

Part G9 - Frenchs Forest Town Centre

Warringah Development Control Plan (DCP) 2011

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Introduction

1.1 Applies to Land

This section applies to the Frenchs Forest Town Centre (Phase 1 Development), as outlined in Figure 1.

The following parts of the DCP do not apply:

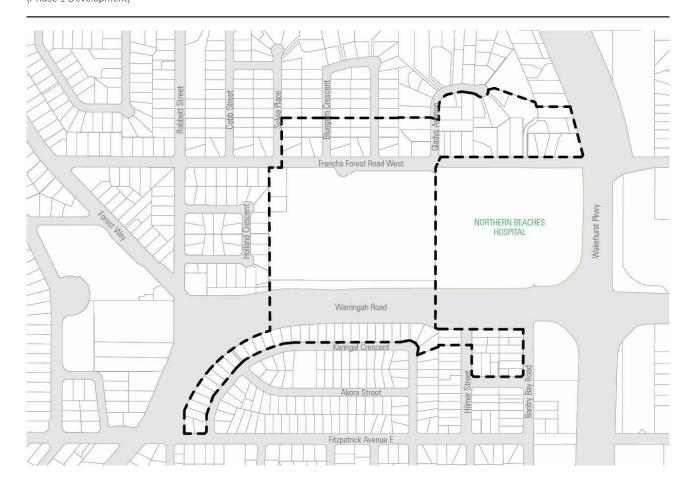
- Part B Built Form Controls
- Part C1 Subdivision (Requirement 1 only)
- Part D1 Landscaped Open Space and Bushland Setting

• Part D19 Site Consolidation in the R3 and IN1 zone.

All other parts of the DCP apply.

In the event of any inconsistency between this section and other sections of the DCP, this section will prevail to the extent of the inconsistency.

Figure 1
Frenchs Forest Town Centre outlined in black
(Phase 1 Development)



1.2 Objectives of this Part and Masterplan for Frenchs Forest Town Centre (Phase 1 development)

The objectives of this Part, and Masterplan (Figure 2) for Frenchs Forest Town Centre (Phase 1 development) are:

- To provide a clear vision and design principles for future development of the Frenchs Forest Town Centre.
- To deliver a master planned outcome which allows for high density, mixed use development and residential transition zones that will guide Frenchs Forest's role as a Strategic Centre.
- To deliver high quality design and public domain outcomes that positively contribute to the character of Frenchs Forest.
- To identify public domain improvements, including new streets, improved pedestrian and cycling connections and public open space, resulting in connectedness and increasing social interactions with the community.

- To promote the Frenchs Forest Town Centre as a self-sustaining precinct, providing opportunities for residents to live, work and play in the Town Centre.
- To establish a clear exemplar for the integration and delivery of sustainability and circular economy at a precinct level and use of industry recognised building rating tools.
- To improve liveability through the use of green infrastructure, creating green spaces and streetscapes that provide visual amenity, reduce heat island effect, reduce the environmental footprint, enhance ecosystems, and create passive recreation opportunities.

Figure 2Illustrative Master Plan for the Frenchs Forest Town Centre (Phase 1 Development) (Source: CHROFI)



Figure 2 - Explanation

Future development will deliver a master planned outcome and be consistent with Figure 2 and below:

- Open space that retains mature vegetation and provides passive recreation opportunities.
- 2 Retaining existing mature trees, particularly where they are adjacent to, or form part of the public domain.
- 3 A landscape buffer along Warringah Road is required to retain and enhance the existing trees and provide a natural buffer to development.
- 4 A central public piazza activated by cafes and outdoor dining, with excellent solar access and views over bushland and open space.
- 5 Community hub to provide for greater social interaction and connectedness.
- 6 A pedestrianised, tree-lined promenade linking to the central piazza and providing a key east-west connection.
- Medium density residential buildings ranging from 3 to 6 storeys provide a transition to surrounding low density development.

- 8 A new boulevard along Frenchs Forest Road West, with local cafes and outdoor dining in a landscaped setting.
- 9 A sunken courtyard to connect to an underground supermarket, fresh food markets and provide for day-today community needs.
- An underground supermarket to minimise bulk and scale at street level.
- A commercial spine to establish a new commercial address in the town centre and provide a buffer to Warringah Road.
- 12 New north- south and east- west streets will connect the Frenchs Forest Town Centre to the existing street network.
- (13) Through site links and new pedestrian and cycling connections to link to bus stops and key desire lines to improve walkability.
- A new neighbourhood centre on Bantry Bay Road that facilitates the adaptive re-use or interpretation of the Former Hew's Residence.

The Masterplan at Figure 2 provides the framework for future development in the Frenchs Forest Town Centre. It is underpinned by an aspirational and holistic vision for the Precinct to be an urban forest, with green streets and new open space, making a feature of the forest hat has always shaped the site's story. Frenchs Forest will also provide character and great places; it will foster health and connected communities, attract families and encourage new business. It will set the benchmark for health and wellness, liveability and prosperity in a new urban centre.

Part G9 contains the controls that will deliver the desired outcome for future development. Certain controls within this Part use figures to identify numeric values and/ or enhanced understanding of controls. In order to graphically represent controls, some figures include a replication of the Masterplan, identifying such elements as spatial locations of building footprints on indicative new lot configurations, public domain and street and pedestrian linkages.

The DCP recognises that the Masterplan is indicative of desired future outcomes and that future development in the Precinct may not align, throughout the precinct, strictly in accordance with the indicative spatial layout identified in the Masterplan.

The following provides an explanation of certain elements of the Masterplan and the related DCP controls. It is provided to enhance understanding of the way that the DCP controls operate to achieve the coherent master planned outcome.

In relation to:

 Layout and design of the street network, through site linkages, future allotment patterns and future building footprints.

Figures within this Part use the indicative footprints of future buildings, new street layouts, through site linkages and future allotment patterns that are indicated in the Masterplan.

Indicative future development concepts are used to indicate how Council envisages that:

- The Masterplan concept for the centre should be delivered.
- Building block depths and widths will be managed to achieve optimum design outcomes, linkages, accessibility and walkability.
- Public domain and spaces between buildings will be provided to ensure amenity for all users of the centre.
- Development site areas are of sufficient size to accommodate appropriate areas of deep planting for canopy trees, to re-introduce the forest to the centre.
- Future site vehicular access arrangements will be managed to limit impact on pedestrians and impacts on the street network.
- Minimum lot areas for certain developments will be required to deliver quality of development outcomes in some areas.

2. Building heights and floor space ratios

Both the Warringah LEP and the DCP make provisions in relation to building heights and floor space ratios. The Masterplan seeks design excellence and the delivery of a range of building heights and a variety of architectural articulation across the centre.

Consequently, development proposals must comply with both the maximum building height controls of both the Warringah LEP and DCP and the maximum floor space ratio controls of the LEP.

The application of both building height and floor space ratio controls, in conjunction with each other, will mean that maximum building height will not always be achievable across the whole of a development site.

Rather, these controls are designed to apply together to achieve buildings that exhibit varied building heights and forms.

3. Podium and tower heights

Figure 26 Podium and tower heights demonstrates the principle discussed in item 2 above. Some building footprints display multiple different values in recognition that the maximum building height will not be achieved across the whole of development sites and that buildings will vary in height to respond to such considerations as:

- Creation of a clearly defined podium and tower
- Tower setbacks to articulate the built form, allow sunlight access and assist in sharing view lines between buildings.
- Amenity for users of open space

within the town centre.

• Privacy for occupants of buildings and for their neighbours.

4. Areas that are blank between indicative building footprints

Council will insist that the layouts for future streets, through site linkages and pedestrian ways are largely consistent with those indicated in the Masterplan.

In relation to all controls, when a figure depicts building footprints and their surrounding spaces, Council recognises that future development proposals may not be wholly consistent with these layouts.

Assessment of development proposals will take into account the Desired Future Character and Character Statement for the respective Precincts, the Objectives of Part G9, and the Objectives and Requirements of the various controls.

In all instances where controls are illustrated by a figure that indicates future building footprints, the relevant control applies to the whole of development sites and to any building that varies from the indicative footprints.



2 Desired future character

Frenchs Forest is an urban forest, with green streets and new open space, making a feature of the forest that has always shaped the site's story.

Frenchs Forest will provide character and great places; it will foster health and connected communities, attract families and encourage new business. It will set the benchmark for health and wellness, liveability and prosperity in a new urban centre.

Figure 3
Precinct location plan
(Source: CHROFI)



Phase 1 development is divided into seven precincts, each with their own distinct character and role. The desired future character within the precincts provides the framework to the built form controls in Part G9.

Development in the Frenchs Forest Town Centre is to demonstrate how the proposal contributes to the desired future character. The precincts are:

- **01** The Civic Heart
- **02** Market Quarter
- 03 Commercial Spine
- 04 The Boulevard
- **05** Frenchs Forest Road West Neighbourhood
- **06** Karingal Crescent Neighboourhood
- 07 Bantry Bay Neighbourhood Centre

Precinct 01 to 04 is defined as the 'Town Centre'.

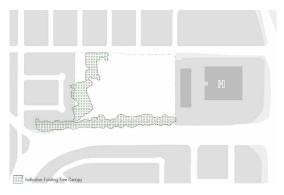
A Character Statement for each precinct, including identification of key features applies.

For Precincts 01-04, design principles also apply (refer to Control 3).

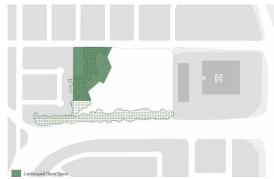


3 Design principles for the town centre

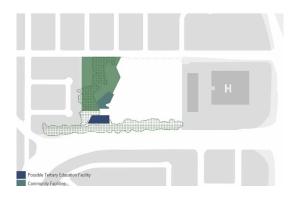
The design principles provide guidance for development in Precincts 01-04. All design principles are to be addressed in any Concept Development Application for Precincts 01-04. Detailed development applications for any development, including public domain works, are to demonstrate consistency with the design principles, where relevant.



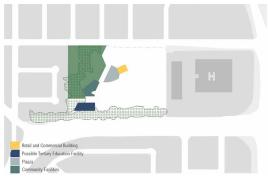




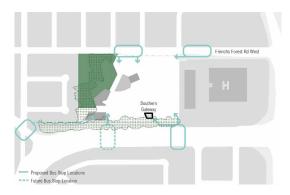
2. Deliver enhanced open space in the Frenchs Forest Town Centre, which is diverse in nature, sustainable and accessible to the entire community.



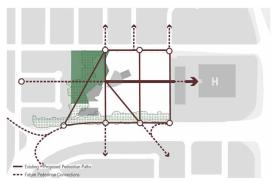
3. A dynamic community hub and space for possible tertiary education facility.



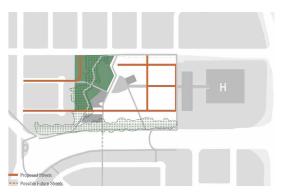
4. Create an innovative social and cultural destination for people to gather and interact.



5. Integrate pedestrian and cycling movement and convenience with accessible public transport.



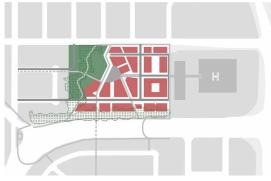
6. Establish a priority pedestrian place.



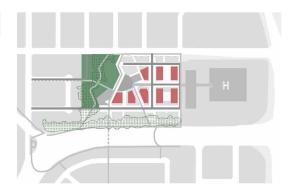


7. A robust road network.

8. Provide a diversity of jobs through creative and adaptable work spaces.







10. Deliver a built form strategy that enhances Frenchs Forest's sense of place.



4 Frenchs Forest Town Centre Public Domain

The public domain will play a crucial role in the success of the Frenchs Forest Town Centre. The public domain will include a variety of new public spaces, including a large new multi-purpose park, central piazza and forest. New streets will be publicly accessible private land and improve connectivity and street activation.

Objectives

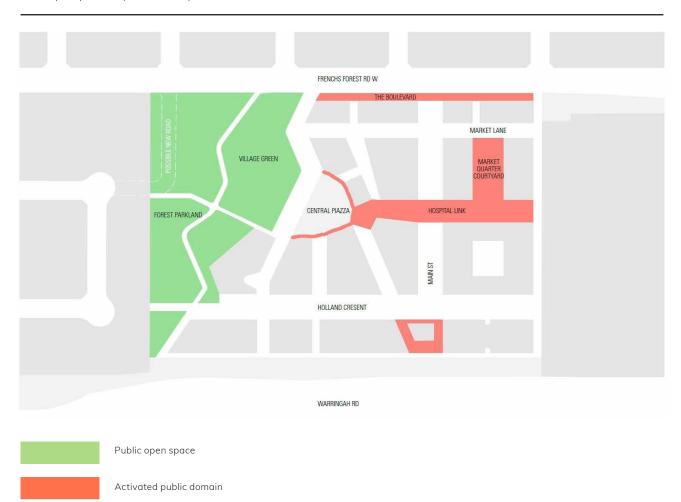
- A. To create a high quality public domain with open spaces that achieve the Desired Future Character and Character Statement for each precinct.
- B. To provide a network of integrated and connected open space and public domain areas, that strengthen the character of Frenchs Forest.
- C. To deliver a new large public park in the Frenchs Forest Town Centre that integrates water sensitive urban design measures.
- D. To ensure that new streets are publicly accessible private land.
- E. To retain and enhance existing vegetation as an integral part of the public domain.
- F. To ensure that the public domain is accessible, safe and secure for all residents, workers and visitors.

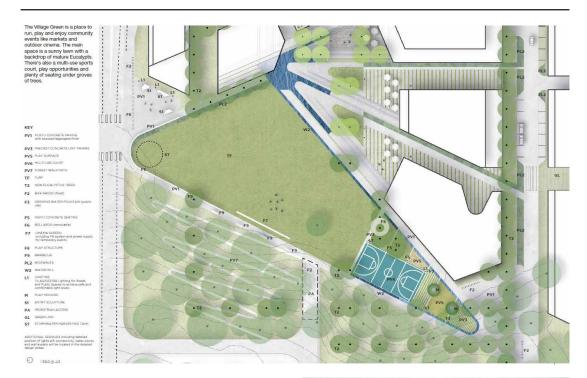
- New public spaces are to be provided in accordance with Table 1 and the concept plans provided at Figures 4 to 11. New public spaces that are not identified as future Council assets in Table 1 must be maintained in perpetuity by private landowners.
- Existing mature vegetation is to be retained and embellished as part of the open space network.

- 3. Public open space must comprise consolidated, useable areas that can support a variety of uses at varied times of the day.
- 4. Public open space areas are to provide for deep soil planting.
- 5. Public open space is to include:
 - 5.1 Flexible spaces that support a range of community activities including passive and active recreation;
 - 5.2 Green infrastructure which addresses stormwater management, climate adaptation, heat mitigation, better air quality and food production amongst other benefits, alongside benefits including public amenity, improved biodiversity and increased quality of life;
 - 5.3 Tree plantings and/or landscaping elements that contributes to shading and cooling, and considers safety, size at maturation and ongoing maintenance;
 - 5.4 Native plant species that have lower fire risks and are drought tolerant;
 - 5.5 Light coloured pavements and road surface to avoid heat absorption and retention; and
 - 5.6 No infrastructure that supports private development.
- Public open space must be designed to provide safety, with lighting, open sightlines and landscaping that allow high levels of public surveillance.

Table 1Public open space and public domain

Name	Purpose	Function	Size (m²)	Future Council asset
Village Green	Primary green space	Multi-purpose informal active and passive recreation, including community events and community sports activities	8,000	Yes
Forest Parkland	Urban bushland and adventure play	Children's adventure play, walking and cycling paths, picnic areas and passive recreation	5,500	Yes
Central Piazza	Publicly accessible	Publicly accessible plaza for events, activities and activation of the ground floor uses.	1,665	No
Hospital Link	Primary pedestrian east- west connection	A linear space that provides a strong civic connection east-west between the Village Green, Piazza and Northern Beaches Hospital.	20m wide	No
Market Quarter Courtyard	Retail plaza	Small courtyard space. Fresh food and local retail, with opportunities for day-to-day community interaction Potential to connect to underground supermarket.		No
The Boulevard	Main Street	Retail uses with outdoor dining and pedestrian walkways		No
Southern Gateway	Transport connector	Paved open space connecting to the bus stop and pedestrian bridge on Warringah Road. Potential for a pavilion café or restaurant.		No





The Village Green

- The Village Green is to be one contiguous open space with a minimum area of 8,000m², excluding streets and pedestrian connections. A community hub facility may occupy part of the open space area.
- 2. It must be designed to provide a large flat green area that can be used for a range of passive and active recreation, including informal recreation, kickabout and training activities.
- 3. The Village Green is to have a direct frontage to at least one public street. The Village Green should be located adjacent to the Forest Parkland. Separation by road is to be avoided.
- 4. Lawn terraces should be used to manage topography and provide a transition to the large flat open lawn.
- 5. The lawn terraces are to be designed to maximise north-west views and informal sit-out spaces.



Precedent: Wormholt Park, London



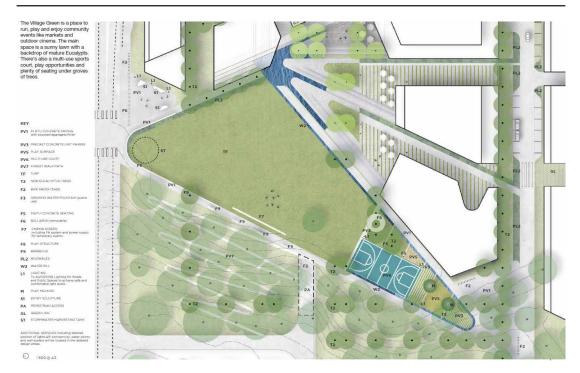
Precedent: Southbank, Brisbane



Precedent: The Domain, Sydney



Precedent: Village Park, Mona Vale



The Forest Parkland

- 1. The Forest is to be a minimum of 5,500m². The design of the Forest is to retain existing trees.
- 2. The Forest will form an important part of the open space network, with a range of uses that promote leisure, exercise, and play. Shared bush trails will allow running, walking and cycling.
- 3. All pedestrian and cycling trails shall avoid and minimise impacts to biodiversity including threatened species values.



Precedent: Girouard Park, Canada



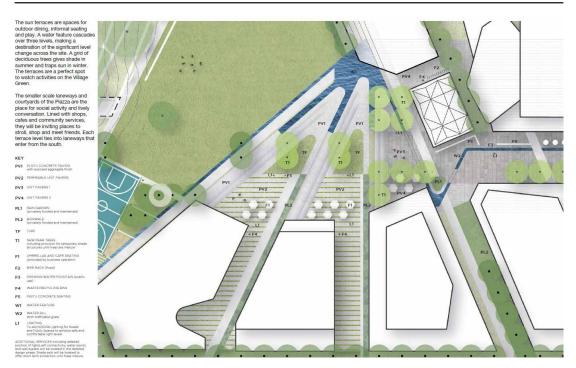
Precedent: Wild Play, Centennial Park



Precedent: Central Park, Hallett Nature Sanctuary, NYC



Precedent: Les Jardins de l'Imaginaire, France



The Piazza

- 1. The Piazza is to be a large flexible paved plaza in the centre of Frenchs Forest Town Centre.
- 2. The Piazza is to be a minimum 1,665m², and appropriately configured to accommodate a range of activities and uses, including outdoor dining, events and markets.
- 3. The Piazza is to be located adjacent to the Village Green and be publicly accessible.
- 4. The Piazza will have excellent solar access and provide extensive views over the Village Green and Forest Parkland.
- 5. The Piazza is to be surrounded by active retail uses and should provide a spill out area for events and activities.



Precedent: Bonn Square, Oxford



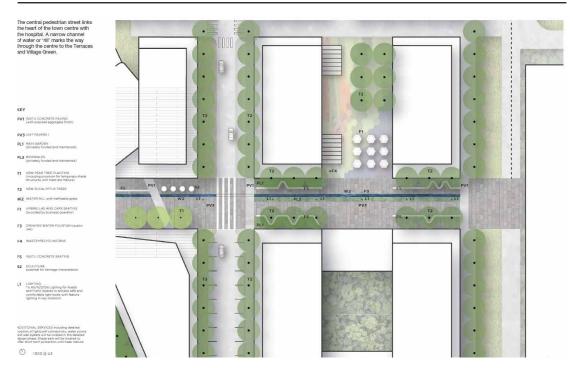
Precedent: Customs House, Sydney



Precedent: Caixa Forum, Madrid (reused building as focal point)



Precedent: Muricia City Hall, Spain



Hospital Link

- 1. The Hospital Link will be a linear space that provides a strong civic connection east-west between the Village Green and Piazza in the west and Northern Beaches Hospital in the east.
- 2. The design of the Hospital Link shall reflect the concept design shown in Figure 8. The Hospital Link will be pedestrianised adjacent to the Piazza but should accommodate shared twoway vehicle access east of Main Street.
- The design of the Hospital Link should allow for a future direct pedestrian connection to the Northern Beaches Hospital.



Precedent: Martin Place, Sydney



Precedent: New Road, Brighton



Precedent: The Goods Line, Sydney



Market Quarter Courtyard

Requirements

- The Market Quarter Courtyard is to be located close to Northern Beaches Hospital, in accordance with Figure 9.
- 2. The design of the Market Quarter Courtyard should provide an intimate and sheltered retail courtyard space away from the streets and the traffic.
- 3. The space will also be an attractive forecourt to any potential underground supermarket located directly to the south.
- 4. Access will be via two grand stairs down into a landscaped courtyard with lush planting and a central reflective water feature.
- Small cafés will activate the edges with spill out seating creating a meeting place for residents.



Precedent: One Central Park, Chippendale, Sydney



Precedent: The Commons, Bangkok



Precedent: Riverlight, London



Precedent: Paley Park, New York

Plan Legend

- 1 Grand stairways leading down into the sunken courtyard
- 2 Pavilion/cafes to activate ground level
- 3 Lower level / sunken courtyard
- 4 Central reflective water feature.
- 5 Active frontage with cafes and outdoor dining
- 6 Access to potential lower ground supermarket

Figure 10
The Boulevard - Illustrative concept plan (Source: CHROFI)



The Boulevard

Requirements

- Frenchs Forest Road West will function as the Boulevard for the Frenchs Forest Town Centre.
- 2. A 7-metre-wide landscaped pedestrian footpath and grand colonnade is to be provided at the town centre along Frenchs Forest Road West.
- 3. This will provide an opportunity for tree planting, outdoor dining, pedestrian walkways, and sufficient space to accommodate bus stops.

Plan Legend

- Corner gateway and under croft space at entrance to Town Centre
- 2 Covered colonnade providing shade for outdoor dining areas
- 3 Shrub and avenue tree planting along the length of Frenchs Forest Road
- 4 Bus Stop location



Precedent: Passeig de Sant Joan, Spain



Precedent: Mission Rock Proposal, San Francisco



Precedent: The Terraces, Sydney



Southern Gateway

Requirements

- The Southern Gateway will connect the Town Centre to the established Frenchs Forest community, south of Warringah Road.
- 2. The Southern Gateway is to be a high quality paved space that creates a high quality pedestrian arrival entry.
- 3. The space will provide improved pedestrian access to bus stops and the pedestrian bridge on Warringah Road.
- 4. The Southern Gateway will feature a signature architectural pavilion which could house community uses or cafe space.
- 5. Buildings are to minimise blanks walls and inactive façades to the Southern Gateway.

Plan Legend

- 1 New link to pedestrian bridge
- 2 Public lift
- 3 Plaza space with shade trees and feature seating
- 4 Feature pavilion building/restaurant space.



Precedent: Cloud Canopy, Federation Square, Melbourne



Precedent: Barangaroo House, Sydney



Precedent: Boos Beach Club Restaurant, Luxembourg



Precedent: Commonwealth Skybar, America



5 Site specific requirements

5.1 Precincts 01 - 04 Town Centre

5.1.1 Applies to land

This control applies to land within Precincts 01-04 as outlined in Figure 12.

Figure 12 Precinct 01-04

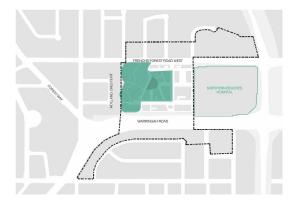




View south over piazza (Source: CHROFI)

5.1.2 Character Statements

Precinct 01: The Civic Heart



Character Statement

The Civic Heart Precinct will serve as the central gathering place of the Frenchs
Forest Town Centre. Centrally located, it will provide a destination for the surrounding residents, workers and visitors. The precinct will be characterised by:

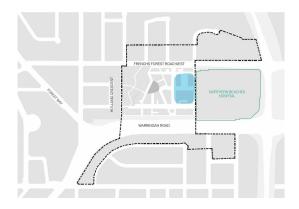
 A large public park that provides a place for informal recreation, community events and integrates water sensitive urban design measures.

- A forest parkland that retains mature trees and provides a green outlook for the Town Centre.
- A central piazza activated by cafes and outdoor dining with potential opportunities for evening activities.
- Community hub to provide for greater social interaction and connectedness.
- Lower building heights adjacent to the central piazza and open space, transitioning to taller buildings east and south of the Civic Heart Precinct.
- Flexible and adaptable buildings that allow for a range of community, education and retail uses.
- A smaller scale street network with pedestrianised promenades and through site links that prioritise pedestrian and cycling accessibility.



View west down Hospital link (Source: CHROFI)

Precinct 02: The Market Quarter



Character Statement

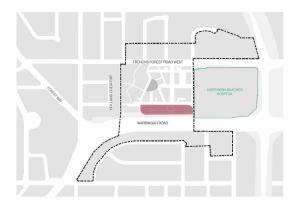
The Market Quarter is the high density mixed use precinct with a focus on local services that will meet the day to day needs of workers, residents and visitors. The precinct will be characterised by:

- Mixed use buildings, up to 12 storeys that provide a high rise urban feel, with ground floor non-residential uses that will meet the day to day needs of workers and visitors to the Northern Beaches Hospital.
- Towers that are slender with appropriate separation to create a sense of openness, enhance views, and are located to minimise bulk, overshadowing and visual impacts.
- A fresh food quarter, underground supermarket and a sunken retail courtyard that is a key attractor and promotes weekend and evening activity.
- A new east-west shared connection lined with retail and business ground floor uses provides direct access from the piazza and Northern Beaches Hospital.
- A direct east-west pedestrian connection to the Northern Beaches Hospital provides direct connection from the Town Centre.



Precinct 03: Commercial Spine

Precedent: 1 Denison Street North Sydney (Source: Bates Smart)



Character Statement

Warringah Road will be a new commercial address for the Frenchs Forest Town Centre. Providing high exposure to Warringah Road, and the opportunity for a variety of commercial uses, the precinct will be characterised by:

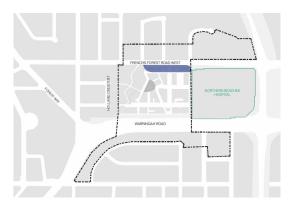
 Flexible and adaptable buildings that allow for a range of commercial uses and support the growth of the centre over time.

- Diverse and high quality architecture promotes Warringah Road as the commercial address for the Town Centre.
- A continuous commercial frontage adjacent to Warringah Road creates a buffer to residential uses within the Town Centre.
- A landscaped buffer retains existing mature vegetation adjacent to Warringah Road to help buffer noise and visual impacts.
- Improved connections to the public transport network, and a fine grain pedestrian and cycle network that promotes walking and cycling;
- Prioritised pedestrian access via through site links to ensure residents located south of Warringah Road have the ability to access the town centre safely and conveniently.



Precinct render (Source: CHROFI)

Precinct 04: The Boulevard



Character Statement

Frenchs Forest Road West will be a vibrant boulevard and important arrival to the town centre, Northern Beaches Hospital and surrounding area. The precinct will be characterised by:

- Medium rise mixed-use apartments (between 5-6 storeys) that are carefully designed to reduce bulk and scale on Frenchs Forest Road West.
- Fine grain active retail frontages with a maximum width of 10 metres, designed to promote active frontages along Frenchs Forest Road West, adjacent to the Northern Beaches Hospital.
- A generous setback provides high quality streetscape amenity with street tree planting, active ground floor frontages, pedestrian and cyclist amenity and adequate room for bus stops.
- A pedestrian focused street with limited vehicular access points from Frenchs Forest Road West. Rear lane servicing ensures a high quality pedestrian environment on Frenchs Forest Road West.

5.1.3 Concept development application

Objectives

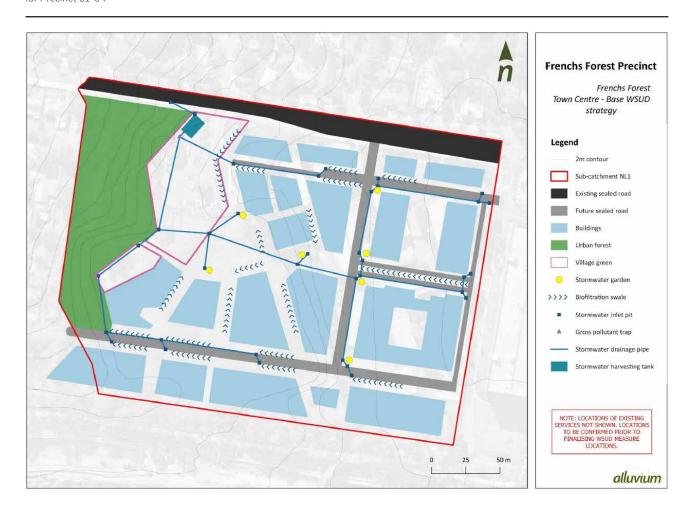
- A. To ensure the orderly development of the town centre and the timely delivery of infrastructure.
- B. To ensure the town centre incorporates the design principles developed for the precinct and facilitates delivery of a low carbon precinct.
- C. To ensure that development is resilient to climate change including reducing the impacts of urban heat island effect.

- A single Concept Development Application (DA) is required to be prepared for Precincts 01 to 04. The following documentation is to be provided as part of the Concept Development Application:
 - 1.1 Public domain layout including open space areas, levels, uses, access and circulation in accordance with Control 4 - Frenchs Forest Town Centre Public Domain;
 - 1.2 A Transport Management Plan that outlines a Green Travel Plan for Precincts 01 to 04 which specifies measures to reduce private vehicle demand and encourage walking, cycling and public transport use. The Green Travel Plan should consider different transport needs for residential and non residential uses and address the themes identified in Councils 'Move Northern Beaches Transport Strategy 2038'.
 - 1.3 A Report, prepared by an Ecological

- Sustainable Development Consultant, addressing the criteria for Green Star Communities rating tool.
- 1.4 Urban Heat Island and Wind Impact Assessment and proposed mitigation strategies.
- 1.5 A Heritage Interpretation Strategy including interpretation of the indigenous and non-indigenous heritage. The strategy should incorporate historical themes relevant to the Frenchs Forest area, including Aboriginal heritage, early settlement patterns and agricultural activities.
- 1.6 Stormwater Drainage and Water Sensitive Urban Design Strategy, in accordance with Council's Guidelines and reference to Figure 13, Control 9 and the Alluvium Frenchs Forest Planning Precinct Water Sensitive Urban Design Strategy (dated December 2019).
- 1.7 Basement Plan showing parking layout, sweep movements, loading zones and waste collection.
- 1.8 Building envelopes.
- 1.9 Development lots and gross floor area distribution (including floorspace allocated for affordable housing).
- 1.10 Location of tower elements and building heights.
- 1.11 Land uses at the ground floor with regard to the mix of uses identified in the Frenchs Forest 2041 Place Strategy.
- 1.12 Staging Plan.

- 2. The concept DA shall be accompanied by a Public Domain Guideline, prepared in accordance with Council's Public Space Vision and Design Guidelines and Control 4 Frenchs Forest Town Centre Public Domain. The Guideline must include the following information and relate to the whole of the town centre site:
 - 2.1 Street design detailed street layout and sections indicating widths of both pedestrian and vehicle areas, alignment levels, materials, electric vehicle charging points, dedicated cycle paths and bicycle parking.
 - 2.2 Tree Planting Strategy including30% tree canopy target and45% for the Town Centre OpenSpace and 30% for the Piazza.
 - 2.3 Signage Strategy and wayfinding palette.
 - 2.4 Pavement and kerb design that incorporates water sensitive urban design.
 - 2.5 Street tree planting schedule.
 - 2.6 Street furniture palette.
 - 2.7 Outdoor dining.
 - 2.8 Street lighting.
 - 2.9 Materials and colour palette, with selections aimed at reducing greenhouse gas emissions and the carbon footprint.
 - 2.10 Heritage Interpretation Strategy.
 - 2.11 Public Art Strategy, which includes a sustainability education awareness focus.

Figure 13Water Sensitive Urban Design Strategy for Precinct 01-04



5.1.4 Street network

Objectives

- A. To provide a hierarchy of new local streets to connect the Frenchs Forest Town Centre to the surrounding street network.
- B. To provide an integrated, functional and legible street hierarchy that encourages sustainable travel behaviour.
- C. To create a robust street network that prioritises active transport.
- D. To ensure new local streets can accommodate buses, increased traffic movements and on-street car parking.

- 1. The new street network, including streets and laneways, is to be provided in accordance with the street network hierarchy in Figure 14. The street network will comprise of the following:
 - 1.1 A new 20m wide north south street (Main Street), to connect from Holland Crescent to Frenchs Forest Road West, and provide the primary entry to the town centre.

- 1.2 Extend Holland Crescent to the east to provide a 20m wide street, connecting to Gladys Avenue South.
- 1.3 Extend Gladys Avenue to the south of Frenchs Forest Road West, to a one-way only, 7m wide access and servicing street, connecting to Holland Crescent.
- 1.4 Provide new east-west streets to improve pedestrian permeability and vehicular servicing within the town centre.
- The new street network is to provide a series of pedestrian laneways, through site links and arcade links to prioritise movement of people throughout the town centre.
- 3. All streets and lanes must be designed in accordance with the street sections shown at Figures 16 23. In addition, footpaths must be designed so that there is a vegetated or permeable buffer between the footpath and road curb to attenuate stormwater flows and remove pollutants.
- 4. All streets, lanes, internal roads and road reserves must remain in private ownership and managed in perpetuity.
- Development is to provide an appropriate mix of on-street parking on all streets to assist the viability of retail uses with street activation.

Figure 14Street network hierarchy



Note: Shared streets are subject to approval from Transport for NSW

5.1.5 Active transport

Objectives

- A. To ensure that development provides for the timely delivery of new streets, paths, and public transport infrastructure.
- B. To encourage walking and cycling for local trips to promote community interaction and reduce local traffic generation.
- C. To create a walking and cycling network that connects to open spaces and existing public transport infrastructure.
- D. To promote walking and cycling paths through public open space and connections to surrounding residential areas.

- Provide pedestrian paths in accordance with Figure 15 to improve walking and cycling connections and connect to the surrounding network.
- 2. Streets are to prioritise pedestrians with low speed traffic lanes and generous street landscaping for amenity and shade.
- 3. Provide a series of east-west and northsouth links that connect the Frenchs Forest Town Centre to bus stops, surrounding residential neighbourhoods and the Northern Beaches Hospital.
- 4. Provide off-road shared paths as part of the open space network, providing a series of connected pedestrian and cycle paths to connect to public open space areas.
- 5. Provide pedestrian footpaths in accordance with the street sections shown at Figures 16-23.

Figure 15Pedestrian Connectivity



Figure 16 Street section - Main Street - 20 metres

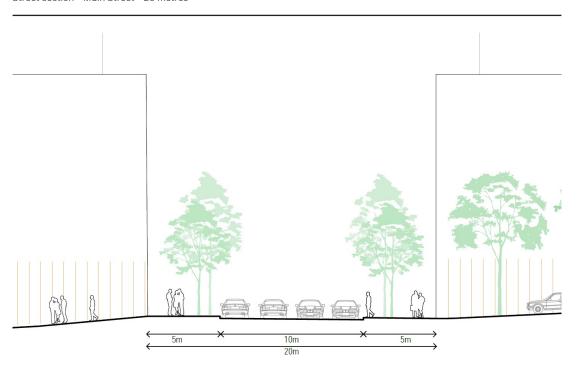


Figure 17 Street section - Holland Crescent - 20 metres

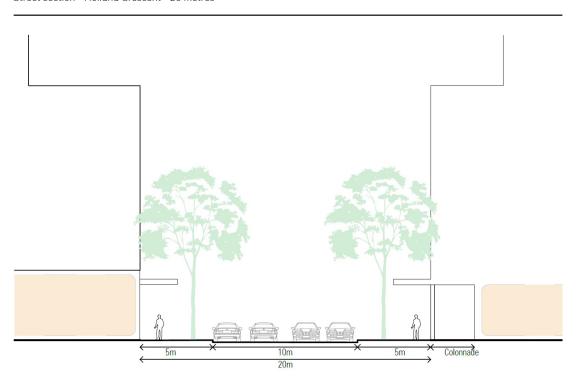


Figure 18Street Section - Frenchs Forest Road West

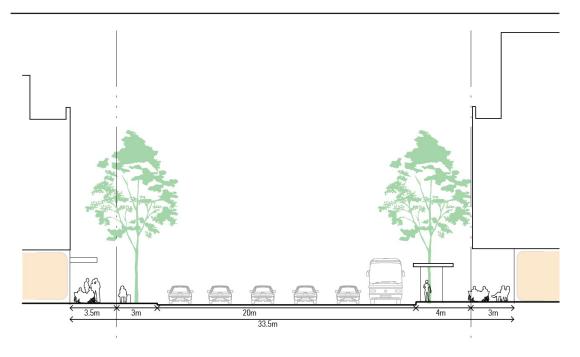


Figure 19 Street section - Market Lane - 12 metres

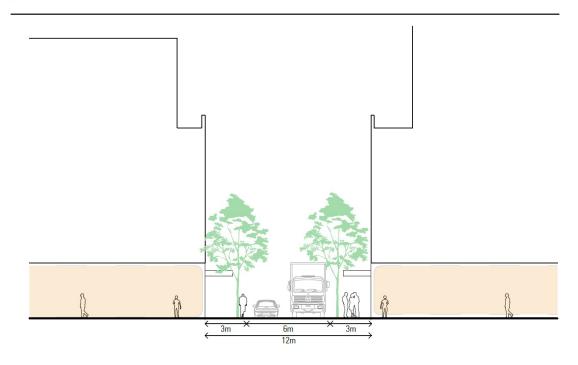
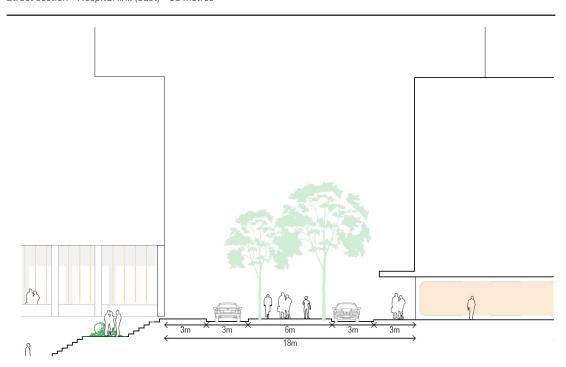


Figure 20 Street section - Piazza Drive - 12 metres



Figure 21 Street section - Hospital link (east) - 18 metres

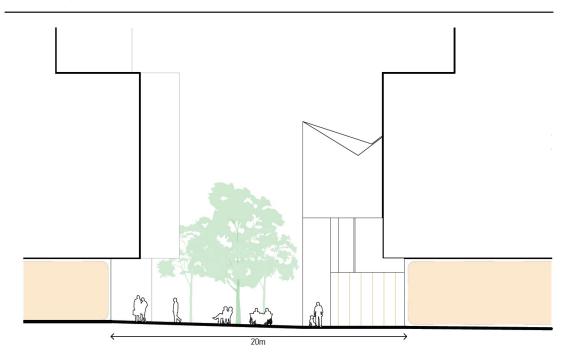


Note : Shared streets are subject to approval from Transport for NSW

Figure 22 Street section - Gladys Avenue South – Shared Zone (one way) - 7 metres



Figure 23
Pedestrian Only Street - Hospital Link West - 20 metres



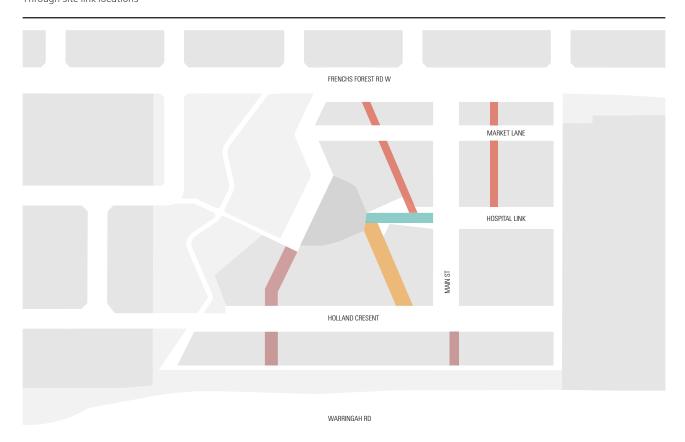
5.1.6 Through site links

Objectives

- A. To promote a walkable, connected and legible Town Centre.
- B. To minimise block length and provide a fine grain pedestrian network.
- C. To encourage pedestrian activity along streets and plazas in conjunction with active edges to support the vitality of Frenchs Forest Town Centre.
- D. To connect and integrate the Town Centre with the surrounding residential areas and public transport network.

- 1. Pedestrian site access and connectivity is to be provided in accordance with Figure 24.
- 2. Additional through-site links are required where the distance between streets and lanes is greater than 80m.
- 3. Through-site links are to be designed to have a minimum width of 6m. Through-site links are permitted to pass through or under a building where the:
 - 3.1 building's height is greater than 3 storeys;
 - 3.2 maximum distance of the link under any structure is 20m; and
 - 3.3 minimum vertical clearance is 9m.
- Encourage active edges and create opportunities for surveillance to through-site links.
- 5. Blank walls or carparking facing through-site links is not acceptable.
- 6. Footpaths must be designed so that there is a vegetated or permeable buffer between the footpath and road curb to attenuate stormwater flows and remove pollutants.

Figure 24 Through site link locations





- Type B: 6m wide. 15m clearance. Maintain clear line of sight from Holland Crescent to Piazza.
- Type C: 6m wide. 9m clearance. 18 hour access.
- Type D: New piazza Open air. 24 hour access.

5.1.7 Building setbacks

Objectives

- A. To ensure buildings reinforce the street edge and enhance the public domain and pedestrian environment.
- B. To ensure spatial separation between buildings and a master planned outcome as identified in the Masterplan.

- 1. Building setbacks are to be provided in accordance with Figure 18.
- 2. Despite Figure 25, for Precinct 04, the ground level of buildings on Frenchs Forest Road West is to be setback at least 3m from the public footpath to provide a colonnade and improve pedestrian amenity, landscaping and reinforce its role as 'The Boulevard'.
- 3. For Precinct 01, buildings directly adjacent to the piazza are to have a nil setback to enable retail spill-out and activation of the area and maintain solar access to the piazza in accordance with Control 5.1.12.

- 4. For Precinct 03, the 3.5m setback to Warringah Road is to be landscaped to enhance the existing mature vegetation along Warringah Road. Landscaped areas shall allow areas for pedestrian access and avoid obscuring or concealing points of entry.
- 5. If setbacks are not identified in Control 5.1.7, setbacks will be determined on a merit basis and will have regard to:
 - 5.1 Streetscape;
 - 5.2 Desired Future Character and Character Statement:
 - 5.3 Amenity of surrounding properties; and
 - 5.4 Setbacks of neighbouring properties.
 - 5.5 Buildings are to be designed to allow for, and to be integrated with, through site links as shown in Figure 24.

Figure 25Building setbacks



Nil

3.5m

5.1.8 Podium and tower heights and setbacks

Note: Podium refers to the built form element that anchors the tower, creates the street wall, and defines the pedestrian experience at the street. The built form addresses the street frontage from the ground level (existing) up to the first building setback. On corner lots, the podium shall be located to front or address both streets.

Note: Tower refers to the built form element set back above the podium and is the most substantial part of the building, which enhances the skyline and public domain. The built form maximises views and access to sunlight through slender floorplates and spacious setbacks between towers.

Note: When interpreting podium and tower heights in Figure 26, the podium is considered the building with the lesser height. The tower is considered the building with the taller height and identifies the maximum number of storeys that can be achieved for the built form.

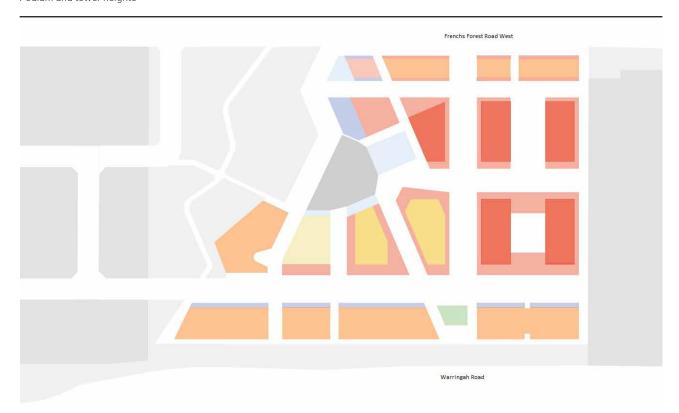
Objectives

- A. To ensure that building heights achieve the Desired Future Character and Character Statement for each Precinct, to reinforce the identity of the Frenchs Forest Strategic Centre.
- B. To ensure buildings stay below the airspace requirements for the Northern Beaches Hospital.

- C. To ensure that a range of building heights is achieved and that these provide an appropriate transition to surrounding residential areas.
- D. To create podium heights and built form edges that front or address the public domain and enhance pedestrian amenity with adequate daylight, appropriate scale, a sense of enclosure and wind mitigation.
- E. To ensure that buildings are appropriately setback above podiums and building heights transition in the streetscape.
- F. To reduce overshadowing, building bulk and visual impact of buildings to streets, open spaces and the public domain.

- 1. Podium and tower heights are to be in accordance with Figure 26.
- Any built form above the podium is to be setback from the building edge in accordance with Figure 27. If setbacks are not identified in Figure 27, setbacks will be determined on a merit basis and have regard to:
 - 2.1 Streetscape;
 - 2.2 Desired Future Character and Character Statement;
 - 2.3 Amenity of surrounding properties; and
 - 2.4 Setbacks of neighbouring properties.

Figure 26Podium and tower heights



- 12 Storeys
- 11 Storeys
 - 10 Storeys
- 6 Storeys
- 5 Storeys
- 4 Storeys
- 3 Storeys 2 Storeys

5.1.9 Podium and tower design

Objectives

- A. To reduce the bulk and scale of towers and ensure they are slender, well separated and provide an appropriate scale transition to the street.
- B. To enhance the quality of the public domain in terms of wind mitigation and daylight access.
- C. To enhance the amenity of occupants in buildings in terms of daylight, outlook, view sharing, ventilation, wind mitigation, and privacy.
- D. To promote the design and development of sustainable buildings.

- Podiums shall be located to front or address the street. On corner lots, the podium shall be located to front or address both streets and the building façade is to incorporate an architectural treatment that emphasises the corner element.
- The podium must include a ground floor lobby which addresses the street frontage to allow access to land uses within the tower element.
- 3. Areas of the podium roof are to provide outdoor space which is open to the sky to deliver casual surveillance. Where the provision of outdoor space is not possible, landscaping is to be provided to improve visual amenity and reduce the heat island effect. Photovoltaic (PV) panels may be located on the podium roof provided that the space is open to the sky, considers safety issues and the location of mechanical plants.

- Setbacks above the podium are to be emphasised through a change in architectural expression, material selection and design elements. Articulated building facades are to be provided.
- 5. Towers identified in Figure 28:
 - 5.1 Are to be slender to reduce visual impacts with a maximum building footprint of 800m2 gross floor area (excludes balconies) and a maximum length of 45m;
 - 5.2 Must include articulation over their length with regular vertical breaks in the building, limiting the overall mass and sense of scale from the public domain;
 - 5.3 Are to be aligned north-south to maximise solar access and minimise overshadowing; and
 - 5.4 Are to be provided with a minimum separation distance from adjacent towers of 24m to provide views, a sense of openness, and a high-quality public domain.
- 6. Where roof tops of towers do not contain photovoltaic (PV) panels, at least 30% of the roof space is to be provided as a green roof or garden. The location of the green roof or garden must consider safety issues and the location of mechanical plants.
- 7. For new development, the colour selection must reflect the dominant natural colour of the surrounding landscape.

Figure 27Tower setbacks

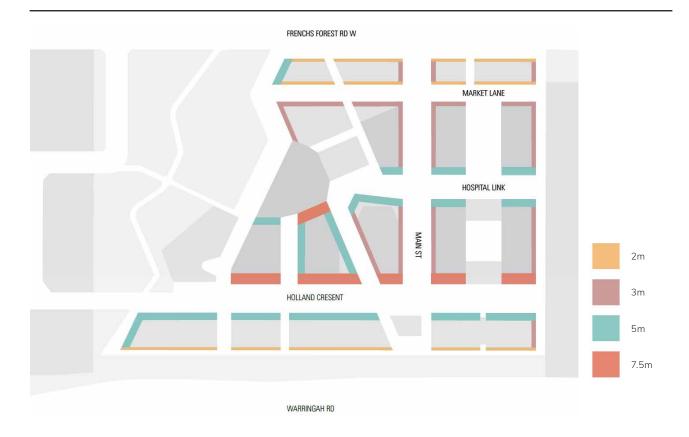
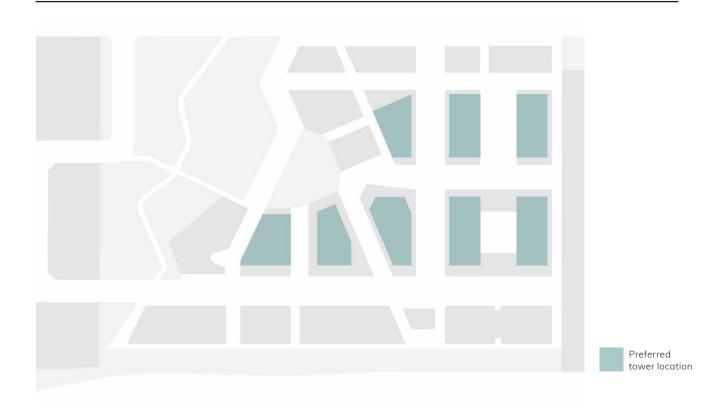


Figure 28 Towers



5.1.10 Additional requirements for Precinct 02 5.1.11 Additional requirements for Precinct 03

Objectives

A. To ensure the built form delivers the Desired Future Character and Character Statement for the precinct.

Requirements

- 1. Development must provide an underground supermarket and sunken retail courtyard with landscaping and a central reflective water feature.
- 2. Pedestrian access to the retail courtyard is to comprise at least two stair cases.

Note: Reference should be made to Control 5.1.16 for requirements on basement design

Objectives

- A. To ensure the built form delivers the Desired Future Character and Character Statement for the precinct.
- B. To provide viable and usable commercial floor space.
- C. To promote daylight access into building interiors and improve the quality of the indoor environment.
- D. To promote the design and development of sustainable buildings.

- 1. Buildings are to have continuous frontages to maintain and enhance streetscape appearance.
- 2. Development that proposes office floor space must ensure that no area of office floor space is more than 10 metres from a source of daylight (eg. windows, atria or light wells).
- 3. Buildings are to be designed to allow for, and to integrate with, through site links as shown in Figure 24.
- 4. Green roofs on roof tops are required.

5.1.12 Active frontages

Objectives

- A. To provide active, engaging and vibrant streets that encourages community activity, safety and surveillance.
- B. To encourage fine grain retail and a diversity of non-residential ground floor uses to promote street activation.
- C. To achieve the Desired Future Character and Character Statement for each precinct.

- 1. Active frontages are to be provided in accordance with Figure 29.
- Primary active streets in accordance with Figure 29 are to provide small scale shop fronts with a maximum street frontage of 10m. Blank walls are not permitted.
- 3. Edges of the piazza are to be activated as primary active frontages, except where it abuts a road or area of public open space.
- 4. Secondary active streets in accordance with Figure 29 are to provide street frontages up to a maximum of 20m and include a minimum of 75% of transparent glazing.

- 5. Primary commercial streets in accordance with Figure 29 are to include retail and commercial uses, with separate identifiable residential lobbies. Blank walls are not permitted.
- Buildings fronting active streets in accordance with Figure 29 must be designed to allow for flexible ground floor uses with a minimum floor to floor height of 4.5m for the ground level and 3.6m for the first floor above.
- The ground floor must be at the same general level as the footpath and directly accessible from the street.
- 8. Continuous awnings or colonnades are to be provided on primary active, secondary active and primary commercial streets in accordance with Figure 29.
- Design service cabinets or utility services are not to be located on active frontages in accordance with Figure 29. Where not possible, design service cabinets or utility services are to blend in with the architectural design of the building.

Figure 29 Active frontages



- Primary active street 0-10m Frontage, no blank walls
- Secondary active street 10-20m frontage, walls to be 75% transparent
- Primary commercial street Retail + commercial street premises, no blank walls

5.1.13 Solar access

Objectives

- A. To provide high amenity open space areas, with excellent solar access at all times of the year.
- B. To ensure new development does not result in a deterioration of direct sunlight access to public spaces.

Requirements

- 1. Solar access must be provided to 20% of the Piazza between 8.30am and 10.30am on 21 June.
- 2. A minimum of 4 hours of solar access must be provided to 70% of the total area of public open space comprising the Village Green, Forest Parkland and Piazza, on 21 June between 9am and 3pm.

5.1.14 Signage

Objectives

- A. To ensure that signage contributes to the Desired Future Character and Character Statement of the Precincts.
- B. To promote signage that is well designed and located, and contributes positively to the appearance of buildings, streetscapes and public domain.

- 1. An overarching signage strategy to be prepared as part of the Concept Development Application required at Control 5.1.3. The strategy must include (but is not limited to) guidance on theme and character; signage design and location; materials, finishes and colours; illumination of signage, particularly in relation to residential amenity, and streetscape and open space requirements.
- 2. Signage must not protrude above the roof, awning and/or colonnade.

5.1.15 Noise and Vibration

Objectives

- A. To achieve a balance between residential amenity and the operational and functional needs of businesses.
- B. To protect residential uses from future noise and/or vibration as the precinct continues to grow to accommodate more residents, workers and visitors.
- C. To support the emergence of a night-time economy and a safe, vibrant and active precinct.

- For new development, a Noise Impact
 Assessment prepared by a suitably
 qualified acoustic consultant is required.
 Noise attenuation measures shall
 demonstrate that residential uses can
 withstand an external noise level of 55
 decibels. Consideration should be given to
 the impact of land uses which facilitate late
 night trading, entertainment and events in
 the public domain on residential amenity.
- The location and design of noise generating activities, such as loading and unloading areas, garbage collection areas, driveways, parking areas, active recreation areas, air conditioning or mechanical plants, must be sited away from any adjacent sensitive land uses and/ or screened by acoustic treatments.
- 3. In mixed use development that includes residential accommodation, non-residential components of the development must be designed to moderate the impact of noise generated by business operations.

5.1.16 Parking, basement design and basement access

Objectives

- A. To ensure on-site car parking is provided underground in order to improve and enhance the public domain.
- B. To minimise the size and quantity of vehicle and service crossings to reduce pedestrian and vehicular conflict and reinforce a pedestrian friendly street.
- C. To ensure car parking areas are safe and address the needs of building occupants.

- 1. Parking rates shall be provided in accordance with Control 6.
- 2. Parking is to be provided underground.
- 3. Where the topography of the land results in the basement parking level projecting above ground level, it is to be designed to:
 - 3.1 not project more than 1m above ground; and
 - 3.2 achieve an attractive ground level relationship between the building and the public domain, with generous vegetation screening.
- 4. Parking, servicing and loading shall be accommodated internally within the building and screened from the street.
- 5. Basement entries are to be provided in accordance with Figure 23.
- Basement entries are prohibited from Frenchs Forest Road West, Main Street and land adjoining the Piazza.

- All driveways must be located a minimum perpendicular distance of 6m away from any intersection.
- 8. A Loading Dock Management Plan must be provided. This should identify locations for waste collection, truck turning and maneuvering areas, and electric charging stations to facilitate the potential for electric and last mile delivery vehicles.
- 9. Vehicular access is to be designed to:
 - 9.1 Separate and clearly differentiate pedestrian and vehicle access;
 - 9.2 Minimise the size, quantity and visual intrusion of vehicle access points on the streetscape;
 - 9.3. Ensure that waste collection is undertaken from a Loading Dock; and
 - 9.4 Allow for a Probable Maximum
 Flood Level plus freeboard of at
 least 0.3m for the underground
 supermarket in Precinct 02. The
 upstream catchment flows are to be
 diverted away from the entrance.
- 10. Basement Plans are to identify areas for storage. Storage facilities shall be lockable, located in secure areas of the basement and clearly allocated to specific apartments with appropriate storage size volumes per bedroom.

Figure 30Basement locations and entry points



Basement location

Basement entry locations

5.1.17 Public domain

Objectives

A. To deliver an integrated town centre with a variety of new public spaces that allow social interaction and are safe..

Requirements

- 1. All development is to be consistent with Control 4.
- 2. Mail boxes shall not dominate the streetscape and ensure that:

- 2.1 Key lockable mail boxes are provided;
- 2.2 They are located adjacent to a building entry foyer that has street frontage (in accordance with any requirements of Australia Post);
- 2.3 The mail box collection area must be from within the building foyer or other area which is only accessible to residents or building occupants; and
- 2.4 The mail box collection facility must be in view of video surveillance.

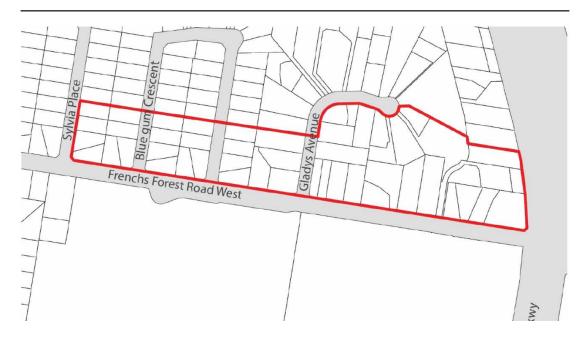
Note: Reference should be made to Part D20 for requirements on safety and security

5.2 Precinct 05 - Frenchs Forest Road West Neighbourhood

5.2.1 Applies to land

This control applies to land within Precinct 05 as outlined in Figure 31.

Figure 31
Precinct 05

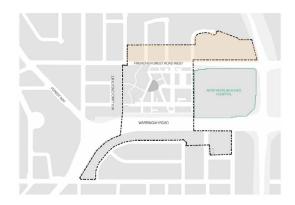




Precinct render (Source: CHROFI)

5.2.2 Character Statement

Precinct 05: Frenchs Forest Road West Neighbourhood



Character Statement

The Frenchs Forest Road West Neighbourhood will provide a contextually appropriate interface to surrounding low density residential areas, whilst increasing housing diversity and activating Frenchs Forest Road West with a range of health, office and medical uses to support the town centre and Hospital. The precinct will be characterised by:

- High quality medium rise apartment buildings, up to 6 storeys to create a new urban residential character to the north of Frenchs Forest Road West.
- Mixed use buildings with a range of ground floor uses, located directly opposite the town centre on Frenchs Forest Road West to create an active and engaging streetscape.
- Non-residential ground floor uses along Frenchs Forest Road West, including medical and health related uses, supporting the Northern Beaches Hospital.
- A pedestrian focused street at Frenchs
 Forest Road West to deliver a high quality
 streetscape on Frenchs Forest Road West.

5.2.3 Building setbacks

Objectives

- A. To provide a consistent streetscape along Frenchs Forest Road West in order to achieve the Desired Future Character and Character Statement for the Precinct.
- B. To provide landscaped streetscapes consistent with those of adjacent low-density residential areas for all street frontages other than Frenchs Forest Road West.
- C. To ensure spatial separation between buildings that will provide an appropriate interface to adjoining low density residential areas.

Requirements

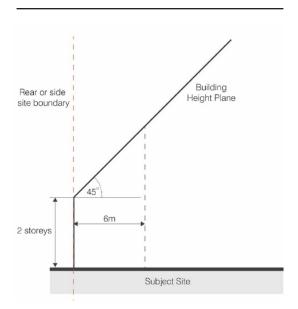
Front setbacks

- A 3.5m setback is to be provided on the northern side of Frenchs Forest Road West. The front setback is to be finished with high quality materials and an active pedestrian frontage across Frenchs Forest Road West.
 - The front setback must not be used for car parking or vehicular access.
- Development with a frontage to Sylvia Place, Bluegum Crescent and Gladys Avenue must be setback a minimum of 6.5m.
- 3. Building setbacks from street frontages are to be landscaped and free of any structures, basements, car parking or site facilities other than driveways, mail boxes, garbage storage areas and fences.

Side and rear setbacks

- Development with frontage to Frenchs Forest Road West shall have a nil side setback to ensure a continuous frontage to the street.
- 2. A minimum setback of 15m is required from Wakehurst Parkway.
- 3. Development adjacent to the R2
 Low Density Residential and RE1
 Public Recreation Zone must provide
 a minimum setback of 6m from the
 side or rear property boundary for the
 first 2 storeys. Development above
 2 storeys is to be set back within a
 45-degree angle, projected from a
 height of 2 storeys. Refer to Figure 32.

Figure 32Residential setbacks



5.2.4 Street wall and upper floor setbacks

Objectives

A. To reduce bulk and scale of buildings, minimise streetscape impacts and provide an appropriate scale transition to adjoining low density residential development.

Requirements

- Development fronting Frenchs Forest Road West shall have the fifth floor set back at least 3m from the street wall.
- 2. Development fronting Frenchs Forest Road West and adjoining the rightof-way accessible off Frenchs Forest Road West (known as Bantry Bay Track) shall have the sixth floor set back at least 3m from the street wall.
- Developing fronting Gladys Avenue shall have the fourth floor set back at least 3m from the street wall.
- 4. Despite Requirement 3, any portion of a building within 12m of R2 Low Density Residential zoned land must be no more than 2 storeys.
- 5. Any portion of a building within 12m of RE1 Public Recreation zoned land must be no more than 3 storeys.

Note: Street wall refers to the built form that addresses the street frontage from the ground level up to the first building setback.

5.2.5 Building design

Objectives

- A. To reduce the bulk and scale and ensure buildings are well separated and provide an appropriate scale transition to the street.
- B. To achieve a consistent built form along Frenchs Forest Road West.
- C. To enhance the quality and safety of the public domain
- D. To enhance the amenity of occupants in buildings in terms of daylight, outlook, view sharing, ventilation, and privacy.
- E. To promote the design and development of sustainable buildings.

- Development shall be located to front or address the street. On corner lots, the buildings shall be located to front or address both streets.
- Upper floors above the street wall are to be emphasised through a change in architectural expression, material selection and design elements.
- 3. Building facades are to be articulated into smaller elements or distinctive treatments, at a scale or grain that reflects:
 - 3.1 Different uses and/or components of the building;
 - 3.2 The residential entries and/or lobby; and
 - 3.3 The podium and upper levels of the building.

- 4. Mail boxes shall not dominate the streetscape and ensure that:
 - 4.1 Key lockable mail boxes are provided;
 - 4.2 They are located adjacent to a building entry foyer that has street frontage (in accordance with any requirements of Australia Post);
 - 4.3 The mail box collection area must be from within the building foyer or other area which is only accessible to residents or building occupants; and
 - 4.4 The mail box collection facility must be in view of video surveillance.

Note: Reference should be made to Part D20 for requirements on safety and security

5.2.6 Site consolidation

Objectives

- A. To ensure that the size of new allotments caters for a variety of dwelling and household types and permits adequate solar access, areas for open space, landscaping and car parking.
- B. To ensure that new development achieves the Desired Future Character and Character Statement for the Precinct.

Requirements

- Proposed lots must have dimensions to enable the siting and construction of a buildings that:
 - 1.1 Protect any natural site features;
 - 1.2 Address the street;
 - 1.3 Minimise the impact on neighbours' amenity including access to sunlight, daylight, privacy and views;
 - 1.4 Provide usable outdoor open space;
 - 1.5 Provide activities for relaxation, recreation, outdoor dining and children's play areas; and
 - 1.6 Provide convenient pedestrian, bicycle, motor vehicle access and parking.
- Shop top housing, residential flat buildings, multi dwelling housing and attached dwellings must have a street frontage.
- 3. Should a development result in an isolated lot, the applicant must demonstrate that the isolated lot is capable of being reasonably developed without detracting from the character of the surrounding area.

5.2.7 Materials and finishes

Objectives

- A. To contribute positively to the streetscape and provide a high-quality architecture and robust selection of materials and finishes.
- B. To encourage materials and finishes that contribute to local character.

- External materials and finishes should appear to be natural, with subdued natural and dark coastal colours.
 Brighter colour accents are permitted.
- 2. The dominant use of smooth shiny surfaces such as glass, metallics and plastics should be avoided.

5.2.8 Landscaped area

Objectives

- A. To ensure that new development achieves the Desired Future Character and Character Statement for the precinct.
- B. To retain existing trees, encourage new tree plantings and maximise deep soil areas.
- C. To ensure communal open space minimises amenity impacts to adjoining neighbours.

Note: To measure the area of landscaped area:

- a) Driveways, paved areas, roofed areas, tennis courts, car parking and stormwater structures, decks etc. and any open space areas with a dimension of less than 2m are excluded from the calculation;
- b) The water surface of swimming pools and impervious surfaces which occur naturally such as rock outcrops are included in the calculation;
- c) Landscaped areas must be at ground level (finished); and
- d) The minimum soil depth of land that can be included as landscaped area is 1m.

- For all residential flat building developments, landscaped area is to be at least 45% of the site area.
- Development must retain and protect any significant trees on the site and adjoining sites. Any tree removal will require offset planting at a ratio of 2 to 1.
- 3. Canopy trees must be planted within the front setback of residential flat buildings.
- 4. Building setbacks are to be landscaped and generally free of any structures, basements, car parking or site facilities other than driveways, mail boxes, garbage storage areas and fences.
- 5. Communal open space shall be located to minimise impact on adjoining neighbours' amenity including privacy and noise.

5.2.9 Active frontages

Objectives

- A. To encourage a range of nonresidential ground floor uses to promote street activation.
- B. To define areas where active streets are required or desirable.
- C. To achieve the Desired Future Character and Character Statement for the Precinct.

- Active frontages are to be provided for development with frontage to Frenchs Forest Road West and zoned B4 Mixed Use development. This is to be achieved by:
 - 1.1 Providing street frontages with a minimum width of 10m and maximum width of 20m; and

- 1.2 Providing clear glazing to promote passive surveillance and public art (if the estimated construction cost is greater than or equal to \$10 million), to contribute to street activity. Where not possible, a minimum of 75% of transparent glazing is permitted; and
- 1.3 Providing flexible ground floor uses with a minimum floor to floor height of 3.6m.
- 2. Continuous awnings are to be provided along Frenchs Forest Road West.
- 3. Design service cabinets or utility services are not to be located on active frontages in accordance with Requirement 1. Where not possible, design service cabinets or utility services are to blend in with the architectural design of the building.

5.2.10 Parking, basement design and basement access

Objectives

- A. To ensure on-site car parking is provided underground in order to minimise the visual impact on the public domain.
- B. To minimise the size and quantity of vehicle and service crossings to retain streetscape amenity and reinforce a high-quality public domain.
- C. To ensure car parking areas and the access to these are safe and address the needs of building occupants.

- 1. Parking rates shall be provided in accordance with Control 6.
- Parking, servicing and loading shall be accommodated internally within the building and screened from the street.
- Basement car parking and servicing areas are to be consolidated under building footprints to maximise the site area available for deep soil planting.

- 4. Vehicular access is prohibited from Frenchs Forest Road West and Wakehurst Parkway. This includes all vehicular access points for loading and unloading, garbage and recycling services and building services generally.
- 5. Despite Requirement 4,
 - 5.1 The existing right-of-way accessible via Frenchs Forest Road West between Nos. 112 and 114 Frenchs Forest Road West (Bantry Bay Track) must remain accessible at all times and;
 - 5.2 Alternative vehicular access points may be considered for lots east of Bantry Bay Track. This may require concurrence from Transport for NSW.
- 6. Basement entries are to be provided from secondary streets, lanes or shared driveways.
- All driveways must be located a minimum perpendicular distance of 6m away from any intersection.
- 8. Vehicular access is to be designed to:
 - 8.1 Separate and clearly differentiate pedestrian and vehicle access;
 - 8.2 Minimise the size, quantity and visual intrusion of vehicle access points on the streetscape; and
 - 8.3. Ensure that basement entries have an appropriate clearance height that is capable to allow for internal waste collection (where applicable).
- Basement Plans are to identify areas for storage. Storage facilities shall be lockable, located in secure areas of the basement and clearly allocated to specific apartments with appropriate storage size volumes per bedroom.

5.3 Precinct 06 - Karingal Crescent Neighbourhood

5.3.1 Applies to land

This control applies to land within Precinct 06 as outlined in Figure 33.

Figure 33 Precinct 06

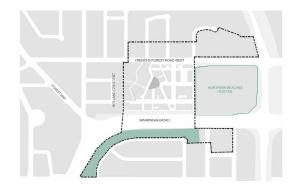




Precedent: Putney Hill (Source: Cox Architecture)

5.3.2 Character Statement

Precinct 06: Karingal Crescent Neighbourhood



Character Statement

The Karingal Crescent Neighbourhood promotes low-rise medium density housing, carefully designed to create a new edge to the town centre and integrate with the existing residential neighbourhood. Diverse housing types within walking distance of the town centre will encourage a walkable residential neighbourhood. The precinct will be characterised by:

- High quality, low-rise medium density housing developments, up to 3 storeys to enhance the established residential character along Karingal Crescent.
- Dual occupancies, semi-detached and attached dwellings to increase housing within walking distance of the town centre and Bantry Bay Neighbourhood Centre, promoting walking for local trips.
- Compact housing types create a new edge to Warringah Road, with landscaped setbacks and north facing rear gardens providing amenity and outlook for residents.
- Landscaped front setbacks, retention of existing trees and new tree plantings to integrate new development into the streetscape.

5.3.3 Building setbacks

Objectives

- A. To maintain the existing visual continuity and pattern of residential buildings' street setbacks, rear gardens and landscape elements in order to achieve the Desired Future Character and Character Statement for the precinct.
- B. To ensure spatial separation between buildings in order to provide a reasonable level of privacy, amenity and solar access.
- C. To ensure opportunities for deep soil landscape areas are provided.
- D. To ensure that buildings are appropriately setback at upper levels to achieve a transition in building bulk and scale at street frontages and at interfaces to adjoining low density residential areas.

Requirements

1. Building setbacks are to be provided in accordance with Figures 34 and 35.

Front setbacks

- 2. Provide a consistent front setback of 5m. Existing mature trees are to be retained, where possible.
- Building setbacks from street frontages are to be landscaped and free of any structures, basements, car parking structures or site facilities other than driveways, mail boxes, garbage storage areas and fences.

Side and rear setbacks

- 4. Provide a minimum side setback of:
 - 4.1 1m for dual occupancies and semi-detached dwellings
 - 4.2 1.5m for attached dwellings.
- 5. Provide a minimum rear setback of 8m to Warringah Road. Existing mature trees are to be retained, where possible.

Upper floor setbacks

6. The third storey is to be setback a minimum of 3m from the street wall.

Note: Street wall refers to the built form that addresses the street frontage from the ground level up to the first building setback.

5.3.4 Site consolidation

Objectives

- A. To ensure that the size of new allotments caters for a variety of dwelling and household types and permits adequate solar access, areas for open space, landscaping and car parking.
- B. To ensure that new development achieves the Desired Future Character and Character Statement for the Precinct.

Requirements

- 1. All dwellings must have direct street frontage.
- 2. Dual occupancies must be attached and configured side by side.
- The layout of the development must not result in a "gun barrel" form (e.g. long perpendicular driveways flanked by dwellings with no street address).

- 4. The maximum number of attached dwellings in a row is 6. Development is to provide a 1.5m landscaped break between 6 dwellings.
- 5. Proposed lots must be of a size, and have dimensions to enable, the siting and construction of a dwelling that:
 - 5.1 Addresses the street;
 - 5.2 Minimises the impact on neighbours' amenity including access to sunlight, daylight, privacy and views;
 - 5.3 Provides usable outdoor open space; and
 - 5.4 Provides convenient pedestrian, bicycle, motor vehicle access and parking.

Figures 34 and 35 illustrate the minimum frontage requirements, setbacks and dimensions for development.

Figure 34Dual occupancy (attached) and semi-detached dwellings

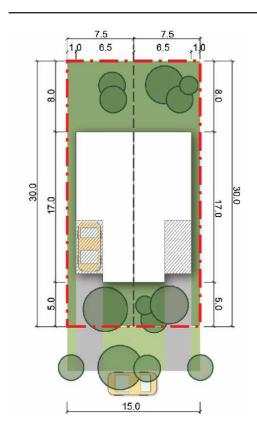
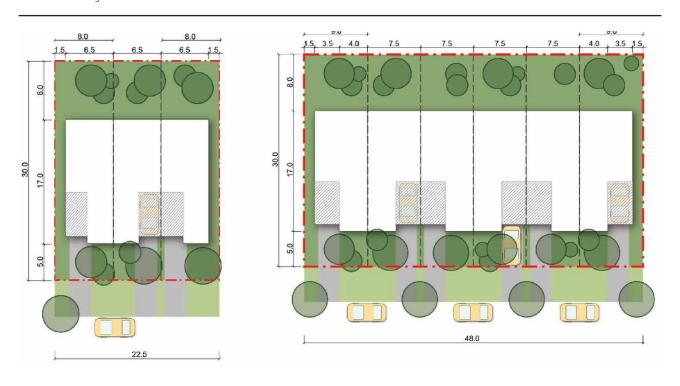


Figure 35Attached dwellings



5.3.5 Landscaped area

Objectives

- A. To ensure that new development achieves the Desired Future Character and Character Statement for the Precinct.
- B. To retain existing trees, support consolidation of mature vegetation and maximise deep soil areas.

Note: To measure the area of landscaped area:

- a) Driveways, paved areas, roofed areas, tennis courts, car parking and stormwater structures, decks etc. and any open space areas with a dimension of less than 2 metres are excluded from the calculation;
- The water surface of swimming pools and impervious surfaces which occur naturally such as rock outcrops are included in the calculation;
- c) Landscaped areas must be at ground level (finished); and
- d) The minimum soil depth of land that can be included as landscaped area is 1 metre.

Requirements

- The minimum amount of landscaped area and/or deep soil is to be 30% of the site area.
- 2. Development must retain and protect any significant trees on the site and adjoining sites. Any tree removal will require offset planting at a ratio of 2 to 1.
- 3. Canopy trees with a minimum maturity height of 5m must be planted within the front setback.
- 4. Canopy trees with a minimum maturity height of 8.5m must be planted within the rear setback.

5.3.6 Private open space

Objectives

- A. To ensure that new development has appropriately sized private open space to enhance residential amenity.
- B. To ensure private open space is appropriable located to maximise solar access and useability.

- 1. Private open space is located at the rear of the site and must not include the front setback.
- 2. Principal private open space is located adjacent to a living room, dining room or kitchen.

5.3.7 Materials and finishes

Objectives

- A. To contribute positively to the streetscape and provide a high-quality architecture and robust selection of materials and finishes.
- B. To encourage materials and finishes that contribute to local character.

Requirements

- External materials and finishes should appear to be natural, with subdued natural and dark coastal colours.
 Brighter colour accents are permitted.
- 2. The dominant use of smooth shiny surfaces such as glass, metallics and plastics is not permitted.

5.3.8 Roof design

Objectives

A. To ensure that roof design contributes to the visual interest of the building and reflects the Desired Future Character and Character Statement for the Precinct.

Requirements

- 1. Roof design is to complement the overall architectural intent of the building and not significantly impact on the streetscape.
- 2. Roof forms shall be articulated and incorporate multi-planar elements to ensure a varied roofscape.

5.3.9 Front fences and front walls

Objectives

A. To ensure that front fences and walls do not dominate the public domain.

- 1. Front fences and front walls are to be no greater than 1.2m in height.
- 2. Hedges to a height of 1.2m may be provided as soft boundary edges.

5.3.10 Parking, parking design and parking access

Objectives

- A. To provide a consistent streetscape pattern of building form and articulation.
- B. To ensure that vehicle parking and site access facilities do not visually dominate development and the streetscape.

- Parking rates shall be provided in accordance with Control 6, except when development is dual occupancy (attached), attached dwelling and/or semi-detached dwelling when a maximum of 2 car spaces (1 per dwelling) applies.
- Garages, carports and other parking structures including hardstand areas must not be the dominant site feature when viewed from a public place.
- Vehicular access is prohibited from Warringah Road. This includes all vehicular access points for garbage and recycling services. Driveways should be located on the side boundary to allow sufficient space for on-street car parking and reduce visual prominence.

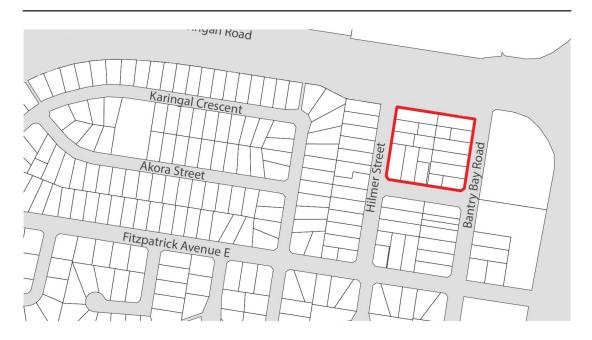
- 4. Garages presenting to a street frontage shall not exceed 3.5m in width.
- 5. Garages must be setback a minimum of 1.5m behind the building line.
- 6. A single car parking space (i.e. not within a garage or carport or other structure) may be located between the primary street frontage and the building line, but only if:
 - 6.1 The parking space is uncovered
 - 6.2 Porous materials are used for the parking space's surface.
 - 6.3 Landscape and deep soil requirements are met.
- 7. Garage doors and gates should be of timber or simple metal cladding.

5.4 Precinct 07 - Bantry Bay Neighbourhood Centre

5.4.1 Applies to land

This control applies to land within Precinct 07 as outlined in Figure 36.

Figure 36 Precinct 07

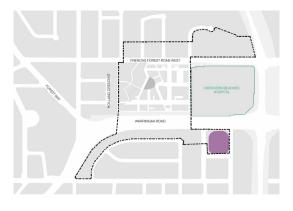




Precedent: Tram Sheds (Source: Mirvac)

5.4.2 Character Statement

Precinct 07: Bantry Bay Neighbourhood Centre



Character Statement

The Bantry Bay Neighbourhood Centre will be an important part of the local community. New local shops will activate Bantry Bay Road and Brick Pit Reserve, while renewal of this area will provide opportunities to celebrate the area's rich history through the interpretation of the Former Hews' Residence. The precinct should be characterised by:

- New neighbourhood shops to provide for the day to day needs of residents living to the south of Warringah Road.
- Re-imagining and celebrating the social significance of the Former Hews' Residence through interpretation. The use of materials and landscaping will provide a connection to the past.
- Ground floor retail uses will activate Bantry Bay Road and Brick Pit Reserve.
- High quality medium rise apartment buildings, up to 5 storeys that integrate with the neighbourhood shops.
- Widened footpaths, street planting and great local streets that bring the community together.
- New tree planting along Warringah Road will improve amenity and provide an outlook to green space.

5.4.3 Site consolidation

Objectives

- A. To encourage lot consolidation to achieve the Desired Future Character and Character Statement for the precinct.
- B. To avoid lot sterilisation.

- 1. Development shall result in amalgamated sites in accordance with Figures 37 and 38.
- 2. Development shall not result in adjacent allotments that have areas or dimensions, or are constrained in other ways, that would render such allotment(s) incapable of being developed in accordance with Warringah Local Environmental Plan.
- 3. Lots are to be consolidated where necessary to ensure the development of one allotment will not render an adjoining one unsuitable for future development.

Figure 37
Amalgamated lots indicated by red outline

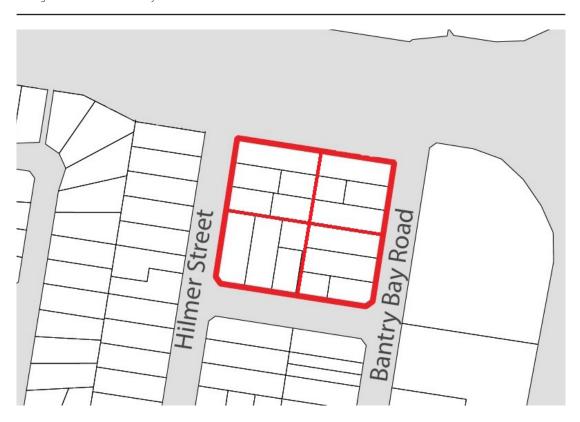
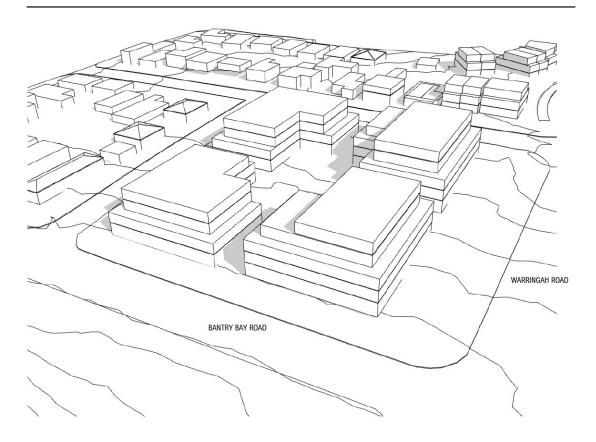


Figure 38 Explanatory diagram showing desired amalgamation pattern



Note: Built form is for illustrative purposes only

5.4.4 Building setbacks

Objectives

- A. To achieve the Desired Future Character and Character Statement for the Precinct.
- B. To ensure spatial separation between buildings in order to provide good amenity to residents, workers and visitors.
- C. To achieve a continuous built form along Bantry Bay Road.

Requirements

Front setbacks

- 1. For residential flat buildings, a minimum front setback of 6.5m is required.
- 2. Despite Requirement 1, development with frontage to Bantry Bay Road shall have a minimum 3.5m front setback. For shop top housing developments, the front setback shall be finished with high quality materials and an active pedestrian frontage across Bantry Bay Road.

Side and rear setbacks

- 3. A minimum side setback of 4.5m is required.
- 4. Despite Requirement 3, development adjoining Warringah Road shall have a minimum 6.5m setback to Warringah Road.
- 5. Rear setbacks are to be a minimum of 6m.

5.4.5 Street wall and upper floor setbacks

Objectives

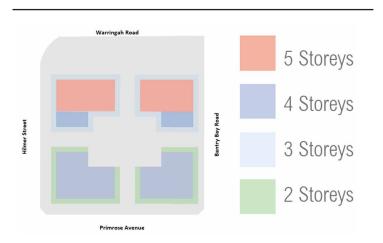
A. To reduce bulk and scale, minimise streetscape impacts and provide an appropriate scale transition to surrounding low-rise medium and low density residential development.

Requirements

- 1. All development must provide street wall heights as indicated in Figure 39.
- 2. Upper floors are to be set back at least 3m from the street wall.

Note: Street wall refers to the built form that addresses the street frontage from the ground level up to the first building setback.

Figure 39 Street wall heights



5.4.6 Landscaped area

Objectives

- A. To ensure that new development achieves the Desired Future Character and Character Statement for the Precinct.
- B. To retain existing trees, support consolidation of mature vegetation and maximise deep soil areas.
- C. To provide well designed communal open space areas that achieve good level of amenity.
- D. To ensure good passive surveillance over communal open space.

Note: To measure the area of landscaped area:

- a) Driveways, paved areas, roofed areas, tennis courts, car parking and stormwater structures, decks etc. and any open space areas with a dimension of less than 2 metres are excluded from the calculation;
- The water surface of swimming pools and impervious surfaces which occur naturally such as rock outcrops are included in the calculation;
- c) Landscaped areas must be at ground level (finished); and
- d) The minimum soil depth of land that can be included as landscaped area is 1 metre.

- 1. For all residential flat building developments, landscaped area is to be at least 40% of the site area.
- 2. Development must retain and protect any significant trees on the site and adjoining sites. Any tree removal will require offset planting at a ratio of 2 to 1.
- 3. Canopy trees must be planted within the front set back area of residential flat buildings.
- 4. Building setbacks are to be landscaped and generally free of any structures, basements, car parking or site facilities other than driveways, letter boxes, garbage storage areas and fences.

5.4.7 Active frontages and streetscape

Objectives

- A. To provide active, engaging and vibrant streets that encourages community activity, safety and surveillance.
- B. To ensure development creates a high quality interface between the public and private domain.

Requirements

- Buildings must be designed to provide continuous frontage along Bantry Bay Road.
- 2. Buildings must address all street frontages with the main entrance visible from the street.
- 3. For residential flat buildings, the ground level shall be activated by the provision of entries and accessible landscaped areas.
- Ground floor apartments that face the street are to have individual entries to the street.
- 5. Ground floor private open space facing the street is to be provided as a deck or paved area with a minimum depth of 2m.
- 6. Buildings on corner lots are to address or frame both frontages.
- 7. Buildings must be designed to allow for flexible ground floor uses with a minimum floor to floor for shop top housing developments with frontage to Bantry Bay Road of a height of 3.6m.

- 8. For all non-residential ground floor frontages, provide clear glazing wherever possible to promote passive surveillance and public art (if the estimated construction cost is greater than or equal to \$10 million), to contribute to street activity.
- 9. Basement entries should be limited and integrated with building design to minimise impacts on streetscape.
- 10. For non-residential uses, the ground floor must be at the same general level as the footpath and directly accessible from the street.
- 11. Continuous awnings for shop top housing developments are to be provided along Bantry Bay Road.
- 12. Design service cabinets or utility services are not to be located on Bantry Bay Road. Where not possible, design service cabinets or utility services are to blend in with the architectural design of the building.
- 13. Mail boxes shall not dominate the streetscape and ensure that:
 - 13.1 Key lockable mail boxes are provided;
 - 13.2 They are located adjacent to a building entry foyer that has street frontage (in accordance with any requirements of Australia Post);
 - 13.3 The mail box collection area must be from within the building foyer or other area which is only accessible to residents or building occupants; and
 - 13.4 the mail box collection facility must be in view of video surveillance.

Note: Reference should be made to Part D20 for requirements on safety and security

5.4.8 Heritage

Objectives

- A. To encourage the adaptive re-use or interpretation of the former Hews' Residence.
- B. To achieve the Desired Future Character and Character Statement for the Precinct.

Requirements

- Opportunities for the adaptive re-use or interpretation of the heritage significance of the Former Hews' Residence is required.
- 2. Building design is to incorporate at least one of the following features:
 - 2.1 Re-use of architectural elements of the Former Hews' Residence.
 - 2.2 Interpretive elements that assist in understanding the social heritage significance of the Former Hews' Residence, such as:
 - a) Materials, finishes, wall features or graphics that aid in the interpretation of the site's social significance.
 - b) Paving inlays with typography and colours which complement the landscape design and historical characteristics of the Former Hews' Residence.
 - c) Sculptural design or landscaping elements which provide a sense of history of the Former Hews' Residence.

Former Hews' Residence Statement of Significance

The Former Hews' Residence is one of the oldest surviving dwellings in Frenchs Forest. The site has been continuously occupied since the earliest phase of settlement and development in the district and retains tangible associations with influential pioneering individuals James French and William Hews. For many years, this residence was the focal point of the Frenchs Forest community as part of the early Rodborough Estate, then for its associations with the nearby former Hews' brickworks, and as the location of social activities in connection with the prominent Hews family comprising local sports, recreation, political and religious events. Although modified in its current physical form, the property is considered to have local significance for its historical, associative, and research potential heritage values.

5.4.9 Parking, basement design and basement access

Objectives

- A. To ensure on-site car parking is provided underground in order to minimise the visual impact on the public domain.
- B. To minimise the size and quantity of vehicle and service crossings to retain streetscape amenity and reinforce a high-quality public domain.
- C. To ensure car parking areas are safe and address the needs of building occupants.

- 1. Parking rates shall be provided in accordance with Control 6.
- 2. Car parking that is required for visitors and/or retail premises is to be accessible at all times.
- Parking, servicing and loading for commercial and/or retail uses shall be accommodated internally within the building and screened from the street.

- 4. Basement car parking and servicing areas are to be consolidated under building footprints to maximise the site area available for deep soil planting.
- 5. Vehicular access is prohibited from Warringah Road and must be located a minimum distance of 20m from any intersection with Warringah Road. This includes all vehicular access points for loading and unloading, garbage and recycling services and building services generally.
- 6. Other than Requirement 5, all driveways must be located a minimum perpendicular distance of 6m from any intersection.
- 7. Vehicular access is to be designed to:
 - 7.1 Separate and clearly differentiate pedestrian and vehicle access; and
 - 7.2 Minimise the size, quantity and visual intrusion of vehicle access points on the streetscape; and
 - 7.3 Ensure that basements allow for an appropriate clearance height that is capable to allow for internal waste collection (where applicable).
- 8. Basement Plans are to identify areas for storage. Storage facilities shall be lockable, located in secure areas of the basement and clearly allocated to specific apartments with appropriate storage size volumes per bedroom.



6 Parking

- A. To provide adequate on-site parking for a mix of development and vehicle types, including car share, electric vehicles, motorcycles and bicycles.
- B. To support the reduction of car trips and encourage the use of sustainable transport.

Requirements

- For residential uses, parking rates shall be provided in accordance with Table 2, which specifies a maximum car parking rate for development and a minimum parking rate for more sustainable forms of transport.
- 2. For Precincts 01 to 04, parking rates shall be provided at a minimum of 4.7 spaces per 100m2 of gross leasable floor area (GLFA).
- 3. Car parking rates for all other uses are to comply with, Part H, Appendix 1 of Warringah DCP 2011. If no uses are identified Appendix 1, car parking rates are to be provided in accordance with the RTA Guide to Traffic Generating Developments (2002).
- 4. Car parking that is required for retail premises and residential visitor spaces is to be accessible at all times.
- 5. Residential parking (excluding visitor parking) may be provided behind a secure access point/gate.
- 6. Privately allocated car spaces shall be located at the rear or lower levels of the basement.
- 7. The provision of parking for people with disabilities must be provided at a rate of 3% of the required parking spaces.
- 8. For non-residential development, at least 2 electric vehicle charging spaces or 2% of the parking spaces (whichever is greater) must be provided.
- 9. For non-residential development, car share spaces are to be provided at a rate of 1 per 200m2 gross floor area.

- 10. Car share spaces are to be:
 - 10.1 Publicly accessible at all times;
 - 10.2 Located in a convenient location;
 - 10.3 Provided in a well-lit location that allows for casual surveillance;
 - 10.4 Signed for car share use only; and
 - 10.5 Where external, is to be adjacent to a street and integrated with the streetscape through appropriate landscaping.
- 11. For residential and mixed-use development basement car parking areas are to include car wash bays for use by residents at the rate of 1 bay per 50 dwellings, up to a maximum of 4 spaces per building. The wash bay is to be adequately drained and connected to the sewer line.
- 12. Bicycle parking for residential uses may be located as part of an extended garage cage.
- Bicycle parking shall be provided in accordance with Part C3(A) Bicycle Parking and End of Trip Facilities, Requirement 4 of Warringah DCP 2011.
- 14. End of trip facilities shall be provided in accordance with Part C3(A) Bicycle Parking and End of Trip Facilities, Requirements 5 and 6 of Warringah DCP 2011.
- 15. End of trip facilities shall provide an electric charging point for electric bicycles.
- 16. Properties are not eligible to apply for Residential Parking Permit Schemes as determined by the RMS Permit Parking Guidelines.

Note: when calculating required parking for development, car parking rates are to be rounded up to the nearest whole number.

Note: Reference should be made to Part C3 and C3(A) for additional requirements on parking facilities, bicycle parking and end of trip facilities.

Table 2Parking rates for residential uses

Maximum parking rate

1 bedroom (including studio)	0.6 spaces
2 bedroom	1 space
3 bedrooms and more	1.5 spaces
Visitor car parking	0.1 spaces per dwelling

Minimum parking rate

Car share dedicated space	2 spaces per 15 dwellings
Electric vehicle charging space	2% of dwellings or 2 per development (whichever is greater)
Motorcycle parking	0.5 spaces per dwelling
Bicycle parking	2 spaces per dwelling 0.25 spaces per dwelling for visitor bicycle parking



Contamination

A. To manage potential contamination risks and ensure that changes to land use will not increase the risks to public health or the environment.

- 1. Where new development is proposed at the below addresses, a Preliminary Site Investigation Report must be prepared and submitted with the application for development:
 - 1.1 Lot 28 in DP 15045
 - 1.2 Lot 17 in DP 15045
 - 1.3 Lot 500 in DP 1214811
 - 1.4 Lot 2 in DP 535422
 - 1.5 Lot 1 in DP 746670



Sustainability

- a. To ensure that new development applies the principles of ecologically sustainable development and facilitates the delivery of a low carbon precinct that embeds the circular economy.
- To minimise energy use through passive building design and energy efficient systems.
- To encourage energy, waste and water efficiency and water recycling in non-BASIX affected development.
- d. To promote thermal comfort through natural ventilation and passive heating and cooling in residential developments.
- e. To ensure that all development is resilient to climate change including reducing the impacts of urban heat island effect.

- All new non-residential buildings are to provide a Report, prepared by an Ecological Sustainable Development Consultant which demonstrates how development addresses NABERS (Section J of the National Construction Code).
- All new non-residential buildings are to achieve the following minimum NABERS scores:
 - NABERS 5.5 Energy for offices and hotels
 - NABERS 3-star Water for offices and hotels
- All new non-residential buildings are to achieve a minimum 4-star Green Star Design & As Built rating.
- 4. Development is to reduce the need for active heating and cooling by incorporating passive design measures to ensure that development is resilient to climate change. This includes design, location and thermal properties of glazing, natural ventilation, appropriate use of thermal mass and

- external shading, including vegetation.
- 5. To minimise energy use buildings are to be designed to:
 - 5.1 Include high levels of insulation to reduce energy consumption and include energy efficient appliances;
 - 5.2 Incorporate green roof and green façade / green wall elements to reduce heat loads on internal spaces; and
 - 5.3 Incorporate shading elements and landscaping on higher levels of buildings to reduce heat loads and encourage passive cooling.
- All new water fittings and fixtures in all non-residential development, the public domain, and public and private parks are to be the highest Water Efficiency Labelling Scheme (WELS) star rating available at the time of development.
- 7. The use of energy efficient lighting with an improved lighting power density (watts per second metre), including LED lighting technology, is to be used in any public domain and/or for façade lighting.
- 8. Development shall, use building materials, fittings and finishes that:
 - 8.1 Have been recycled, are recyclable or reusable;
 - 8.2 Are made from or incorporate recycled materials that contain lower embodied energy to reduce energy use and the environmental footprint;
 - 8.3 Have been certified as sustainable or 'environmentally friendly' by a recognised third-party certification scheme, and;
 - 8.4 Use non-toxic source origin materials to improve the quality of the indoor environment especially the health, comfort and productivity of building occupants.

If recycled material cannot be used, justification must be included in the Waste Management Plan. Financial costs will not be accepted as appropriate justification

- 9. For Precincts 01 to 04, development shall:
 - 9.1 Prioritise the use of recycled material and modular building design for roads, footpaths and buildings together with material passports to enable reuse of materials and ongoing reuse of building materials into the future; and
 - 9.2 Identify opportunities to support food waste collection systems or networks from businesses and residents.
- 10. Development shall explore opportunities to incorporate innovative sustainability measures to assist with future proofing the building with emerging technologies and address ongoing maintenance responsibilities. This could include the installation of a building management system to monitor energy, waste and water usage by building operations and occupants, and future proofing the trenching requirements for servicing infrastructure for emerging technologies and electric vehicles.



9 Water management

- A. To ensure that new development minimises the impact on downstream catchment areas of Bantry Bay, Manly Dam and Narrabeen Lagoon.
- B. To ensure that new development maintains or enhances water quality of receiving waters in the Bantry Bay, Manly Dam and Narrabeen Lagoon catchments.

Requirements

- 1. The stormwater drainage systems for all developments are to be designed, installed and maintained, as far as is practicable, so as to improve water quality and assist in maintaining stream flow in accordance with Council's Water Management for Development Policy and Water Sensitive Urban Design & MUSIC Modelling Guidelines and Alluvium Frenchs Forest Planning Precinct Water Sensitive Urban Design Study Strategy (dated December 2019).
- 2. All water management facilities and stormwater infrastructure are to be privately owned and operated.
- 3. All new development shall be accompanied by a Stormwater Management Plan or Strategy that details the methods for controlling and managing increased stormwater flows on downstream catchment areas and the impacts on private property (where applicable).

Note: Reference should be made to:

- Part C4 for stormwater requirements
- Part E11 for flood prone land requirements
- Alluvium Frenchs Forest Planning Precinct Water Sensitive Urban Design Strategy (dated December 2019)



10 Waste management

A. To ensure that built form maintains a visually appealing streetscape.

Requirements

- All waste management for Precincts 01-04 is to be undertaken internally within the building. No waste collection is permitted on street.
- 2. The Waste Management Plan for Precincts 01-04 shall explore ways to enable the efficient collection and sharing of waste, water and energy between businesses. This can include:
 - 2.1. An underground automated waste collection system, such as a vacuum system to transfer different waste types from buildings to a transfer station;
 - 2.2. Sharing waste infrastructure between businesses.
- 3. For demolition and construction, at least 85% of any waste generated in demolition and construction is to be recycled. This is to be identified in the Waste Management Plan.
- 4. All development must comply with the Northern Beaches Council Waste Management Guidelines, particularly in regard to available capacity, separation for recycling and access for servicing.

Note: Reference should be made to Parts C8 and C9 for waste management and demolition and

construction requirements

B. To promote circular economy design for buildings and infrastructure to reduce carbon intensive materials and increase recycling.



