (RL38.9m)

Figure 103: 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.

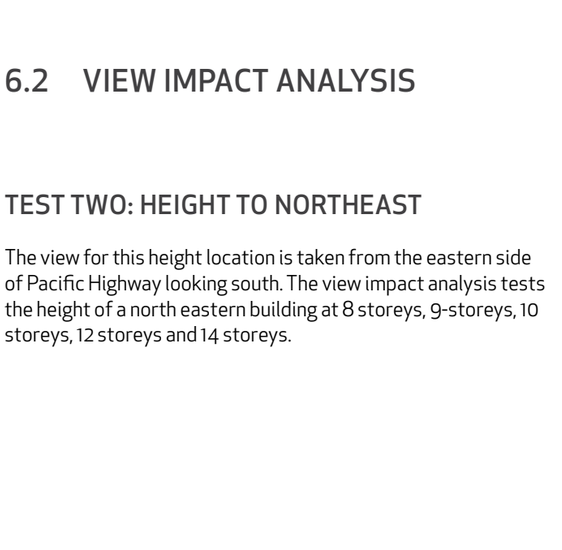


Figure 104: Key Plan

Figure 105: 8 STOREY (RL26.5m)

Figure 106: 9 STOREY (RL29.6m)

Figure 107: 10 STOREY (RL32.7m)

Figure 108: 12 STOREY (RL38.9m)

Figure 109: 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 111: 8 STOREY (RL26.5m)

Figure 112: 9 STOREY (RL29.6m)

Figure 113: 10 STOREY (RL32.7m)

Figure 110: Key Plan

Figure 114: 12 STOREY (RL38.9m)

Figure 115: 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 117: 8 STOREY (RL26.5m)

Figure 118: 9 STOREY (RL29.6m)

Figure 119: 10 STOREY (RL32.7m)

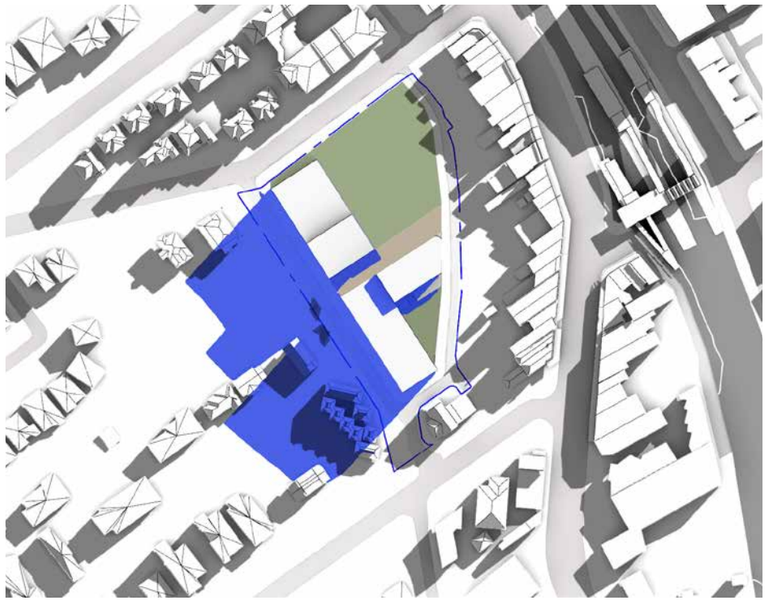
Figure 116: Key Plan

Figure 120: 12 STOREY (RL38.9m)

Figure 121: 14 STOREY (RL45.1m)

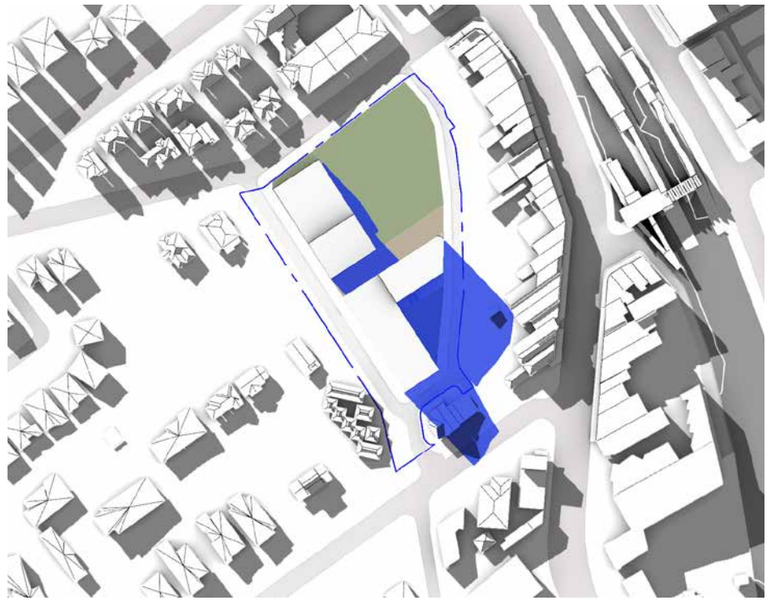
6.5 OVERSHADOWING IMPACT ANALYSIS

DCP MASTER PLAN



9AM, JUNE 21

12PM, JUNE 21



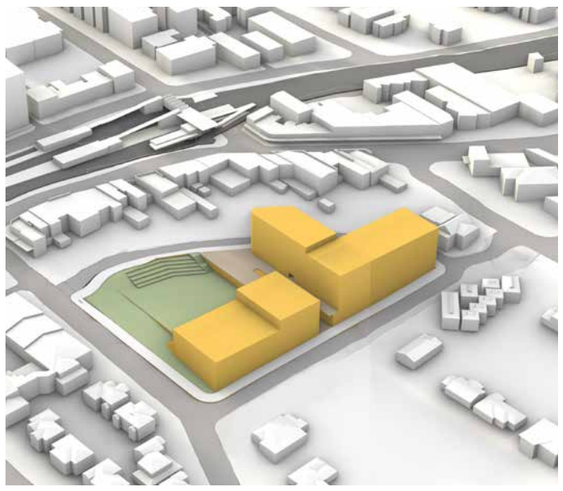
3PM, JUNE 21

Figure 122: Shadow Diagrams, DCP Master Plan

KEY

EXISTING OVERSHADOWING

OVERSHADOWING BY DCP MASTER PLAN



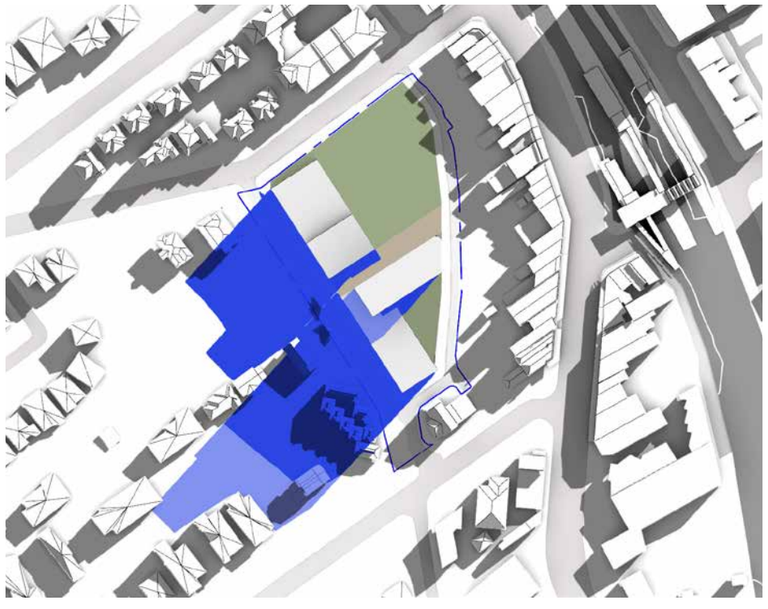
MASSING

KEY

EXISTING OVERSHADOWING

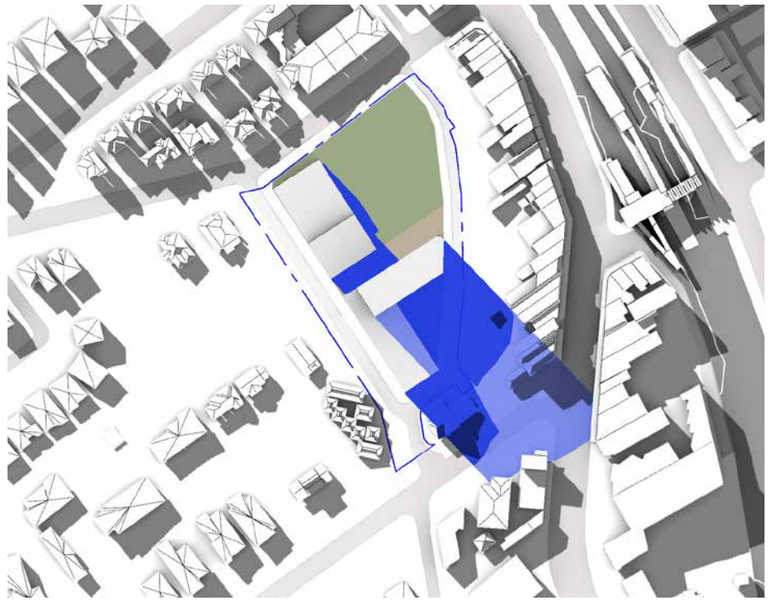
OVERSHADOWING BY DCP MASTER PLAN

ALTERNATIVE MASSING, OPTION 1



9AM, JUNE 21

12PM, JUNE 21



3PM, JUNE 21

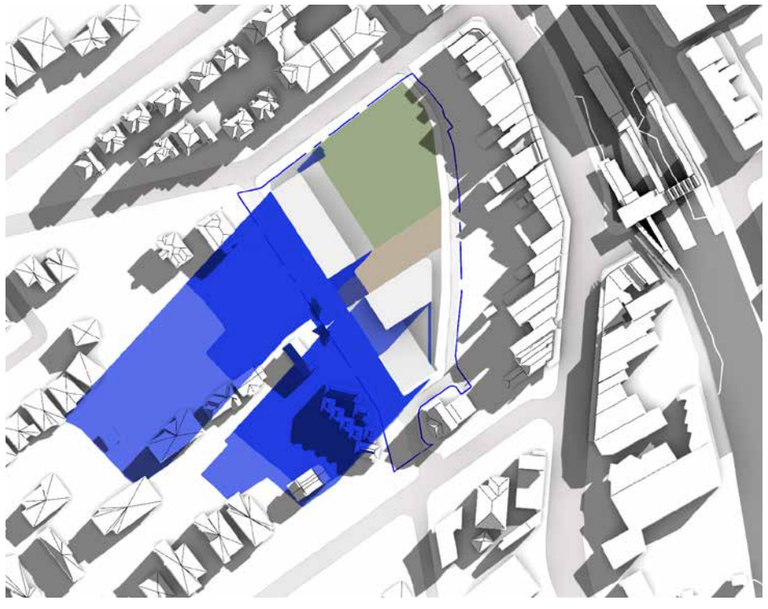
Figure 123: Shadow Diagrams, Option 1

KEY

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

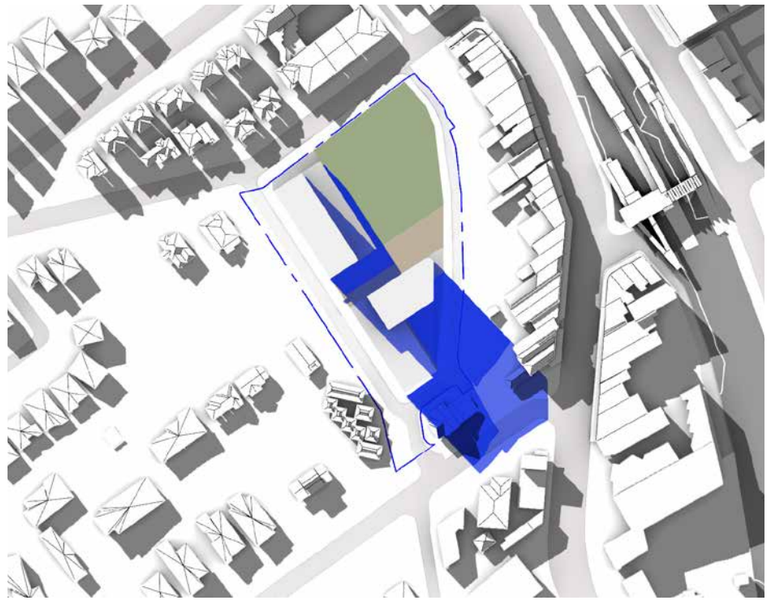
MASSING

ALTERNATIVE MASSING, OPTION 2



9AM, JUNE 21

12PM, JUNE 21



3PM, JUNE 21

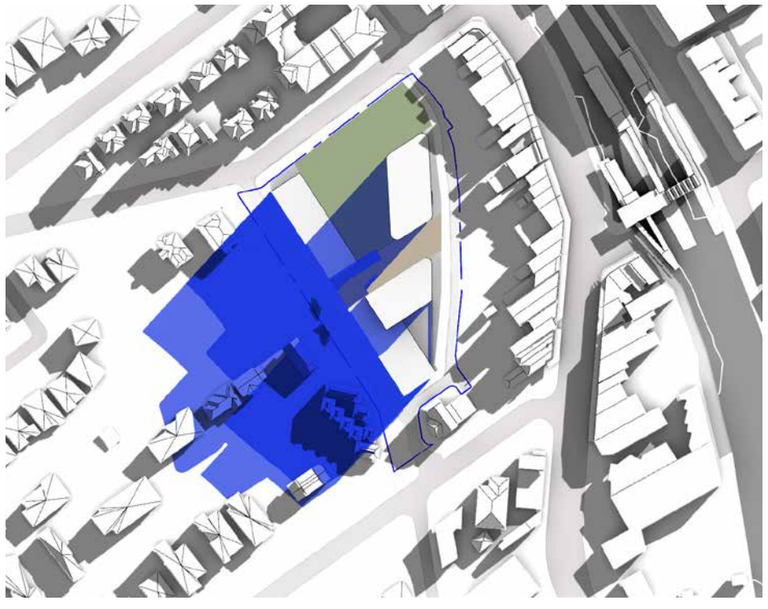
Figure 124: Shadow Diagrams, Option 2

KEY

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

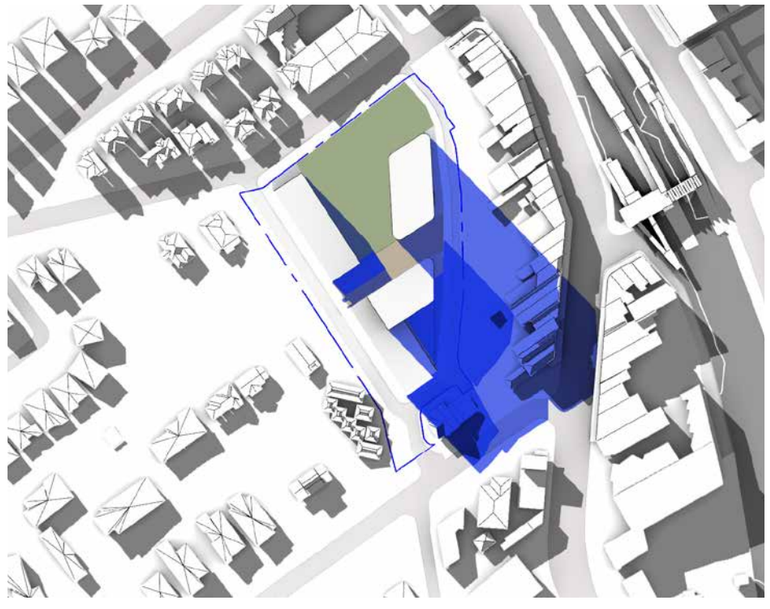
MASSING

ALTERNATIVE MASSING, OPTION 3



9AM, JUNE 21

12PM, JUNE 21



3PM, JUNE 21

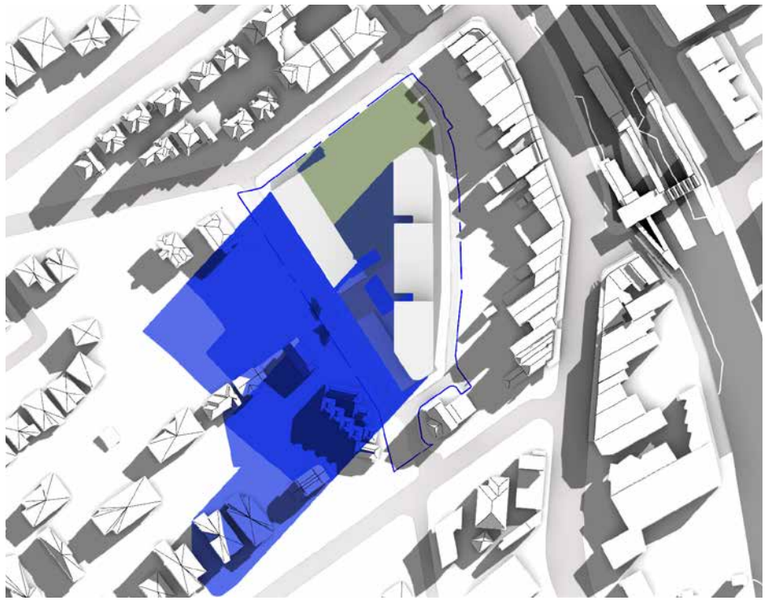
Figure 125: Shadow Diagrams, Option 3

KEY

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

MASSING

ALTERNATIVE MASSING, OPTION 4



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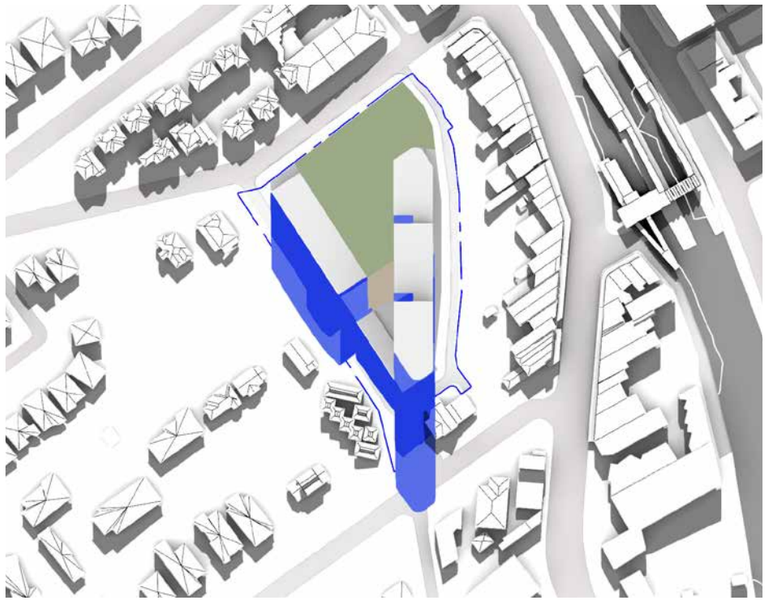

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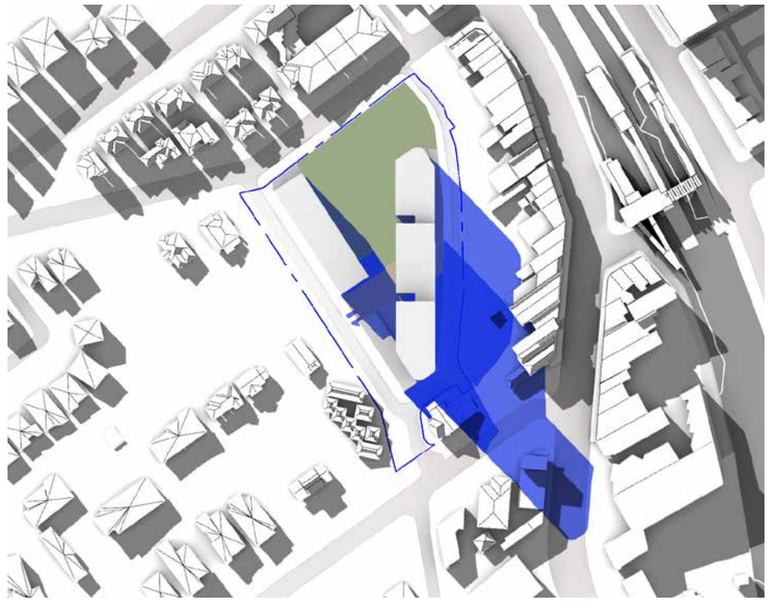


3PM, JUNE 21

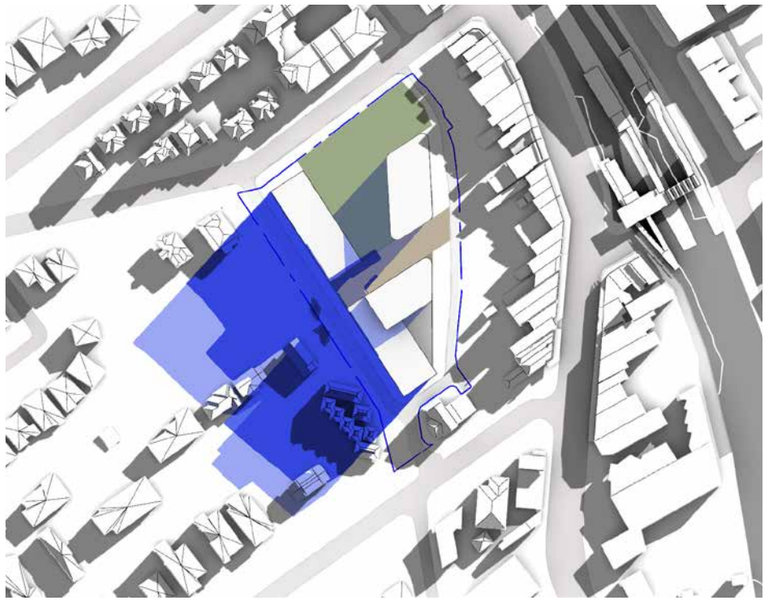
Figure 126: Shadow Diagrams, Option 4

KEY

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

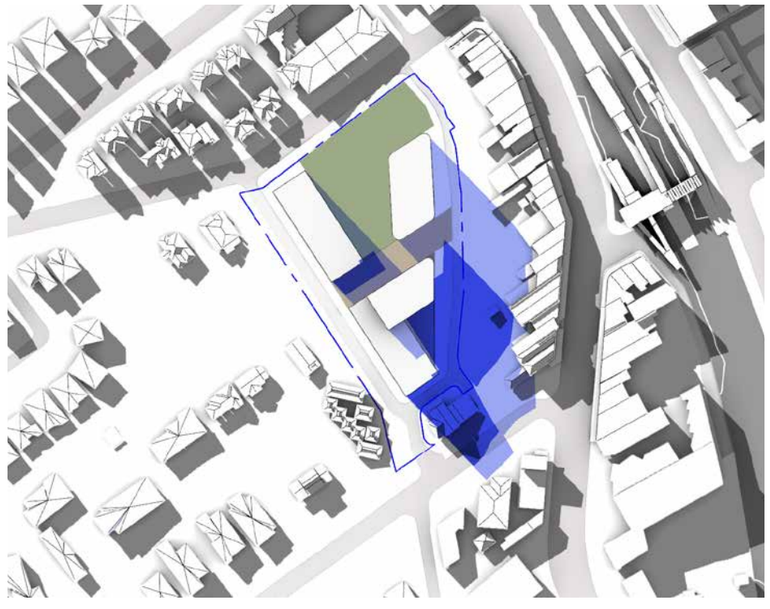
MASSING

ALTERNATIVE MASSING, OPTION 5



9AM, JUNE 21

12PM, JUNE 21



3PM, JUNE 21

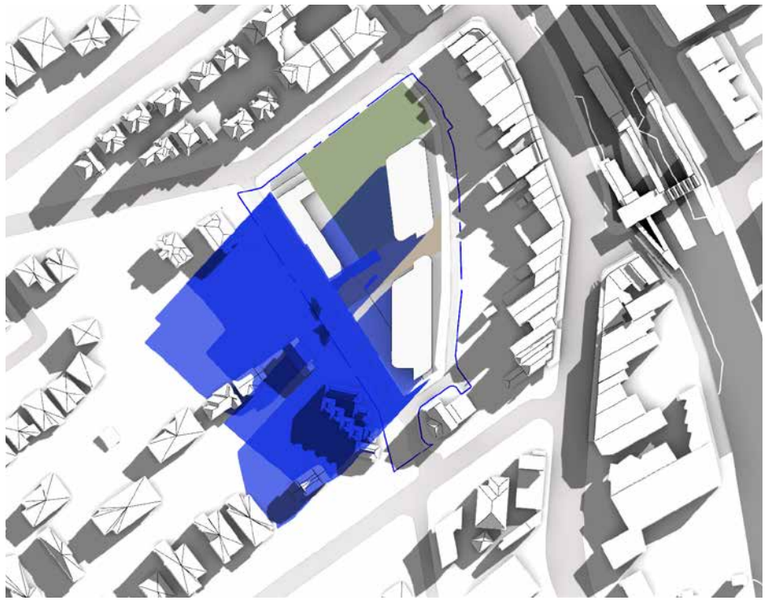
Figure 127: Shadow Diagrams, Option 5

KEY

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

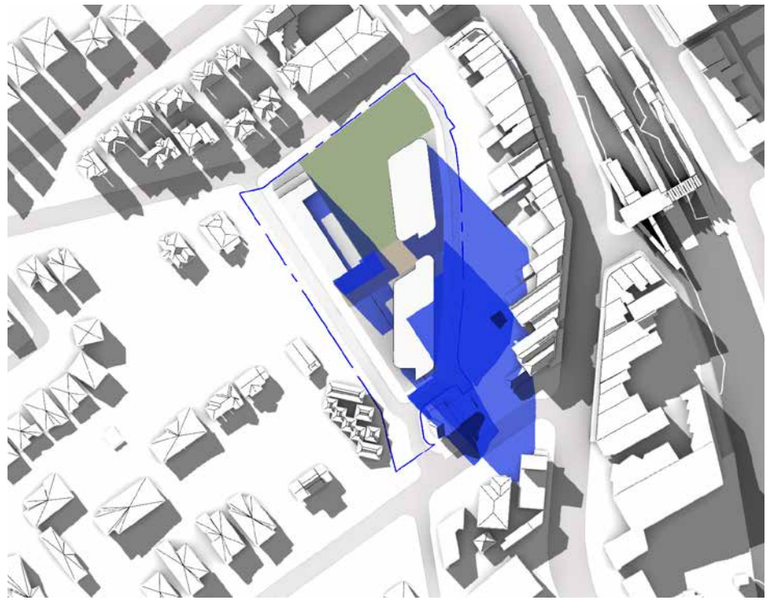
MASSING

ALTERNATIVE MASSING, OPTION 6



9AM, JUNE 21

12PM, JUNE 21

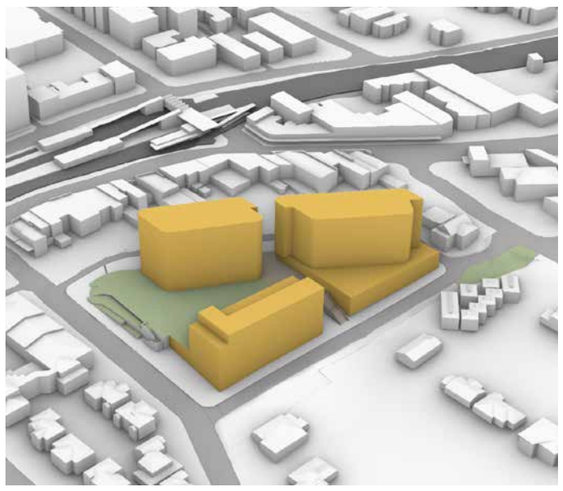


3PM, JUNE 21

Figure 128: Shadow Diagrams, Option 6

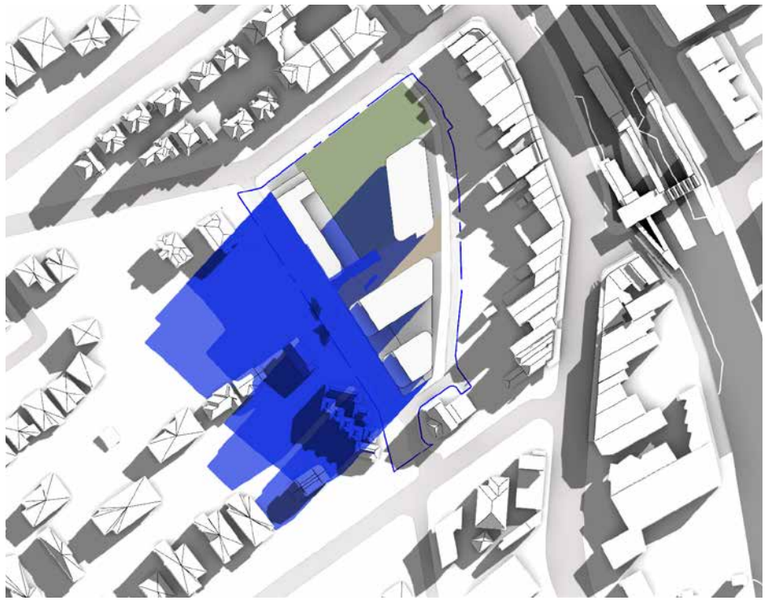
KEY

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



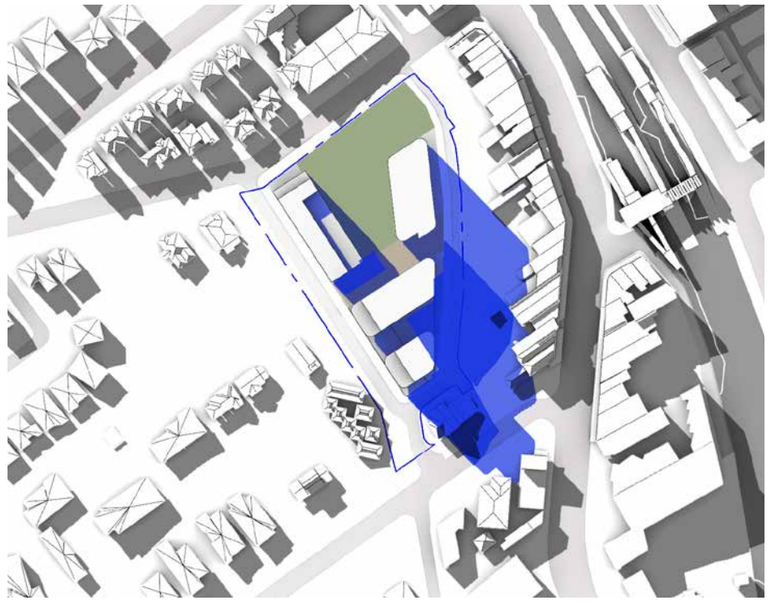
MASSING

ALTERNATIVE MASSING, OPTION 7



9AM, JUNE 21

12PM, JUNE 21

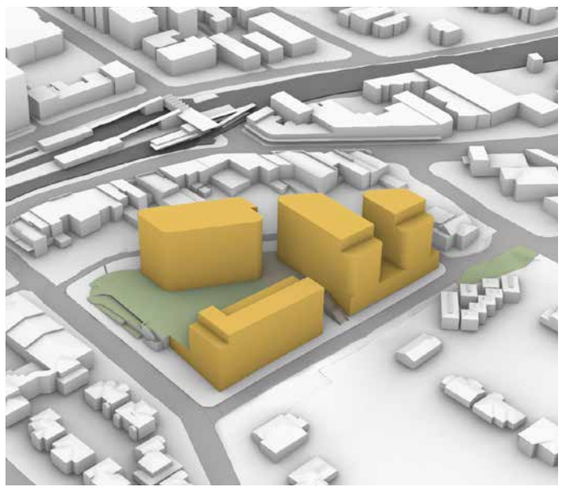


3PM, JUNE 21

Figure 129: Shadow Diagrams, Option 7

KEY

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



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

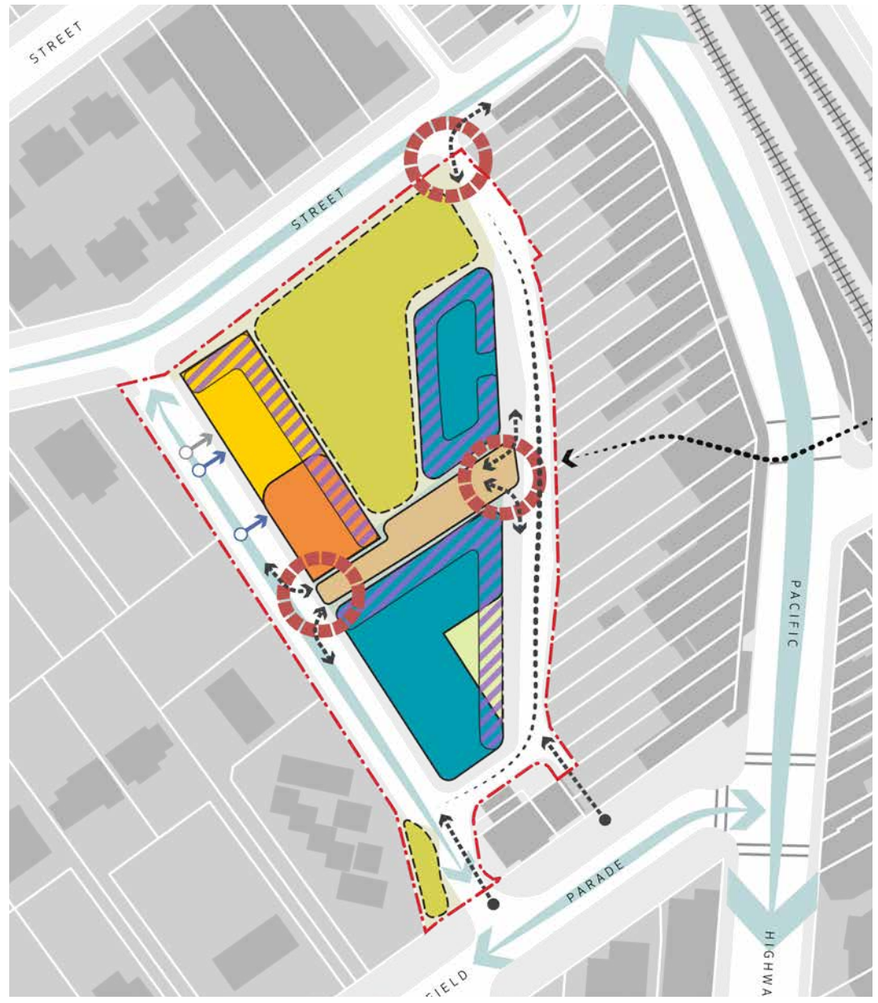


Figure 131: Indicative Design - Structure Plan

Key

- Train station
- Access points
- Vehicular movement
- Pedestrian movement
- Parking access
- Servicing access
- Open space
- Community facility
- Childcare
- Plaza
- Residential
- Active frontage

SJB Architects ASPECT Studios™

6.6.1 ACCESS

Vehicular and pedestrian access remains largely consistent between the 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.

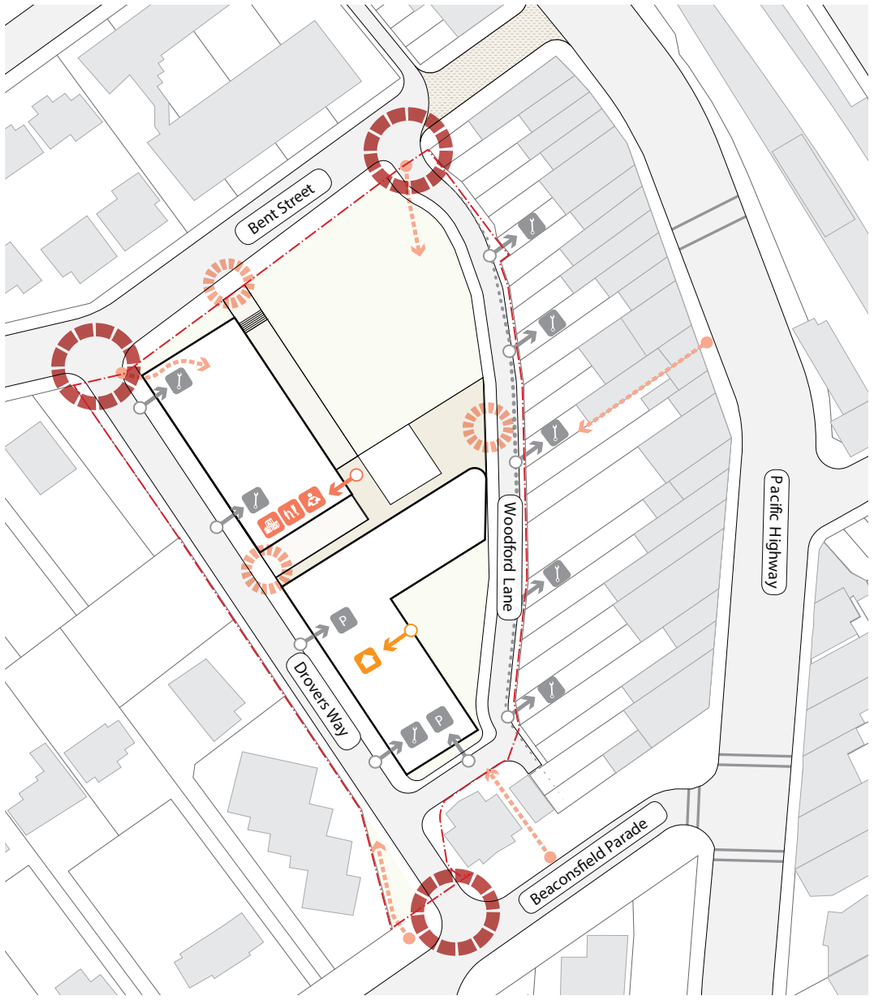


Figure 132: DCP Master Plan - Site Access
image source: p14-162 of KMC Local Centres DCP

Key

- Vehicular access point
- Pedestrian access point
- Secondary pedestrian point
- Community hub access
- Residential access
- Servicing access
- Library
- Community centre
- Childcare
- Public parking
- Hub services
- Residential
- Servicing

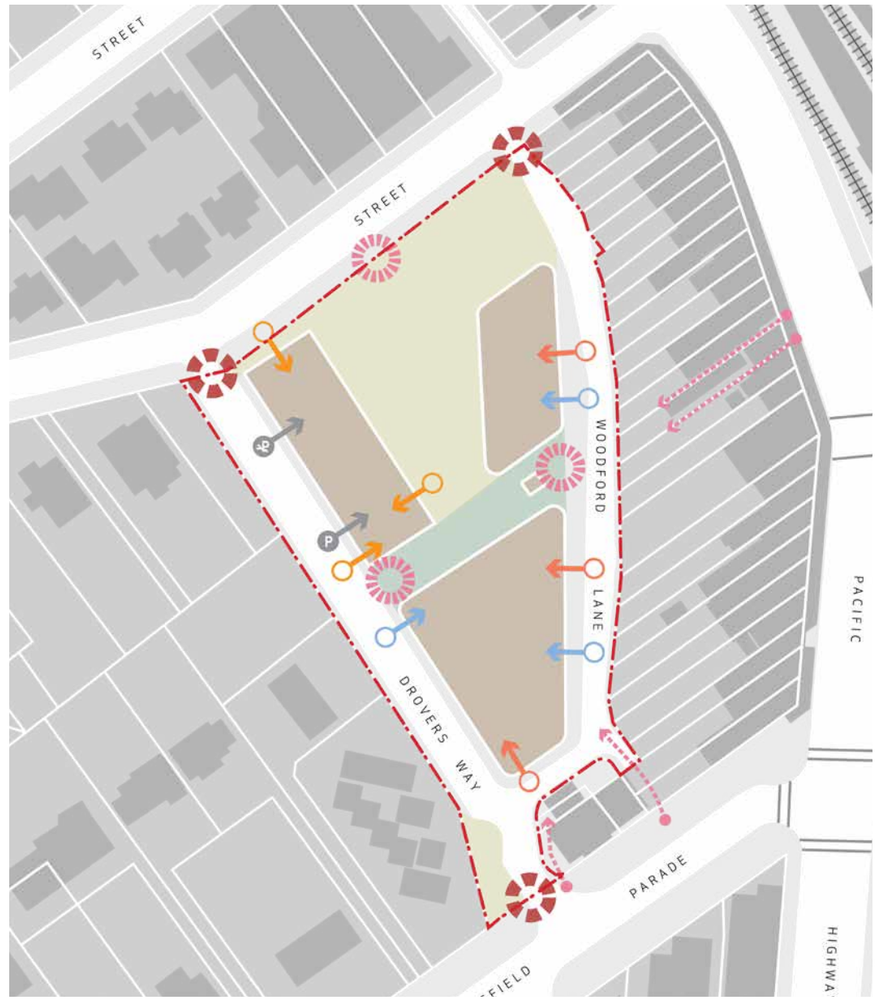


Figure 133: Indicative Design - Site Access

Key

- 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.

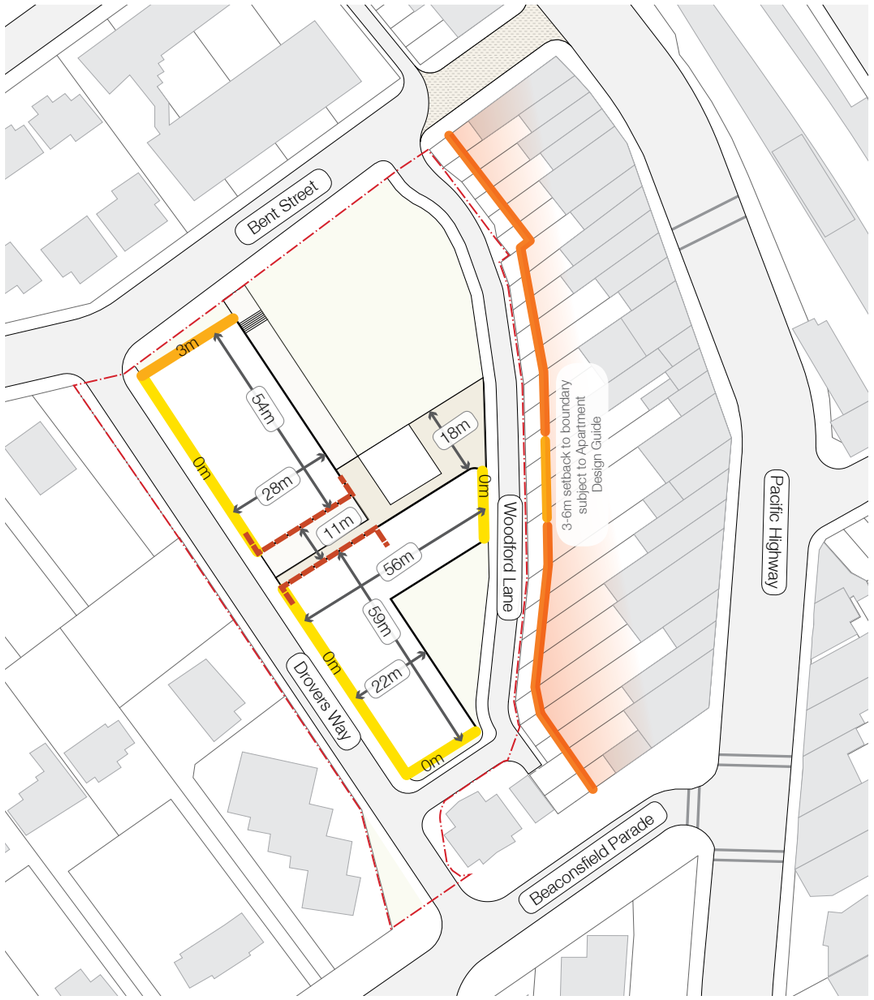


Figure 134: DCP Master Plan - Setbacks
image source: p14-162 of KMC Local Centres DCP

Key

- Street to building setback
- Built form separation
- Woodford Lane setback

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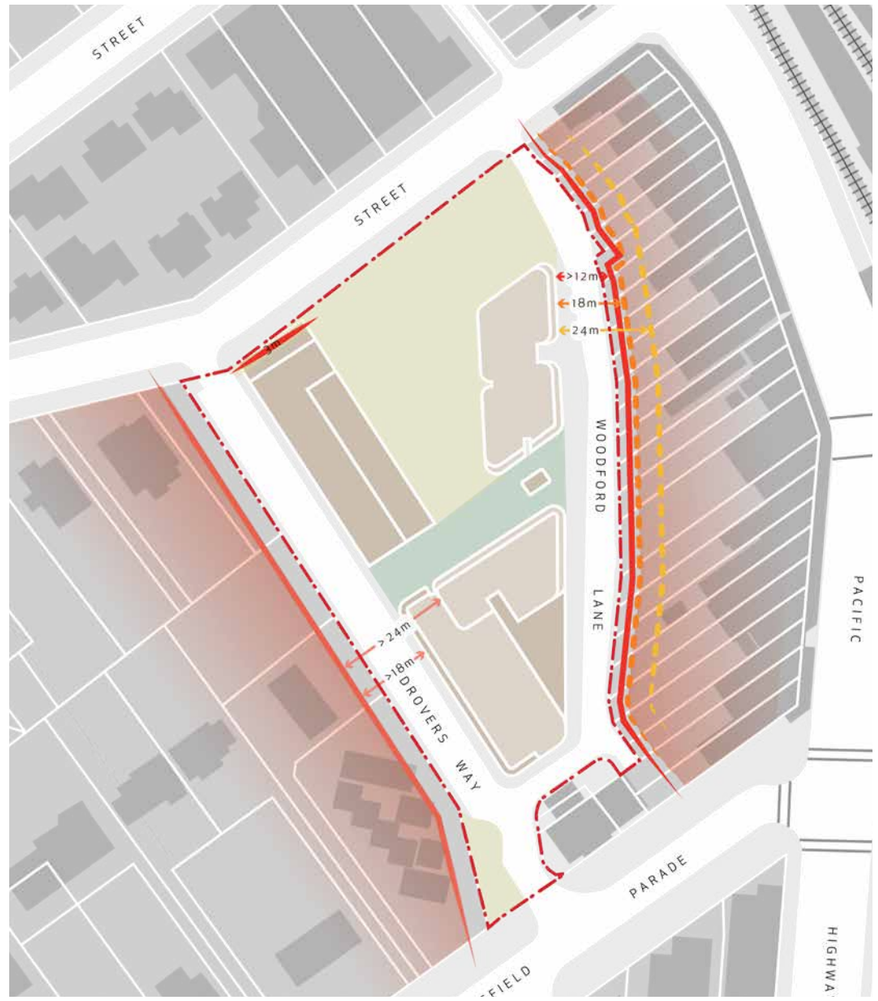

Figure 135: Indicative Design - Building Footprint & Setbacks Plan

Key

- Existing 3m DCP Setback
- Proposed 2m Upper Level Setback (5 - 8 Storeys)
- Proposed 6m Upper Level Setback (≥ 9 Storeys)
- Existing 6m DCP Setback

6.6.3 ACTIVE FRONTAGE

The indicative design increases active frontage from the 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 activated.

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 Frontages'.

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

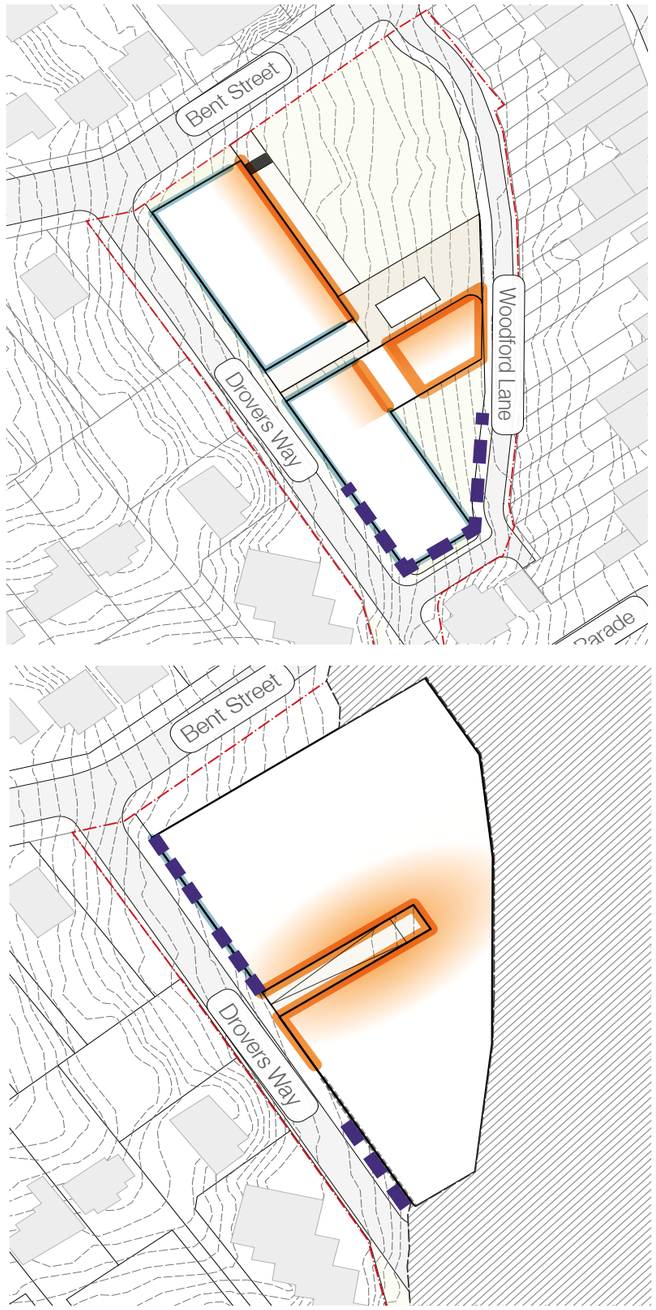

Figure 136: DCP Master Plan - Active Frontages
image source: p14-170 of KMC Local Centres DCP
with additional 'blank frontage' overlay

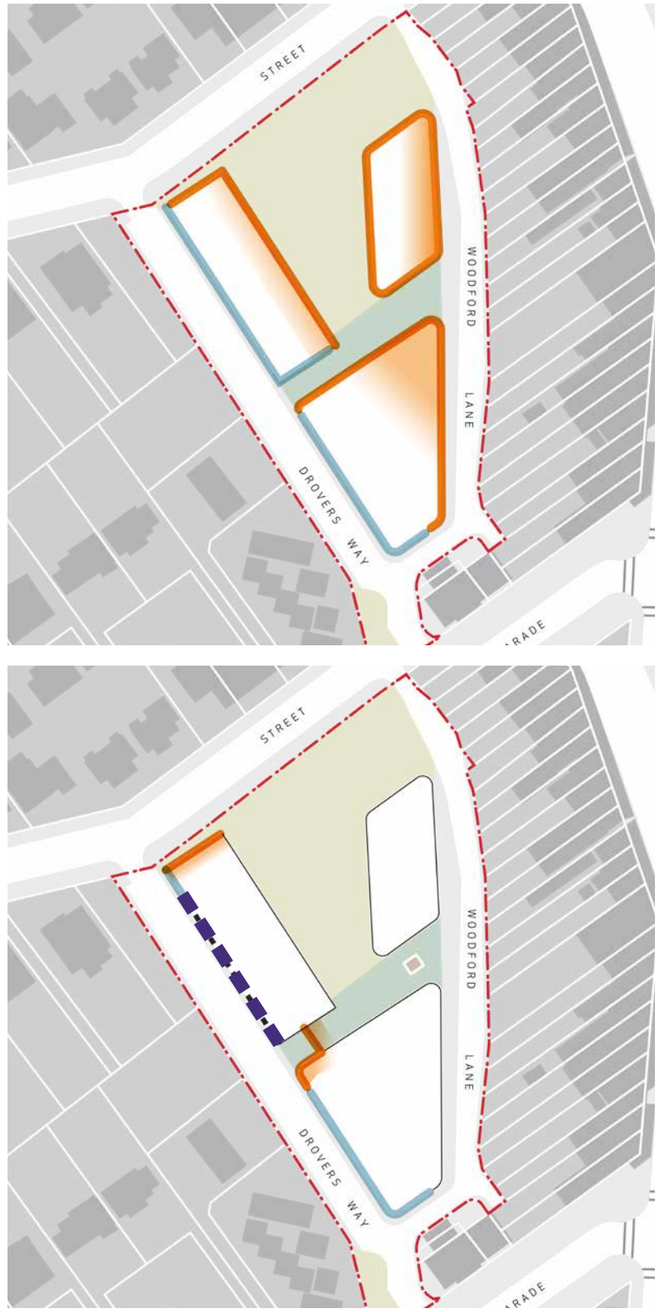

Figure 137: Indicative Design - Active Frontage
Top: Woodford Lane Ground Level
Bottom: Drovers Way Ground Level

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 shoptop residential.

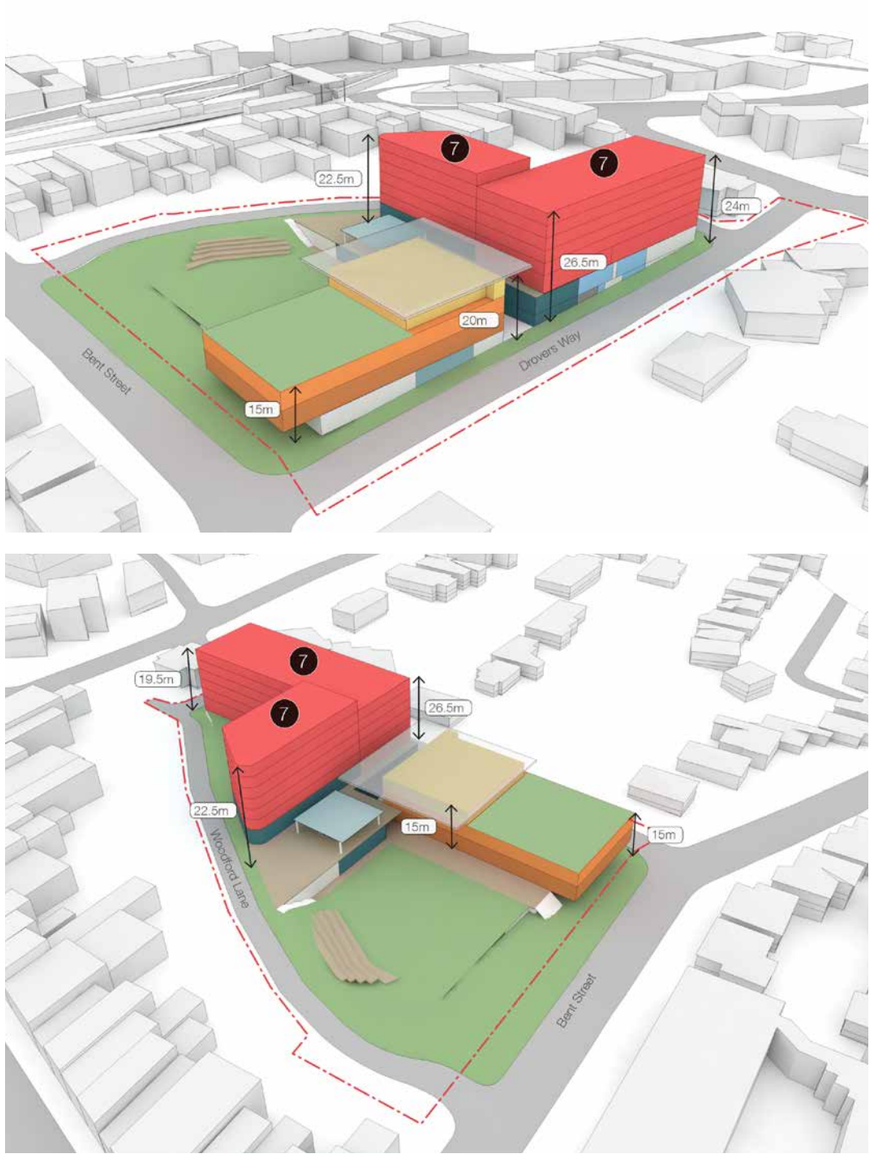

Figure 138: DCP Master Plan, image source : p14-170 of KMC Local Centres DCP

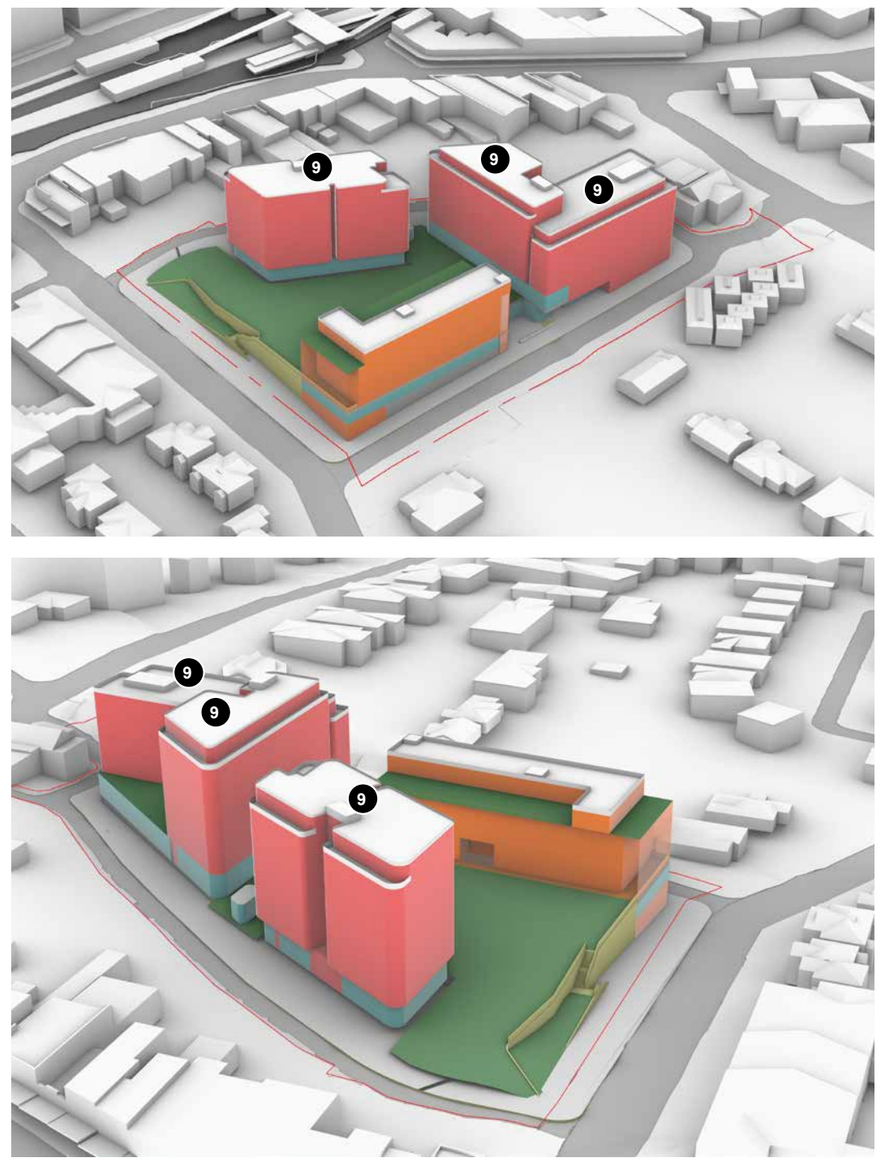

Figure 139: Indicative Design

KEY

RESIDENTIAL

COMMUNITY / LIBRARY / CHILDCARE

RETAIL / COMMERCIAL

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

6.7 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 140: Precedent - New Acton, Oculus

Figure 141: Precedent - Surry Hills Community Centre, FJMT