



URBIS

# BELMORE ROAD PRECINCT URBAN DESIGN REPORT

PREPARED FOR

**CKDI PTY LTD**

4 OCTOBER 2023

FINAL DRAFT



Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge the Dharawal people as the traditional custodians of this land and pay our respect to their Elders, both past and present.

The project development team of Belmore Road Precinct, including Camden Council, recognises the recent release of the *Draft Connecting with Country Framework* by Government Architect NSW (GANSW). The draft framework has been developed in close collaboration with senior knowledge holders from the Indigenous communities.

The draft framework aims to guide project teams to gain better understanding of, and to better support, a strong and vibrant Aboriginal culture in our built environment through place-led design approaches.

In review of the draft framework and the preliminary advice provided by Niche Environment and Heritage (Niche), the following pages provide a summary of Belmore Road Precinct's Country and Culture Identity, and the design responses embedded in the Indicative Layout Plan (ILP).

# DESIGNING WITH COUNTRY

## CONNECTING WITH COUNTRY

### STARTING WITH COUNTRY: COUNTRY AND CULTURE IDENTITY

**The Belmore Road Precinct lies within the Tharawal Local Aboriginal Land Council (LALC) boundary.**

The general location of the Precinct is considered to be the corner country of the Darug, Dharawal and Gandangara groups. Specific clan group names for Bringelly Precinct were not recorded, with the possible exception of the Cobbity Barta or Cubbitch Barta in the Cobbitty-Camden area (Niche PACHA Report).

The context of the Precinct portrays a landscape that has been subject to various disturbances relating to its primary use for pastoral/ agricultural activities, including vegetation clearance, and the construction access tracks, building structure and house developments. Nevertheless, the landscape forms part of the physiographic region of western Sydney (Cumberland Plain region), and it currently still contains landscape features (e.g. raised level creek terraces) that has the potential to yield surface and/or buried Aboriginal objects.

Belmore Road Precinct is characterised by an open undulating hilly landscape with alluvium rich soil. The precinct contains non-perennial streams of South Creek and Lowes Creek, along with other second and third order streams of the Hawkesbury River and Thompson Creek.

#### Bringelly Precinct's Key Landscape Features

The steep terrain to the south-west corner of the site and the central non-perennial stream are two dominant landscape features within the Belmore Road Precinct. These features are embedded in the open space and landscape strategy of the ILP. The intention behind this strategy is to revitalise the cultural values of the Precinct, create stronger connection with the wider landscape of the region, and better integrate these into the daily life of the future communities.





## STRATEGIES FOR CONNECTING WITH COUNTRY

**Niche has prepared a Preliminary Aboriginal Cultural Heritage Assessment (PACHA) to inform and support the development of the ILP and Precinct Planning Process for Belmore Road Precinct.**

As part of the assessment, Niche has consulted with the Registered Aboriginal Parties (RAPs), representing a total of seventeen (17) Aboriginal Groups.

The RAPs see the Precinct as a cultural landscape, and that every tree and stone is a cultural item as part of the wider landscape. This include the recognition of the non-perennial streams as thoroughfares through the country, and ridgelines as lookout points.

The ILP adopts a country-centred design approach, where decisions are first guided by the landscape features present within the Precinct. The ILP considers the central non-perennial stream as the main open space within the Precinct, connecting series of other open spaces proposed across the precinct. Additionally, the western ridge park sitting on the steep terrain is to be retained as part of a regional open space system. Streets are designed as connector of the open space system through wider verges, with tree planting and other landscaping.

The project development team acknowledges that the Aboriginal Cultural Heritage Assessment including consultation with the RAPs are in the early stages. Future design and development of Belmore Road Precinct will need to retain continuous engagement and consultation with local Aboriginal Community.

Niche PACHA Report (dated 12 March 2021) has provided 14 recommendation to guide future development at the Precinct, with reinforcement that Aboriginal Stakeholders will continue to be engaged and consulted throughout the project life cycles. This is to enable Aboriginal cultural knowledge to be incorporated into the detailed design and development across the Precinct.

**Belmore Road Precinct recognises the interrelationships between Country, Community and Individuals.**

**The ILP is guided by the vision to create a place where the natural environment integrates seamlessly with the built environment, providing a cultural link to the early landscape character of the wider region and the emerging new communities.**



# EXECUTIVE SUMMARY

## PROJECT BACKGROUND

The Belmore Road Precinct (the Precinct), formerly referred to as Bringelly Sub-Precinct 2, is located in one of the largest greenfield growth areas in Greater Sydney, the South Creek West Land Release Area (SCW). SCW comprises of five distinct precincts with a total land area of 1,500 hectares. Belmore Road Precinct is located at the north-west of SCW, representing approximately 13 % of the SCW land area.

A SCW Structure Plan is currently being developed by the Department of Planning and Environment (DPE) in collaboration with Camden Council. There is no known timeframe to when this structure plan will be publicly available. Urbis, as engaged by CKDI Pty Ltd, has worked closely with Camden Council to ensure the broader strategic inputs for the land release area have been considered and addressed where appropriate throughout the Precinct Planning Process.

**Belmore Road Precinct sits between two major active precinct planning areas, led by DPE and the Western Sydney Planning Partnership. The two major precincts include:**

- **Lowes Creek Maryland:** Exhibited in 2018 by DPE. Currently undergoing finalisation.
- **Western Sydney Aerotropolis:** Exhibited in 2019 by the Planning Partnership, with SEPP being finalised in March 2022.

From a strategic perspective, being located less than 2km south-west of the Western Sydney Aerotropolis (WSA), Belmore Road Precinct plays a role in providing housing choice and diversity to support the anticipated 200,000 future workers at WSA.

## A COLLABORATIVE APPROACH TO PRECINCT PLANNING

DPE has adopted a new approach to Precinct Planning in early 2020, providing greater responsibilities for local councils in planning for their local areas and new communities.

Belmore Road Precinct is identified as part of the Collaborative Planning Precincts, where the precinct planning process rely upon the integration of the various inputs from public and private agencies for successful infrastructure and timing. Under this new approach, Camden Council would lead the planning process for the precinct, with the support from DPE. It is DPE's intention that they will facilitate collaborative planning amongst these agencies, enabling precinct submissions which demonstrated holistic planning and delivery schedules.

As one of the major landowners, CKDI Pty Ltd has engaged Urbis and a team of technical consultants to work closely with Camden Council in preparing the vision and an Indicative Layout Plan (ILP) for Belmore Road Precinct.

**The precinct planning process for the Belmore Road Precinct can be summarised in the following four-step methodology.**

### PROJECT TEAM ENGAGEMENT

Engagement of Urbis and technical consultants to perform investigations on site opportunities, constraints and challenges in future development stages.

### VISION WORKSHOP

Workshop with Camden Council to develop the vision for Belmore Road Precinct based on the various investigation and insights.

### OUTCOMES

Working together with Camden Council, a Indicative Layout Plan has been developed with a set of design strategies.

### IMPLEMENTATION

Documentation of the Planning Proposal to support the proposed amendments to the Precincts SEPP. This will also be further supported by a precinct-specific Development Control Plan.



# AN OVERVIEW OF THE VISION AND OVERARCHING DESIGN PRINCIPLES

"Belmore Road Precinct will be an exemplar for new community development where both natural and built environments are seamlessly integrated with the socio-cultural values of the past and present.

It will exemplify a thriving community where residents live in healthy and walkable neighbourhoods served by well-maintained public spaces and facilities, such as parks, schools and libraries.

The Indicative Layout Plan (ILP) is guided by the following four design principles:



## **Seamless Integration with the Blue, Green and Ochre Grids**

Enhancing distinctiveness of the place through the grids, whilst promoting a healthier, liveable, and sustainable environments for future communities.



## **A Well Defined and Active Community Hub at the heart of the Precinct**

Designing a local centre that supports lifestyle convenience, leisure and entertainment, through a vibrant mix of land uses, services and facilities.



## **Series of Interconnected Neighbourhood Hubs**

Dividing the precinct into a series of smaller, walkable, and interconnected neighbourhood, each with their own unique place characteristics and local amenity.



## **Provision of Housing Diversity and Choice**

Catering to variety of household types and needs by providing housing diversity and choice.

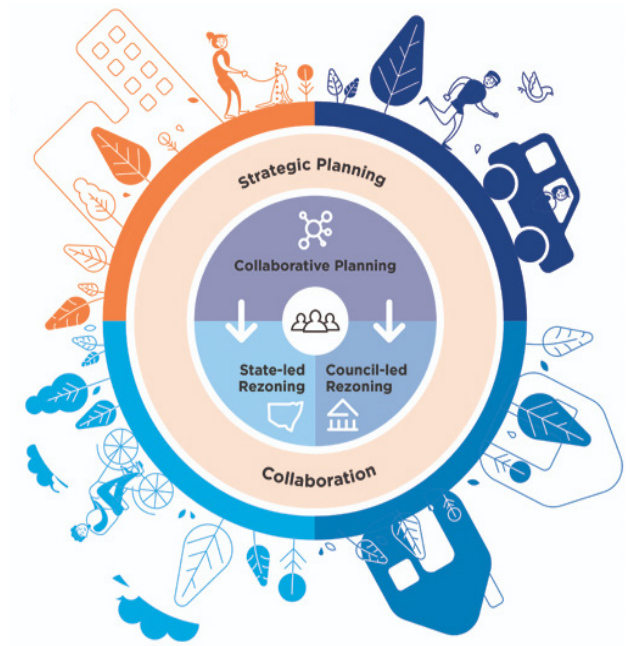


# INTRODUCTION

**CKDI Pty Ltd (CKDI), as the main landholders at Belmore Road Precinct, engaged Urbis and a group of technical consultants in December 2020 to prepare the planning and design for Belmore Road Precinct.**

Guided by DPE's new approach to precinct planning, CKDI and the project development team has worked closely with Camden Council to prepare a Indicative Layout Plan (ILP) for Bringelly Precinct, informed by a collective vision and design strategies.

The Indicative Layout Plan informs the amendments to the State Environmental Planning Policy (Precincts—Western Parkland City) 2021 (Precincts SEPP), and the preparation of a precinct-specific Development Control Plan.



**DPE's New Approach to Precinct Planning**

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# PURPOSE OF THIS REPORT

The purpose of this report is to provide a summary of the Indicative Layout Plan (ILP) process for the North-West Precinct of South Creek West Land Release Area. This precinct is being referred as **Belmore Road Precinct**.

The ILP for Belmore Road Precinct proposes future land uses, infrastructure services, and development objectives for the Precinct. The proposed outcome is a response to the strategic planning context, technical studies, and inputs from stakeholders including the different land owners.

Technical investigations undertaken as part of this process include the following:

- Roads and public transport;
- Landform and topography;
- Biodiversity and riparian corridors;
- Flooding and water cycle management;
- Indigenous and European heritage;
- Social infrastructure and open spaces;
- Housing market assessment;
- Retail and employment assessment;
- Noise and vibration;
- Air quality; and
- Electricity, telecommunications and gas.

For ease of understanding, the report is divided into three parts:

- **Part A: Urban Context (Site Opportunities and Constraints)**

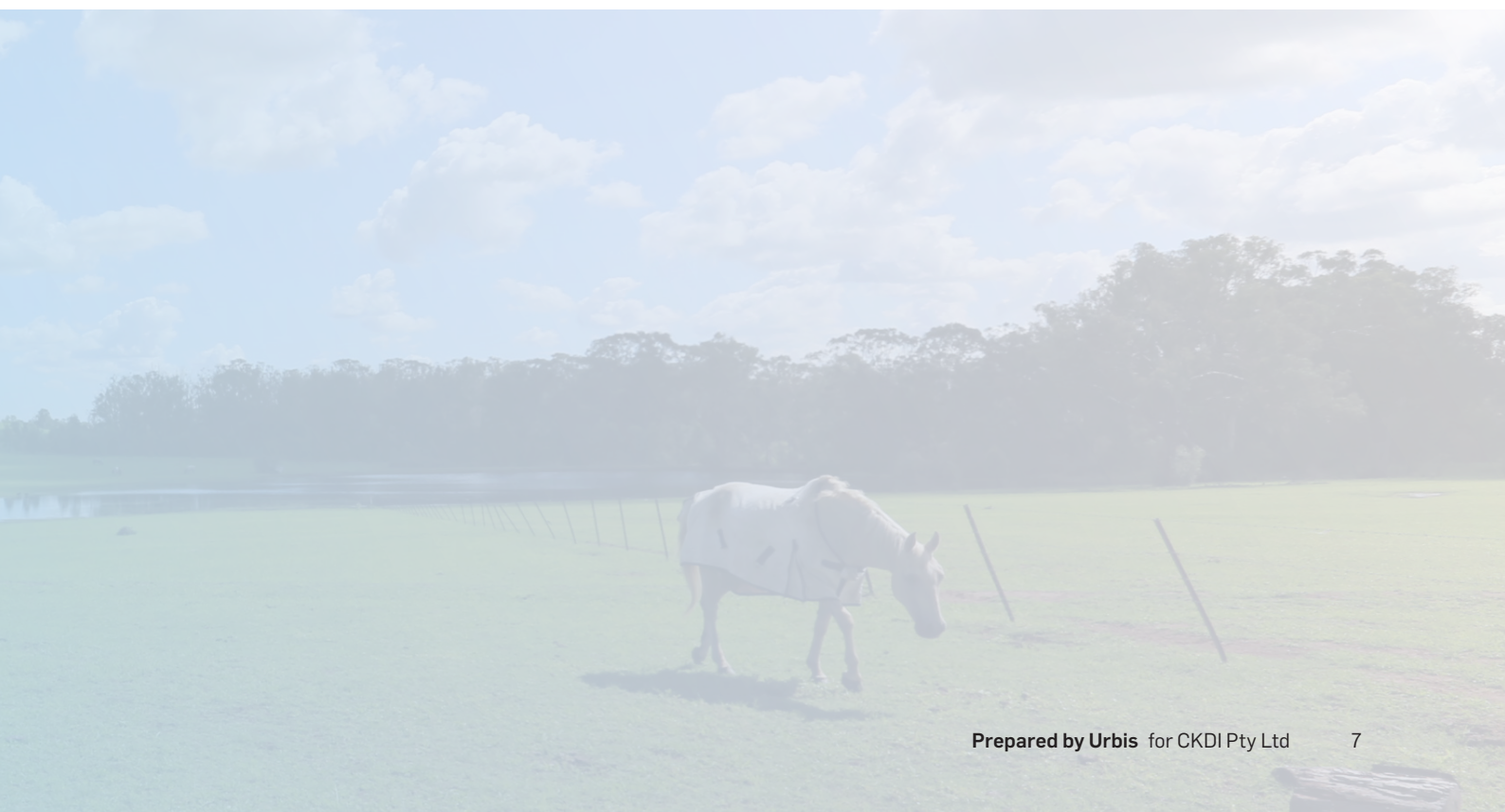
Collates the key findings from the technical studies into a series of site opportunities and constraints' maps, with the aim to identify a developable land area for the precinct.

- **Part B: Indicative Layout Plan**

Provides an overview of the vision and key outcomes of the ILP as a series of layered strategy plans.

- **Part C: Proposed SEPP Amendments**

Provides an overview of the proposed changes to the State Environmental Planning Policy (Precincts—Western Parkland City) 2021 (Precincts SEPP).



# PROJECT LOCATION

Belmore Road Precinct is located in Sydney's South West Growth Area (SWGA), within Camden Council Local Government Area. It is located approximately 40km south west of Parramatta CBD and 60km south west of Sydney CBD.

## South West Growth Area

The SWGA is one of five major growth areas in Western Sydney. It offers a unique proposition with the incorporation of employment generating precincts in addition to a focus on residential greenfield development.

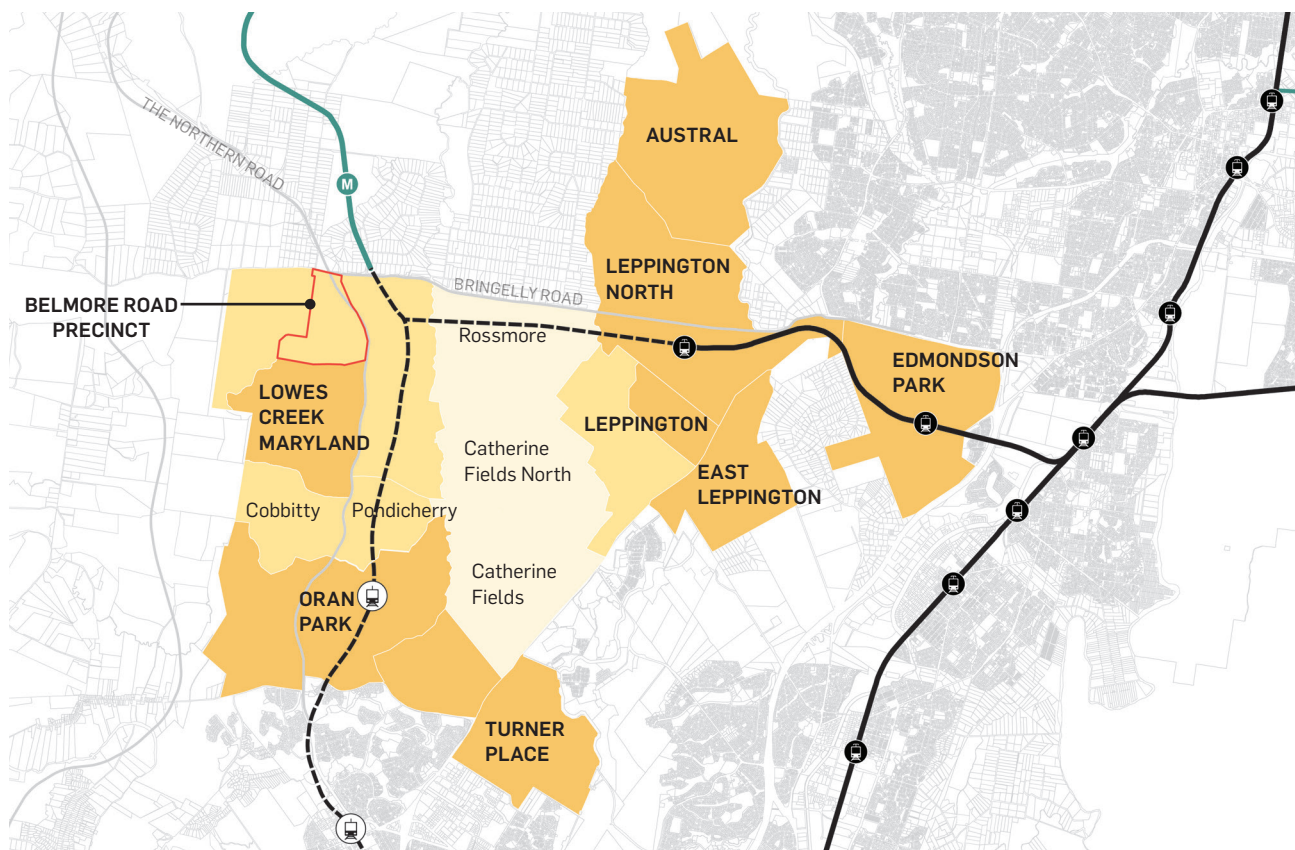
SWGA comprises of 14 precincts, of which 8 have been rezoned under the Precincts SEPP for urban development. Development in this priority growth area is supported by considerable investment in transport and service infrastructure, including the North-South Rail Link and The Northern Road.

Located 4km south of Badgerys Creek Western Sydney Aerotropolis, the Precinct has great potential to cater to a vast proportion of the housing demand from the anticipated employment growth.

Over the next thirty years, Western Sydney Aerotropolis is projected to deliver 139,000 jobs, generating significant demand for housing within the immediate local areas. Belmore Road Precinct benefits from its proximity to both committed and future Sydney Metro Network. It has the potential to support the transition from an employment generating precinct up north, to a residential living precinct further south.

### LEGEND

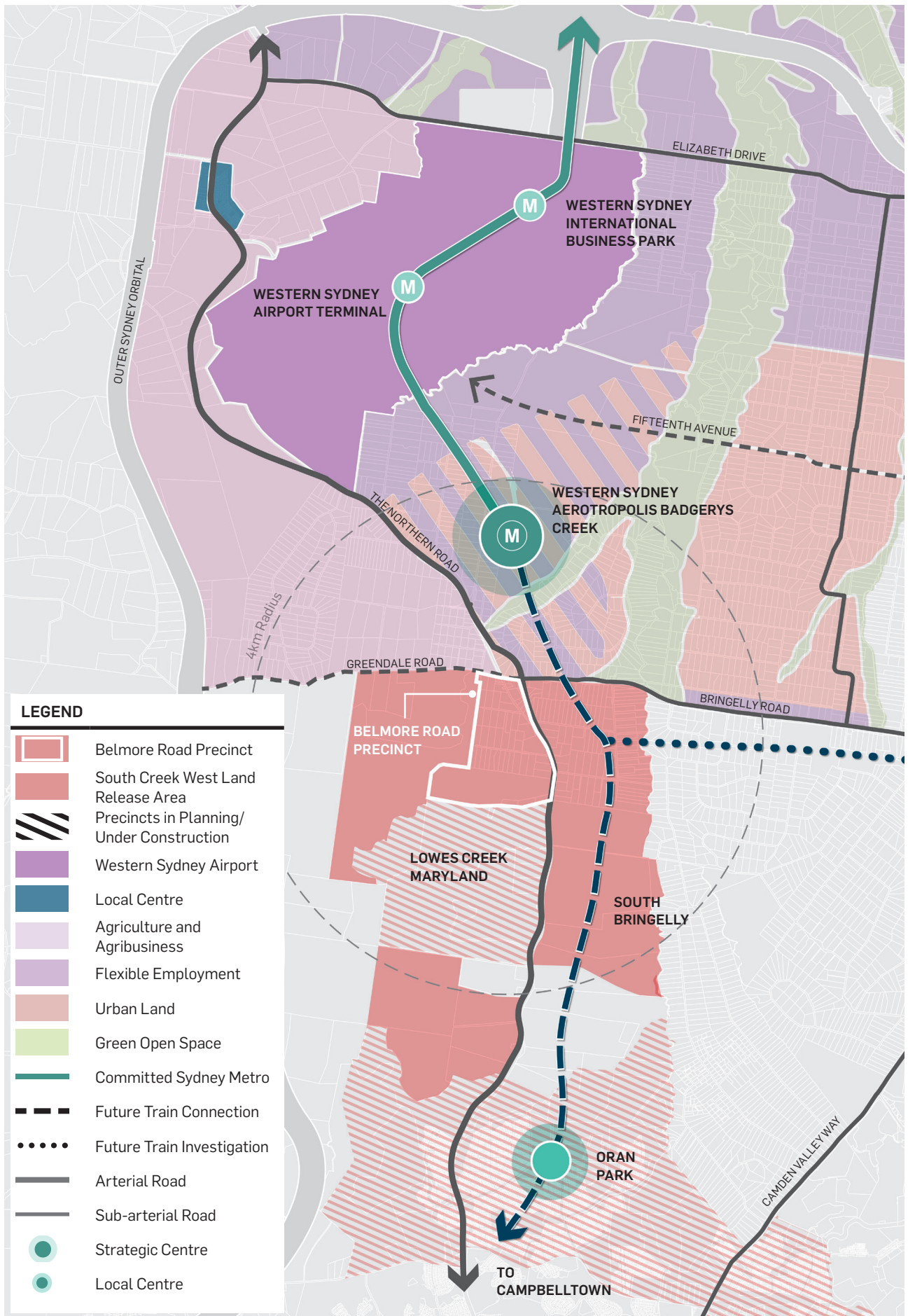
	Belmore Road Precinct		Committed Sydney Metro Network
	Rezoned		Existing Train Network
	Currently in Planning		Future Train Connection
	Growth Centre Area		



**Figure 1** Status of the Precinct Planning in South West Growth Area







**Figure 2** South West Growth Area



## South Creek West Land Release Area

South Creek West Land Release Area is one of the 14 precincts in the South West Growth Area (SWGA). Belmore Road Precinct is located at the north-west of the land release area, within the suburb of Bringelly in the Camden Local Government Area.

Belmore Road Precinct adjoins Lowes Creek Maryland Precinct to the south. Lowes Creek Maryland is a new planned precinct, delivered by DPE in collaboration with Camden Council.

The planning of Belmore Road Precinct will respond to Lowes Creek Maryland and other planned or rezoned precincts in the vicinity, including Oran Park, Turner Road, East Leppington, Austral, Leppington North, Edmondson Park, and Catherine Field.

### Camden Local Strategic Planning Statement (LSPS) 2020



Camden LSPS sets out the land use, transport, and sustainability objectives to meet the changing community's needs at Camden Local Government Area over the next 20 years.

Belmore Road Precinct supports Camden vision as a place of opportunity, building on a foundation of respect for the environment, a well-managed approach to growth, social inclusion and economic innovation.

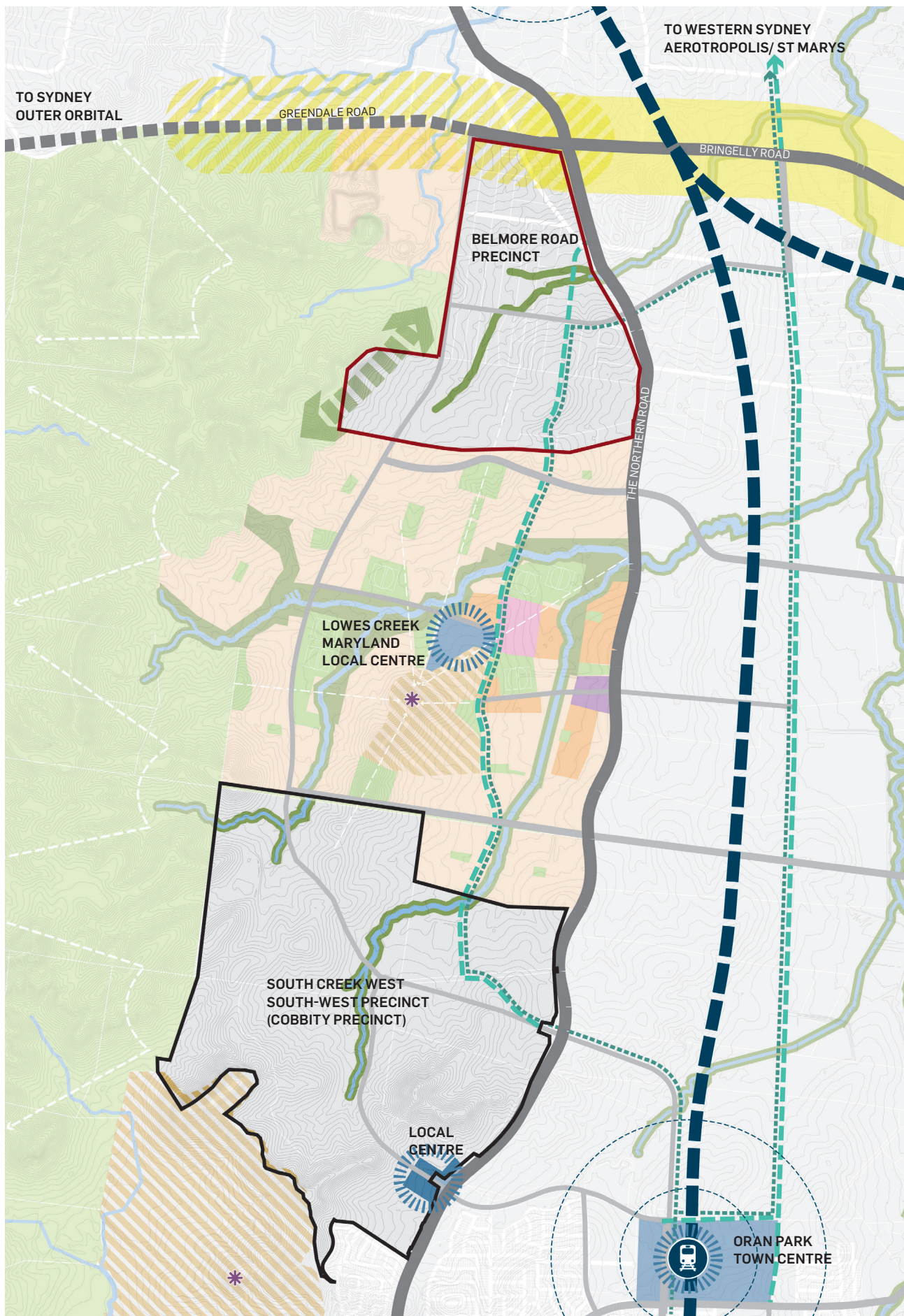
As part of Camden's LSPS Structure Plan, Bringelly Precinct sits at the intersection of key transport connections between the Northern Road, Greendale Road and Bringelly Road.

The current non-perennial stream traversing across the precinct has been identified as one of the LGA's habitat corridor, with a potential clustering of regionally significant habitat (environmentally sensitive land).

#### LEGEND

	Belmore Road Precinct
	South Creek West's South-West Precinct
	400-800m Radius
	Future Train Connection
	Transit Boulevards
	Arterial Road
	Sub Arterial Road
	Enterprise Corridor Investigation Area
	Proposed Investigation Area Extension
	Proposed Centres
	Mixed-Use Employment
	Proposed School Location
	Low Density Residential
	Mid-High Density Residential
	Riparian Corridor
	Open Space
	Opportunity to Expand Green Space
	Views Corridor to Lowes Creek Maryland
	Heritage





**Figure 3** South Creek West Land Release Area - Indicative Structure Plan (Based on SWGC Structure Plan and Camden LSPS 2020)



# PRECINCT DESCRIPTION

**Belmore Road Precinct is located at the north-west of South Creek West Land Release Area. The Precinct has a total area of approximately 191 hectares.**

The Precinct shares the border with Badgerys Creek Aerotropolis to the north, along Greendale Road and Bringelly Road. The Precinct immediately adjoins the new planned precinct, Lowes Creek Maryland, to the south.

## Landform Characteristic

The site is undulating in character with an elevation between 72m at the east and 132m at the south-west, and an overall level change of approximately 50m.

Belmore Road Precinct has two ridgelines traversing across the site; one transverses from the west to north-east, and the other transverses from the south-west to the east. Two of these ridgelines fall towards the central of the site, forming a creek corridor at the core of the Precinct.

## Road Infrastructure

The main access to the precinct is via The Northern Road, which lies on the eastern boundary of the Precinct.

The Northern Road is currently being realigned and upgraded. This will strengthen connectivity between the Precinct and two major centres, i.e. Badgerys Creek Aerotropolis at the north and Oran Park to the south.

Both of these centres are within a 10 to 15 minutes drive from the Precinct. The Northern Road also provides access to Parramatta CBD and Sydney CBD.





Greendale Road and Bringelly Road to the north provides major east-west connections to the Northern Road, Camden Valley Way and South Western Freeway.

## Zoning

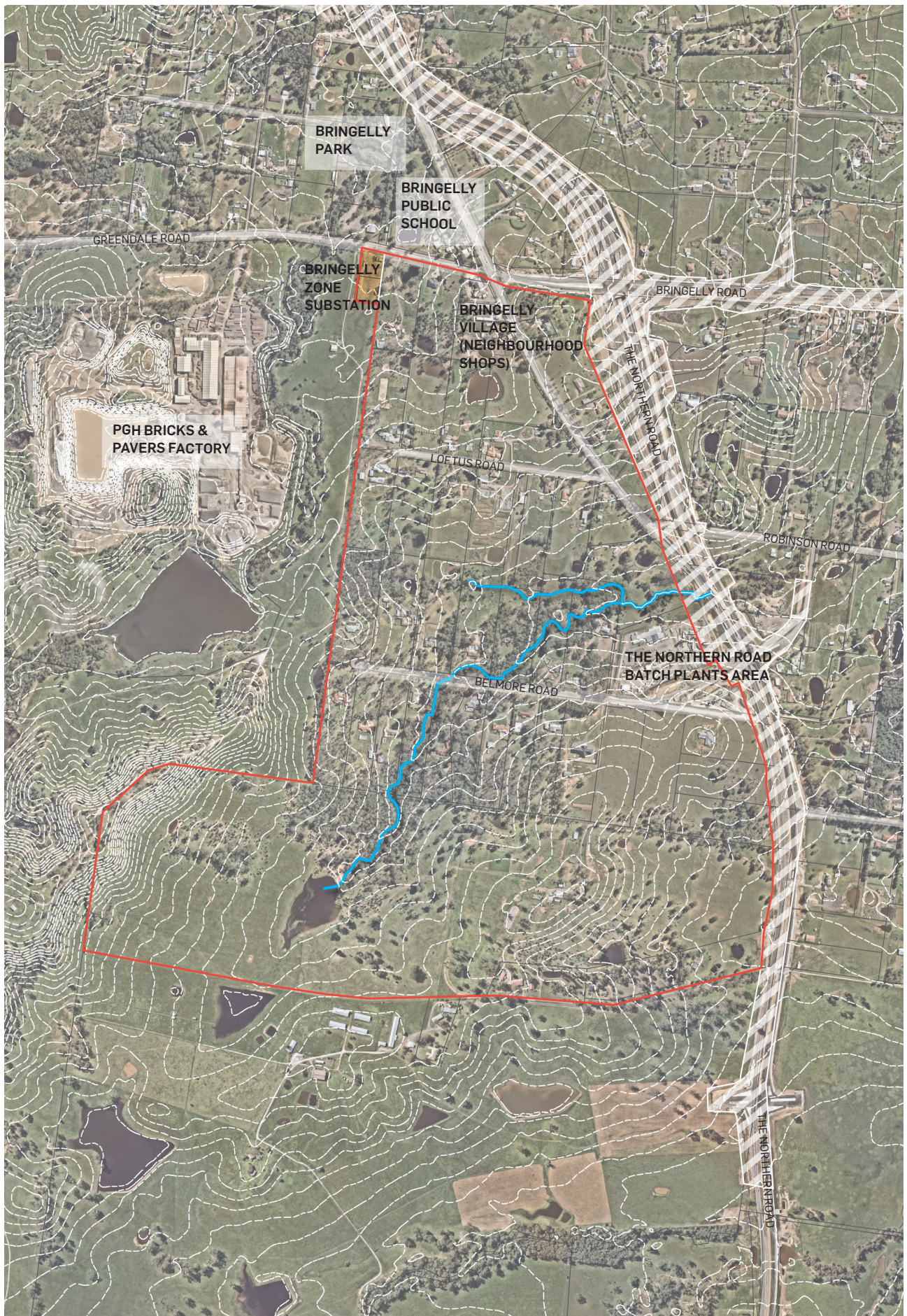
The central and northern part of the Precinct is predominantly zoned as RU4 Primary Production Small Lots, with B1 Neighbourhood Centre at the north-east corner. This portion of the land currently accommodates Bringelly Zone Substation, Bringelly Village, the Northern Road's Batch Plants Area, and a few small rural residential lots.

The southern part of the Precinct (predominantly owned by CKDI Land) is currently zoned as RU1 Primary Production.

### LEGEND

	Belmore Road Precinct
	Substation
	Watercourse (Strathler Stream Order 2 and 3)
	The Northern Road





**Figure 4** Key existing features of the Belmore Road Precinct on aerial photo





# OWNERSHIP

Belmore Road Precinct has a total of 63 lots. CKDI is the main landowner within the Precinct, owning approximately 76 hectares of the land to the south of Belmore Road. This represents 40% of the Precinct's land area.

Endeavour Energy currently runs Bringelly Zone Substation at the north-east of the Precinct. The substation comprises of two lots, formerly known as Lot 1 (DP 733115) and Lot 10 (DP 1125892). These lots will have to be retained for Substation use.

Bringelly Village at the north-west corner has a mix of retail operators including SPAR, FRESH, Super Cellars, NSW Lotteries, LJ Hooker, Australia Post, a local Pharmacy and Family Medical Practice.

There is a cottage located east of existing Bringelly Village, across Wentworth Road. This cottage has been identified as a heritage item of local significance.

The lightly hatched area shown in **Figure 5** indicates the Batch Plants Area of the Northern Road and Bringelly Road Upgrade. This site is owned and managed by Roads and Maritime Services (RMS).








## Other Landowners

The rest of the Precinct is made up of individual land owners, and the lots are predominantly small rural lots.

The table below provides an overview the land area under different ownerships.

	Land Area	
	(hectares)	(%)
<b>CKDI Land</b>	<b>75.8</b>	<b>40%</b>
<b>Rest of the Precinct</b>	<b>114.9</b>	<b>60%</b>
• Bringelly Zone Substation	0.8	
• Bringelly Village Shops	2.7	
• Listed Heritage Site	0.4	
• The Northern Road Batch Plants Area	7.7	
• Other Private-Owned Land	103.3	
<b>Total Belmore Road Precinct</b>	<b>190.7</b>	<b>100%</b>

## LEGEND

	Belmore Road Precinct
	CKDI Land
	The Northern Road Batch Plants Area
	Listed Heritage Item (Cottage)
	Endeavour Energy
	Strata
	Other Land Ownership



**Figure 5** Ownership Plan



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# **PART A:** **URBAN CONTEXT**

## **SITE OPPORTUNITIES AND CONSTRAINTS**



## A.1 ROADS AND PUBLIC TRANSPORT

### The Northern Road Upgrade

The realignment and widening of the Northern Road provides an increased road capacity to cater future population growth at South Creek West.

The road expands over 15km, providing Belmore Road Precinct with improved connection to Oran Park at the south and future Western Sydney Aerotropolis at the north.

The Bringelly Road Interchange has opened in July 2020. The second stage of the upgrade at Belmore Road Intersection has resulted in the realignment of Belmore Road.

The existing stretch of Northern Road along the north-east boundary of the Precinct is renamed as Wentworth Road. This road is proposed to have cul-de-sac at both ends, with a primary role to provide connection between Loftus Road and Thames Road at the north.

### Connection to Lowes Creek Maryland

The Department of Planning and Environment (DPE), in collaboration with Camden Council, has prepared the draft Precinct Plan for Lowes Creek Maryland, where a clear road hierarchy has been proposed.

As part of the broader South Creek West precinct, future road network at the Precinct will need to consider connectivity to the proposed road network at Lowes Creek Maryland. There is an opportunity to extend the north-south connection from Lowes Creek Maryland to both Greendale Road and the Northern Road.

### Future Sydney Metro - Western Sydney Airport











DPE has released a Corridor Protection SEPP in July 2020. This protects the delivery of North South Rail Line corridor, where future Sydney Metro - Western Sydney Airport connection will be provided.

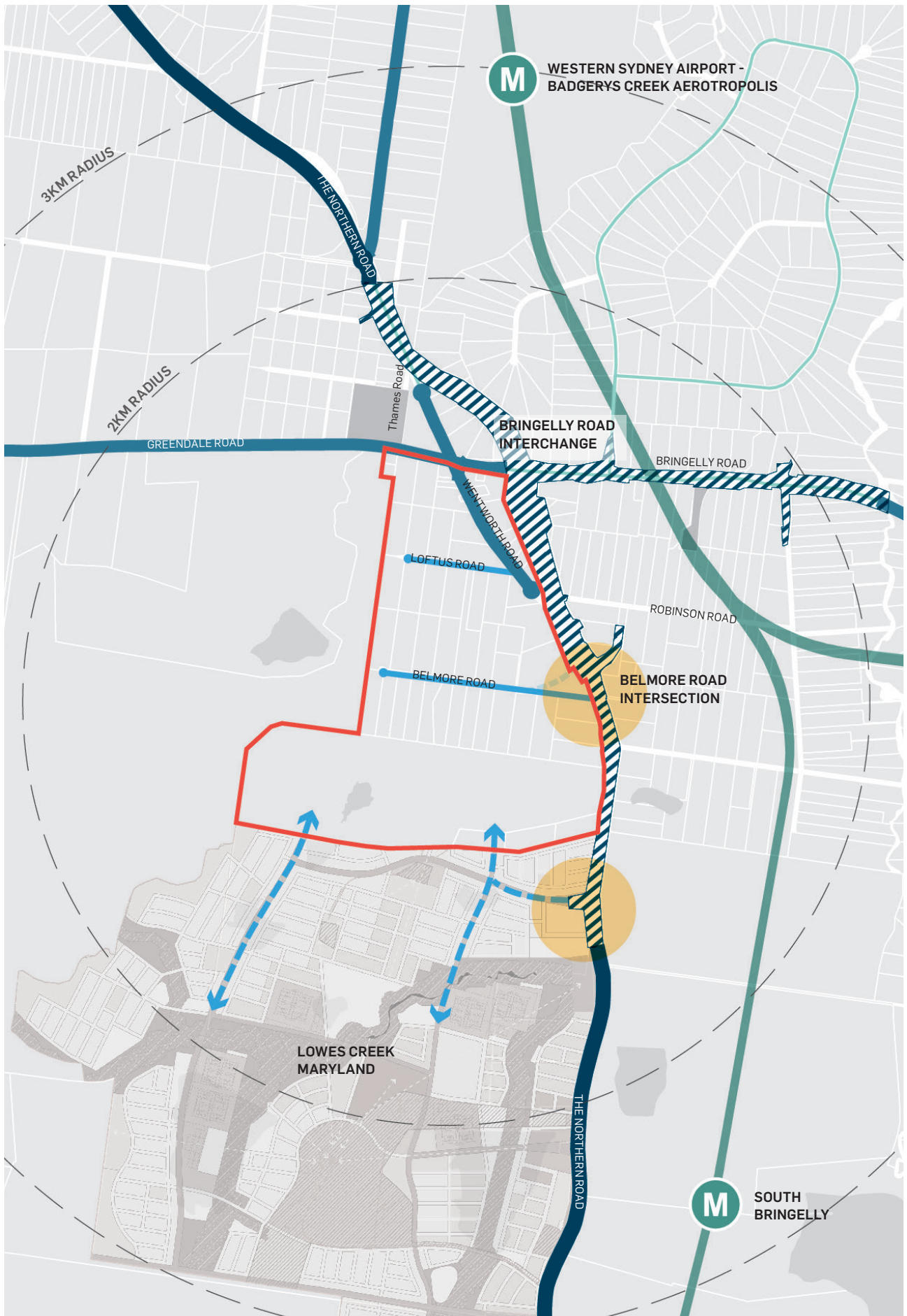
Belmore Road Precinct will only be 3km away from the proposed metro station at Western Sydney Aerotropolis.

#### KEY DIRECTIONS

- 1 Belmore Road as the prime entrance and major road servicing the Precinct.
- 2 Provide a 4-lane sub-arterial road to connect between Greendale Road and Belmore Road.
- 3 Utilise the connection provided by existing Northern Road (Wentworth Road), and provide the Precinct with ease access to Bringelly Primary School .
- 4 Built upon Lowes Creek Maryland's proposed road network, to support an integrated road network around South West Growth Area.
- 5 Design roads that support bus operation to improve connectivity to future metro stations at Badgerys Creek Aerotropolis and South Bringelly.

#### LEGEND

	Belmore Road Precinct
	The Northern Road Upgrade (Completed)
	Major Intersections
	Arterial Road
	Sub-Arterial Road
	Local Roads
	Proposed Local Roads
	Realignment of Belmore Road
	Existing Bus Network
	Future Sydney Metro - Western Sydney Airport (Corridor Protection SEPP)



**Figure 6** Existing Access and Movement



## A.2 LANDFORM AND TOPOGRAPHY

The Belmore Road Precinct features two east-west ridgelines, with gradual slope towards the central and south-east corner. The direction of slope forms the unique feature of the Precinct with a creek corridor traversing across the central of the site.










The sloping topography of the Precinct varies by 60m across the precinct, from the lowest point at the east (72m) to the highest point at the south-west corner (132m).

The south-western corner of the precinct has the greatest level of steepness, with elevation varying over 30m in a distance of 100m.

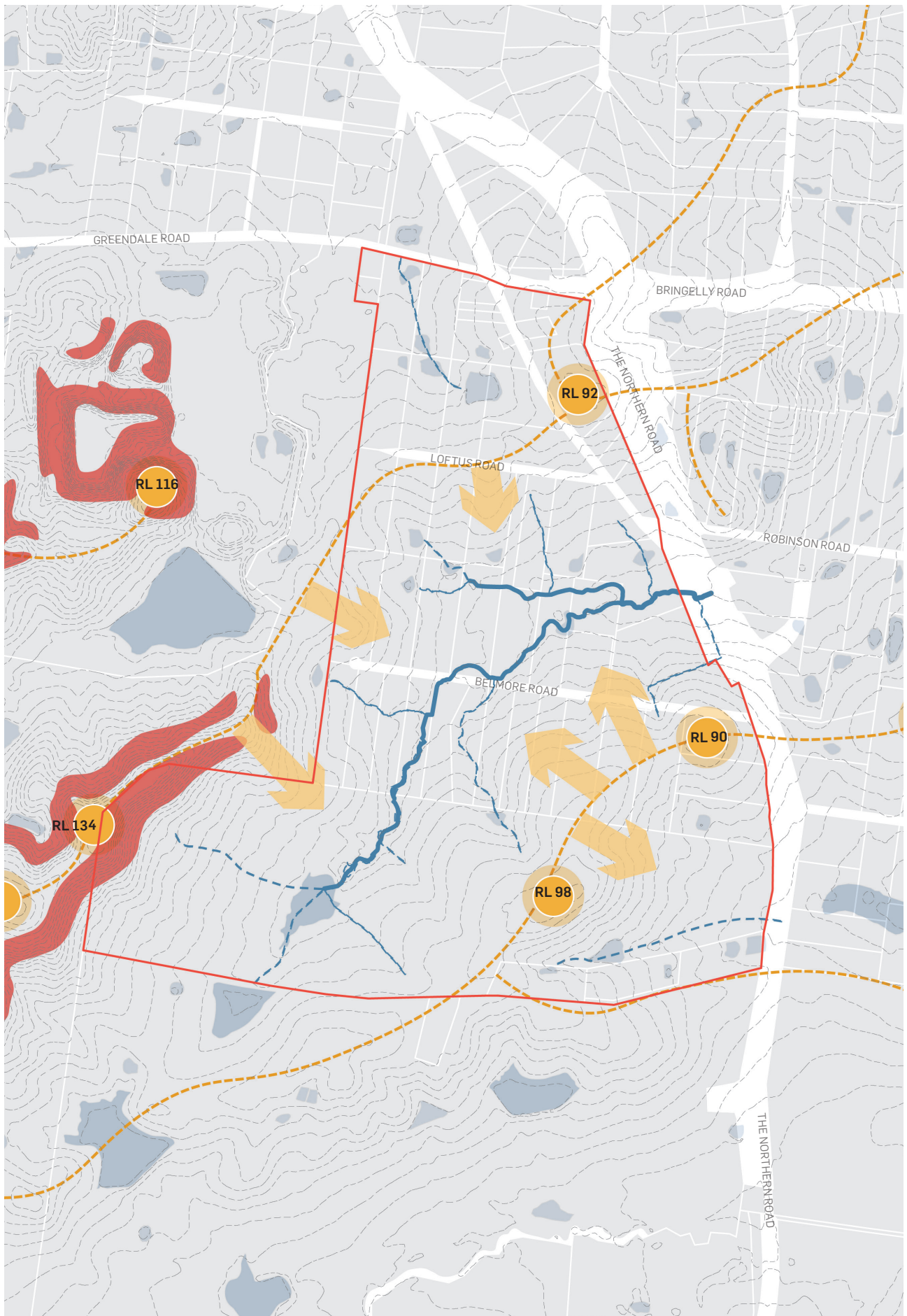
### KEY DIRECTIONS

- 1 Preserve the landscape feature at the south-western corner of Belmore Road Precinct, by designing the area as one of the key open space.
- 2 Leverage the presence of the creek traversing across the core of the Precinct, and expand views towards this unique landscape feature.

### LEGEND

	Belmore Road Precinct
	High Points
	Ridgelines
	Direction of Slopes
	Creek
	Creek line
	2m Contours
	Steep Slope over 18%
	Water Bodies





**Figure 7** Topographical Features of Belmore Road Precinct



## A.3 BIODIVERSITY AND RIPARIAN ASSESSMENT

### Biodiversity Assessment

Belmore Road Precinct is mostly biodiversity certified, where there is no obligation to retain any areas of Existing Native Vegetation (ENV). Nevertheless, there are clusters of good quality, mature trees adjoining the riparian corridors that would provide significant biodiversity and amenity outcomes if protected.

The Precinct has 25ha of Existing Native Vegetation (ENV) and approximately 34ha of vegetation that has Additional High Conservation Value (AHCVV). Much of this vegetation are distributed on land in or adjoining riparian corridors.

Number of significant environmental features are contained within these clusters of vegetation, including *Cumberland Plain Woodland* and *River-Flat Eucalypt Forest*.

*Cumberland Plain Woodland* is classified as a critically endangered ecological community under both the BC Act and EPBC Act. *River-Flat Eucalypt Forest* is classified as an endangered ecological community under the BC Act.

### Riparian Assessment

There is a total of 12.2ha of riparian corridor within the Precinct, of which, 10.8ha comprises validated first-order, second or third-order watercourses. These are predominantly within the central riparian corridor of the Precinct.

The riparian corridor at the core of the Precinct has riparian vegetation in good condition. This vegetation provides good habitat and contributes to bank stability.









The primary watercourse of the riparian corridor is categorised as Strathler stream order 2 and 3, with a designated buffer of 20-30m. This comprises approximately 9.7ha in land area.

The remaining riparian corridors across the precinct are first-order watercourses. Some of the mapped first order riparian corridors are removed as they had low environmental significance and/or did not have a defined creek bed. Subject to detailed field validation and NRAR review, there is an estimated total of 12.2ha of riparian zone across the Precinct.

#### KEY DIRECTIONS

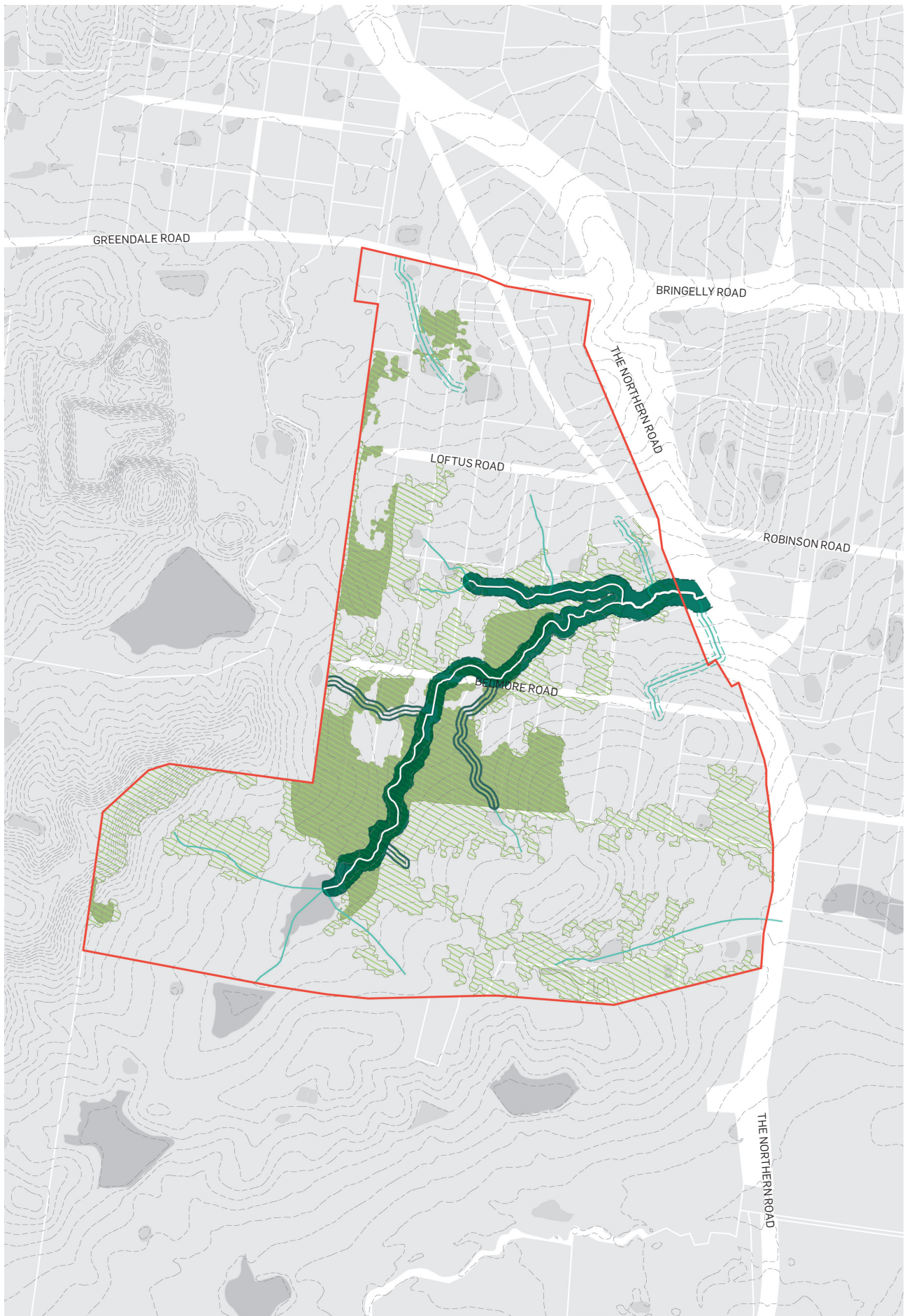
- 1 Retain the riparian corridor at the core of Belmore Road Precinct. Where possible, riparian zones should allow public access for recreational uses.
- 2 Protect High Conservation Value Vegetation along the riparian corridor.
- 3 Provide quality open space that builds upon the unique landscape experience offered by the riparian corridor.

#### LEGEND

	Belmore Road Precinct
	Field-Validated Areas
	Riparian Corridor to be retained (Top of bank with Strathler Stream Order 2 & 3)
	Validated Watercourses (Strathler Stream Order 1)
	Unlikelihood of a Watercourse/ Riparian Corridor (Strathler Stream Order 1)
	Not a Watercourse (Pending NRAR Approval)
	Existing Native Vegetation (ENV)
	Additional High Conservation Value Vegetation (AHCVV)

*Note: Based on field survey and validation within area identified on Figure 8 only. Remainder of Bringelly Precinct are based on desktop assessment.*





**Figure 8** Biodiversity and Riparian Corridor Plan





## A.4 FLOODING AND WATER CYCLE MANAGEMENT

J.Wyndham Prince's flood impact assessment indicated that there is no adverse flood impact external to Belmore Road Precinct, based on both 50% AEP and 1% AEP events.






**Figure 9** demonstrates that the existing flood extent within Belmore Road Precinct is contained within the creek lines, with slight increase in extent around existing farm dam locations.

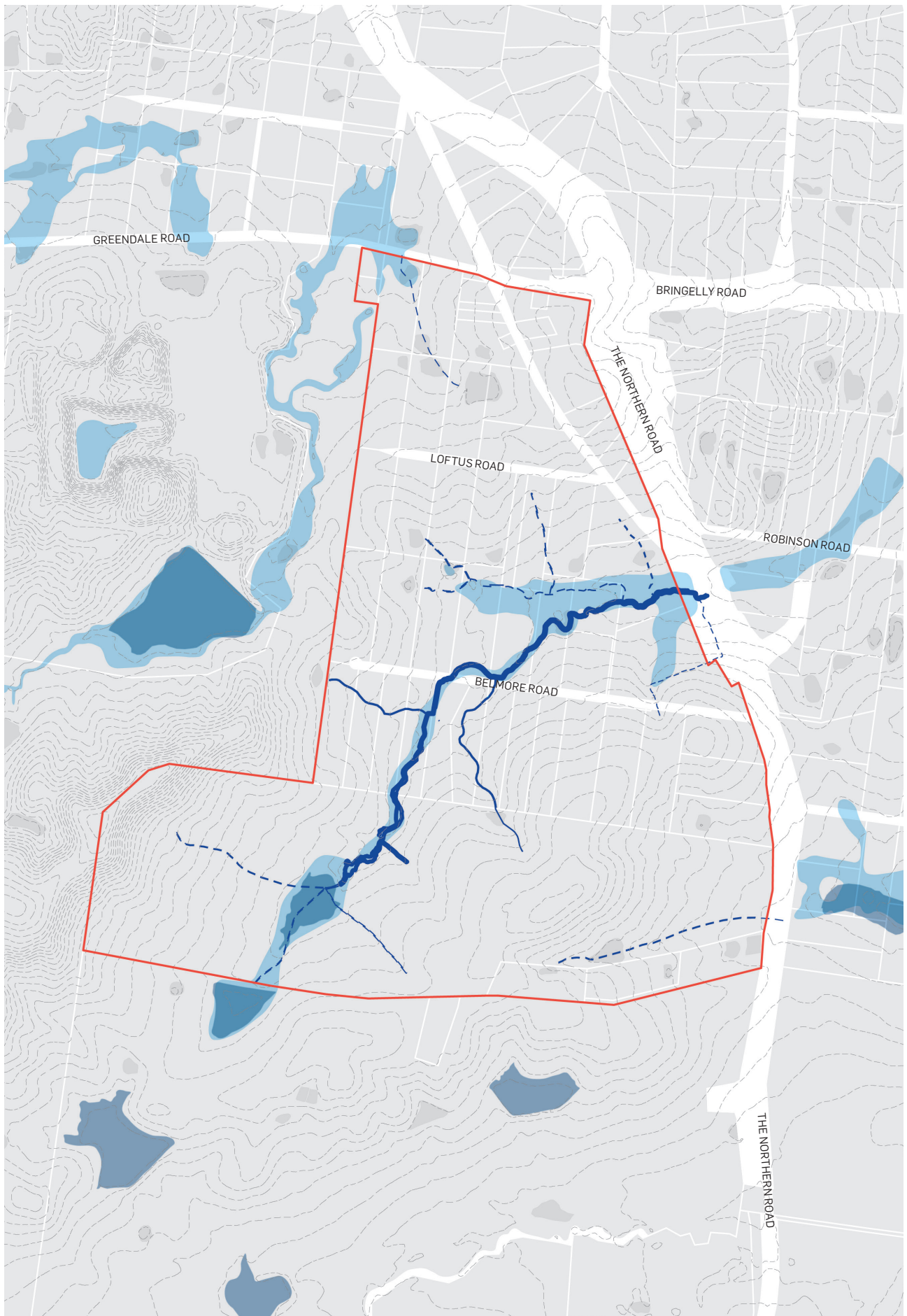
Increase local flood levels, generated by new development, will be managed through locating detention basins to appropriately manage flows back to the existing (pre-development) conditions.

### KEY DIRECTIONS

- 1 Strategically locate roads, open spaces and residential lands in response to the flood hazard ranking.
- 2 Utilise the presence of the riparian corridor and provide utilities that integrate well with the natural environment.

### LEGEND

	Belmore Road Precinct
	Top of Bank with Strathler Stream Order 2 & 3
	Not a Watercourse or Unlikelihood of a Watercourse
	Existing Dams
	1% AEP Extent



**Figure 9** Existing Flood Condition (1% AEP Events)








## A.5 BUSHFIRE ASSESSMENT

The required Asset Protection Zone (APZ) at Belmore Road is driven by the presence of the central riparian corridor, where a minimum of 16m is required.

Based on the vegetation and slope analysis across the Precinct, a minimum 12m APZ is required along the steep downslope areas along the western and southern boundary. Upslope or flat area with grassland will only require 10m.

These APZ can be achieved by providing perimeter roads as a protection buffer.

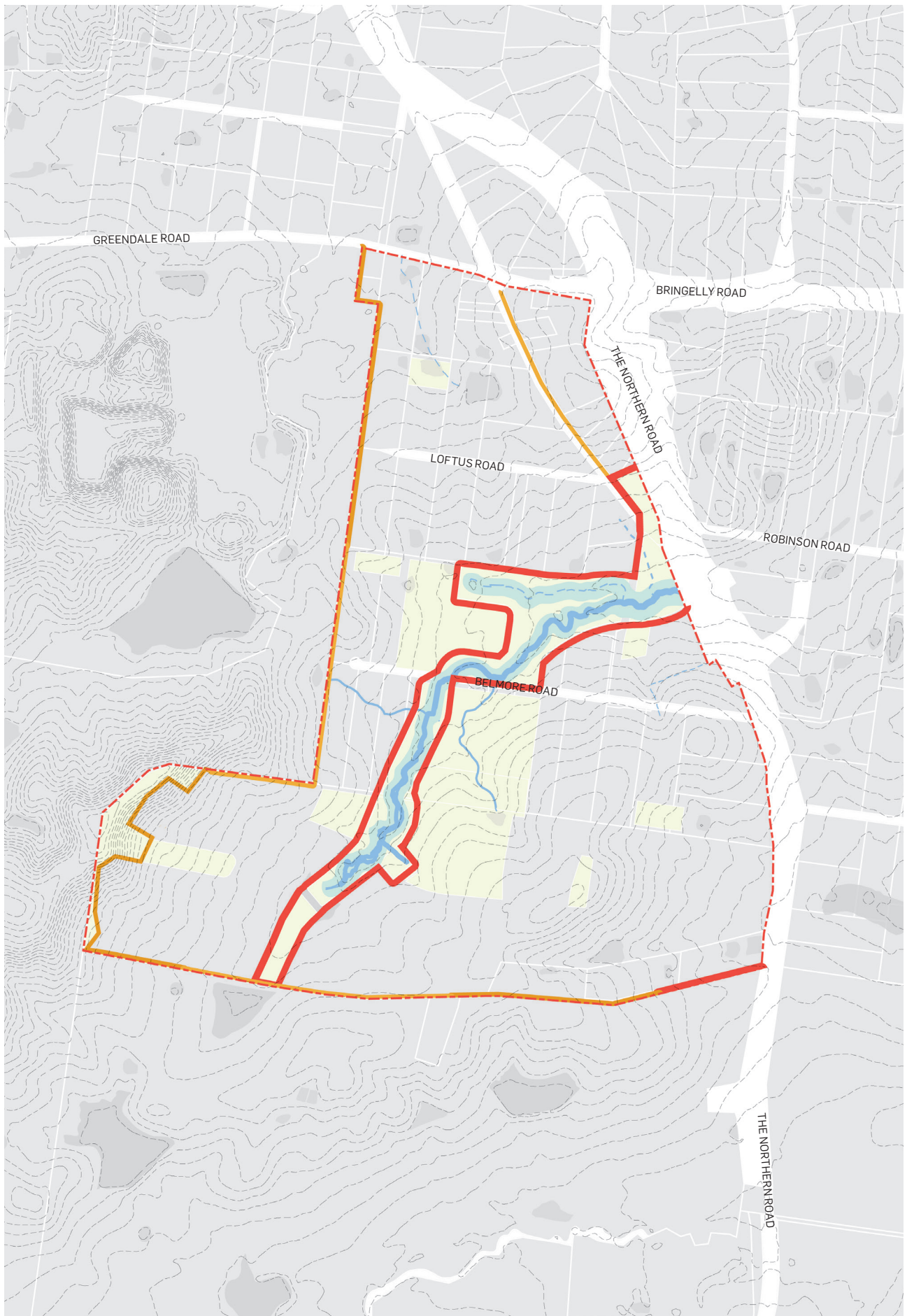
### LEGEND

	Belmore Road Precinct
	Indicative Proposed Open Space
	Asset Protection Zone 10m
	Asset Protection Zone 12m
	Asset Protection Zone 16m

### KEY DIRECTIONS

- 1 Provide road connection along the riparian corridor and precinct boundary. The road will form part of the minimum required APZ and a natural buffer to protect residential lands.





**Figure 10** Asset Protection Zone (APZ) Plan





## A.6 INDIGENOUS AND EUROPEAN HERITAGE

### Indigenous Heritage (Preliminary)

**Preliminary Aboriginal Archaeological Assessment has no indication of significant heritage items or sites that require conservation within Belmore Road Precinct.**

There is a total of 10 Aboriginal cultural heritage sites identified within the precinct. These include modified tree, artefacts and potential archaeological deposit as shown in **Figure 11**. Whilst there were no determination on the need to conserve specific heritage items, it is important to note that the Registered Aboriginal Parties (RAPs) see the entire Precinct as a cultural landscape.

As such, future detailed design of the Precinct will need to consult local Aboriginal community to identify opportunities to incorporate heritage protections, conservation zones, active heritage management, and ensure the design incorporates, responds and celebrates Aboriginal heritage values.

### European Heritage

**Belmore Road Precinct has a listed heritage item of local significance at the north-east corner of the precinct. This is known as the Fibro House (I2). Future development should consider the height and scale of new buildings to ensure any form of new development will be well integrated with the built form character of the heritage item.**



In the vicinity of the study area, there are local heritage items. These include Bringelly School at the north and Maryland Estate at the south. These heritage items collectively demonstrate the history, settlement and growth of the region.

Whilst views to and from the Precinct do not contribute to the significance of heritage items, sympathetic design should be in place to recognise the historical and social values of these heritage items.






### KEY DIRECTIONS

- 1 Elevate the presence of the riparian corridor at the centre of the Precinct and form a destinational experience along this corridor.
- 2 Further studies should be undertaken to determine the significance of the artefacts or Potential Archaeological Deposit (PAD) within the Precinct.
- 3 Provide an open space connection that celebrates the historical and social values of surrounding heritage items. This include the provision of clear visual corridors and pedestrian or cycle links along riparian corridors.
- 4 Enable adaptive reuse of the cottage (Fibro House) at the north-east of the precinct, and ensure future development in the immediate surround sensibly responds to the built form character of this heritage item.

### LEGEND

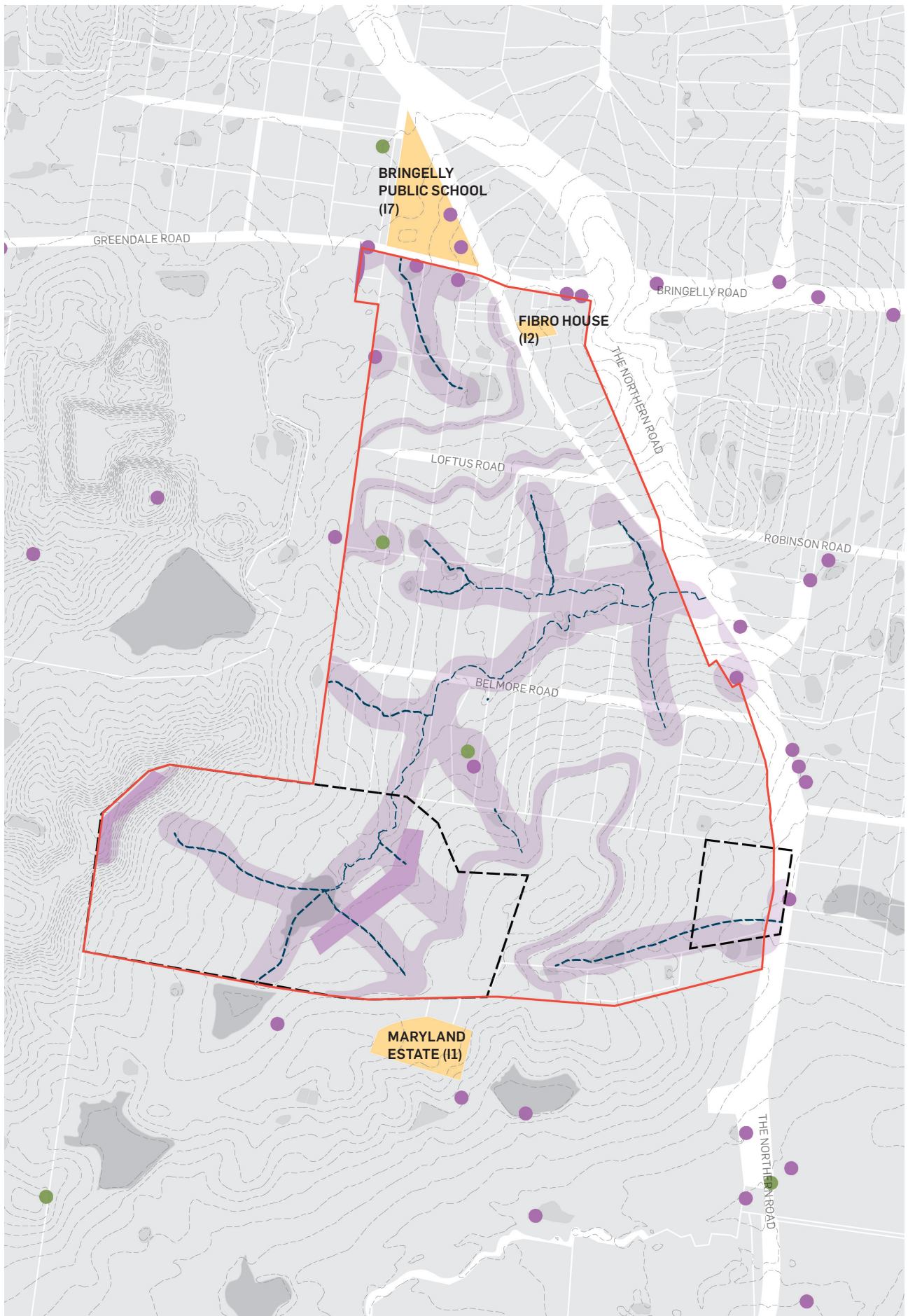
-  Belmore Road Precinct
-  Field Validated Areas

### Indicative Aboriginal Heritage Constraints

-  Artefacts, Potential Archaeological Deposit (PAD)
-  Modified Tree (Carved or Scarred)
-  Non Perennial Stream
-  Potential Archaeological Deposit
-  Moderate to High Archaeological Potential

### European Heritage Listings

-  Listed Heritage Items



**Figure 11** Indigenous and European Heritage Plan



## A.7 SOCIAL INFRASTRUCTURE

The allocation of social infrastructure within Belmore Road Precinct will need to consider the needs of future residents, students and workers. The Precinct will have to respond to the social planning of South West Growth Area, as well as the ecological and environmental asset of South Creek.

Existing social infrastructure is clustered around north of the Precinct. **Figure 12** overleaf illustrate the distribution of proposed facilities and amenities at Lowes Creek Maryland.

With an expectation that the Precinct will accommodate up to 10,498 additional residents, the following social infrastructure is recommended:

### Open Space, Sports & Recreation

<b>Total</b>	29.71 ha
<b>Active</b>	14.85 ha
<b>Passive</b>	14.85 ha
<b>Facilities</b>	
Sports ground	6 sports fields
Courts/ Multi-purpose Courts	up to 5-6 courts
Athletics Track	n/a
Leisure Centre	n/a









### Playgrounds

<b>Total</b>	Up to 5-6
<b>Large (district)</b>	2-3
<b>Small (local)</b>	2-3

### Education, Community and Cultural Facilities

<b>Neighbourhood Centre</b>	440m <sup>2</sup>
<b>Youth Recreation</b>	934m <sup>2</sup>
<b>School</b>	1 Government Primary School

### LEGEND

	Belmore Road Precinct
	School
	Community Centres
	Passive Open Spaces (Parks)
	Playing Fields
	Riparian Corridor
	Retail and Convenience
	Commercial

### KEY DIRECTIONS

- 1 Provide an open space program that is well connected and integrated with Bringelly Park, Bringelly Public School, and the proposed amenities and facilities at Lowes Creek Maryland.
- 2 Provide an open space program that offers range of leisure and recreational experience.
- 3 Provide a multi-purpose neighbourhood centre of approximately 440m<sup>2</sup> as community gathering/ meeting space.
- 4 Retain approximately 500m<sup>2</sup> in the open space provision as shared youth recreation space/ sporting organisation post, with the possibility to deliver an additional 500m<sup>2</sup> within the multi-purpose neighbourhood centre.





**Figure 12** Existing Social Infrastructure Plan



## A.8 RETAIL AND EMPLOYMENT

Existing distribution of centres in the South West Growth Area (SWGA) indicate an opportunity to relocate existing neighbourhood shops at Belmore Road Precinct to a more centralised location. This will enable the potential of the Precinct to form synergy with Badgerys' Creek Aerotropolis, i.e. through the provision of employment-based uses at the north.

Based on the retail demand assessment upon full capacity by 2056 and beyond, there is a demand for approximately 6,940m<sup>2</sup> of retail floorspace at the Precinct. A further 1,880m<sup>2</sup> of non-retail floorspace such as gyms and medical centres are recommended to be delivered in support of the retail operation.

Belmore Road Precinct can potentially support a double supermarket shopping centre and a neighbourhood convenience centre with a total GFA of 8,820m<sup>2</sup>.









The new centres at the Precinct would be anchored by two full-line supermarkets (4,700m<sup>2</sup>), supported by supported by 470m<sup>2</sup> of mini-major floorspace and 1,770m<sup>2</sup> of retail specialty floorspace.

The following table provides a summary of the recommended retail and complementary non-retail mix at Belmore Road Precinct.

### Recommended Retail and Complementary Non-Retail Mix at Belmore Road Precinct.

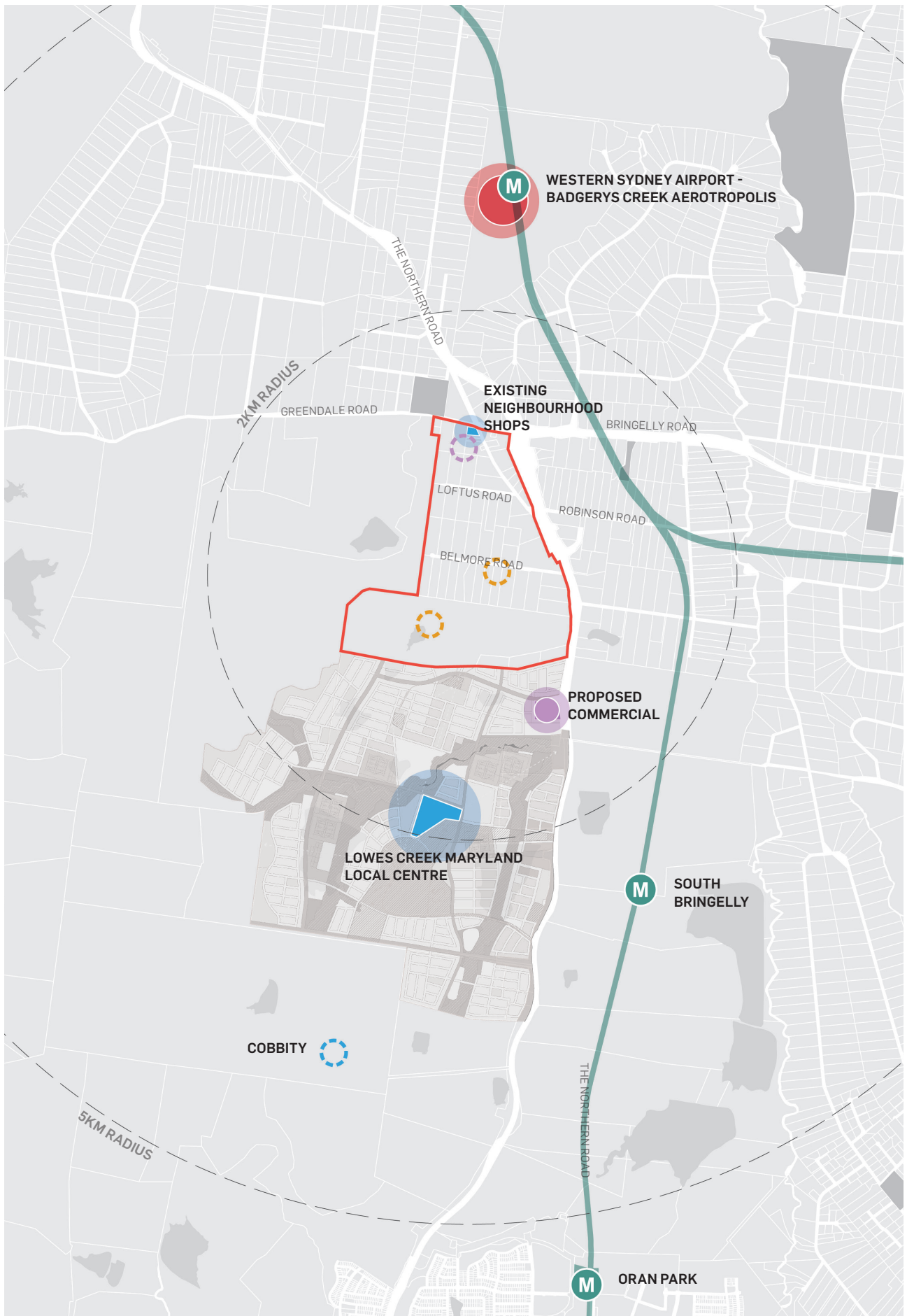
COMPONENT	GFA (M <sup>2</sup> )	%
<b>Retail</b>		
Supermarket	4,700	53%
Mini-majors	470	5%
Retail Specialties	1,770	13%
<b>Total Retail</b>	<b>6,940</b>	<b>71%</b>
<b>Total Non-Retail</b>	<b>1,880</b>	<b>29%</b>
<b>Total Retail</b>	<b>8,820</b>	<b>100%</b>

#### LEGEND

-  Belmore Road Precinct
-  Planned Centre
-  Existing Neighbourhood Centre
-  Proposed Local Centre
-  Proposed Commercial Area
-  Potential Supermarket-based Centre
-  Potential Neighbourhood Centre
-  Potential Employment Area

#### KEY DIRECTIONS

- 1 Provide a retail centre, capable of accommodating two supermarkets, at the core of Belmore Road Precinct, where is easily accessible from the north and south of the Precinct.
- 2 The centre should maximise the location of specialty shops along the north-south Collector Road with Belmore Road to create an active street environment.



**Figure 13** Centres Hierarchy Plan



## A.9 HOUSING DEMAND

DPE's recent population projections indicate that an additional 208,000 dwellings are required within the South West Region. This is equivalent to an average annual demand of 8,360 dwellings to 2041.

This dwelling demand is far exceeding the pipeline dwellings. There are approximately 25,000 dwellings being planned and delivered across the South West Region. These include Edmondson Park, Leppington and Oran Park.

Based on the required annual demand of 8,360 dwellings, the current supply pipeline only represents three-years of supply in the South West Region.

The location of South West Growth Area (SWGA) presents a great opportunity to provide new dwellings that is close to public transport and jobs. Belmore Road Precinct, in particular, has the potential to support a housing mix with higher-density typologies, with it's proximity to Western Sydney Aerotropolis.

Recent trend has proven the stability of the housing market activity at SWGA compared to North West Growth Area, with the presence of affordable option. This is evident through the growing number of younger purchasers, and the continued shift towards smaller lot and dwelling sizes.

The Atlas' housing market assessment report indicates that Belmore Road Precinct has the potential to support up to 4,211 dwellings, with would represent an average density of 33dw/ha.

The Precinct has the potential to accommodate additional 13,265 residents, based on an average household occupancy rate of 3.15. This only represent the market supportable rate of additional residents. Other physical constraints will need to be considered to identify the maximum new dwellings that the Precinct can deliver.


### Recommended Housing Mix

HOUSING TYPE	MIX (%)	LOT SIZE (M <sup>2</sup> )	HOUSEHOLD OCCUPANCY RATES
Lifestyle Lots	5%	450 - 600	3.6
Low Density Housing (Detached)	50%	300 - 450	3.4
Medium Density Housing (Attached/Terraces)	35-40%	150 - 200	2.9
High Density Housing (4-6 storeys)	5-10%	-	2.3

### KEY DIRECTIONS

- 1 Provide diverse housing types in response to the recommended housing mix.
- 2 Apartment to be located above the retail podium of the local centre.
- 3 Higher densities (35 to 50dw/ha) to be located within 200m of the local centre and open space.
- 4 Medium density (25 to 35dw/ha) to be located generally between 200m and 500m of the local centre and key open spaces.
- 5 Low density (15-25dw/ha) should be located in other areas.

### LEGEND

	Belmore Road Precinct
	Current Major Housing Estates
	South West Growth Area
	Existing Train Network
	Future Train Network
	Proposed Metro Connection





**DOUBLE STOREY TERRACE (268M<sup>2</sup>)**  
7.6m frontage x 33.5m depth



**DOUBLE STOREY DETACHED (303M<sup>2</sup>)**  
10m frontage x 30m depth



**DOUBLE STOREY TERRACE (253M<sup>2</sup>)**  
7.5m frontage x 34m depth



**LIFESTYLE LOTS (525M<sup>2</sup>)**  
15m frontage x 35m depth



**SINGLE STOREY DETACHED (303M<sup>2</sup>)**  
10m frontage x 30m depth

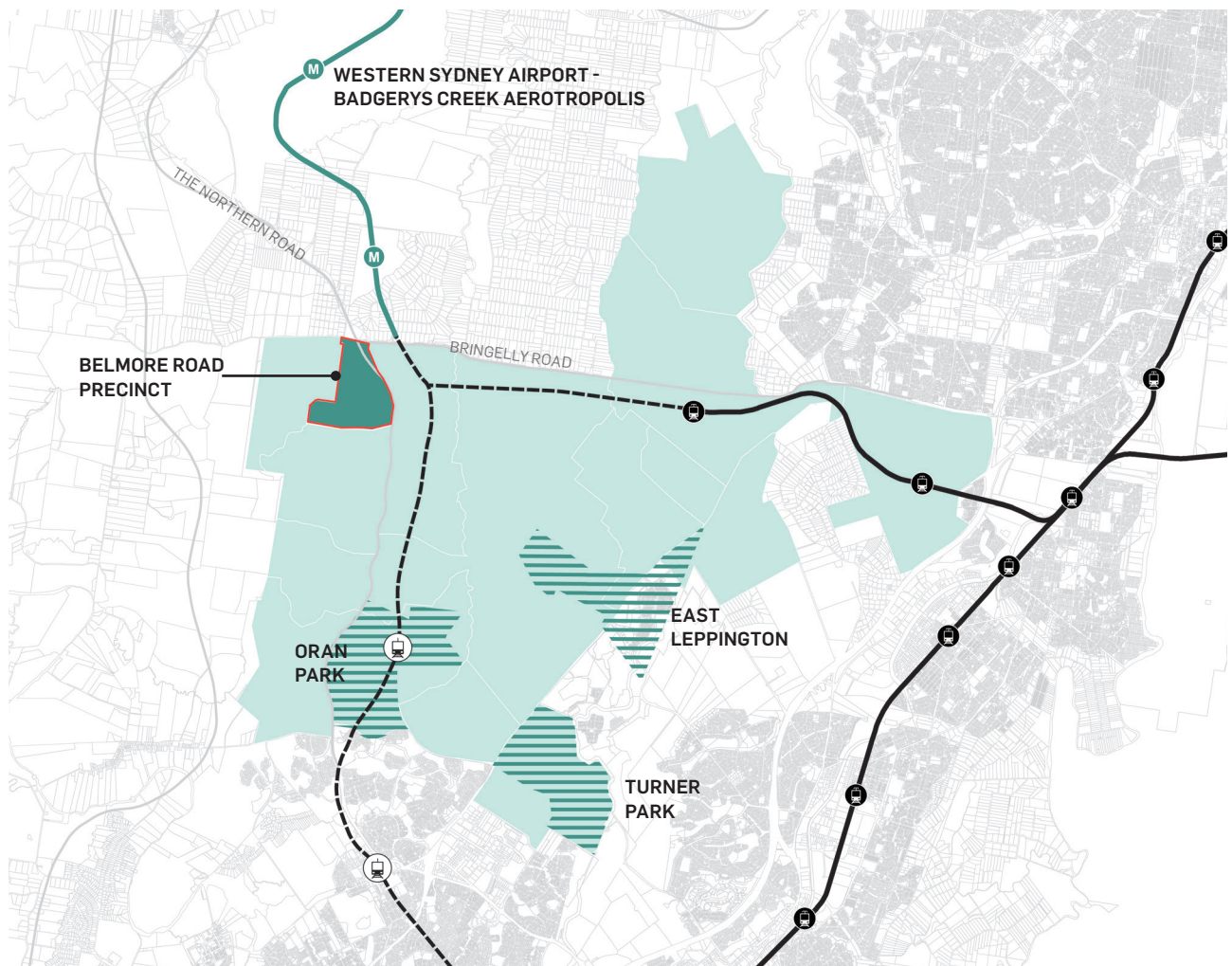


**DOUBLE STOREY DETACHED (386M<sup>2</sup>)**  
12.85m frontage x 30m depth

**Oran Park Town Estate**

**Gregory Hills Estate (Turner Park)**

**Willowdale and Emerald Hills**



**Figure 14** Current Major Housing Estates within South West Growth Area



## A.10 AIR QUALITY ASSESSMENT

The western boundary of Belmore Road Precinct may experience air quality impacts. This is associated with particulate emissions from the existing Bringelly Brickworks.

Bringelly Brickworks is one of the largest brick-making plants operated by Boral bricks. Whilst there was no odour detected in vicinity of the facility in the preliminary assessment, the air quality impacts are yet to be defined due to the uncertainty of Bringelly Brickworks' future operation.




In reference to the AQIA completed for the Bringelly Brickworks site in 2013 (Wilkinson Murray 2013), the main sources of emission could include:

- Emissions of hydrogen fluoride, hydrogen chloride, oxides of nitrogen and sulphur, carbon monoxides, particulate matter, some VOC's and metals from the brick kiln stack; and
- Dust emissions arising from the associated quarry operations.

The north-west of the Precinct will need to enable flexible land use option or prepare a mitigation strategies in response to the potential air quality impact from Bringelly Brickworks in future.

No other air emission sources, identified in **Figure 15**, pose an impact to Belmore Road Precinct.

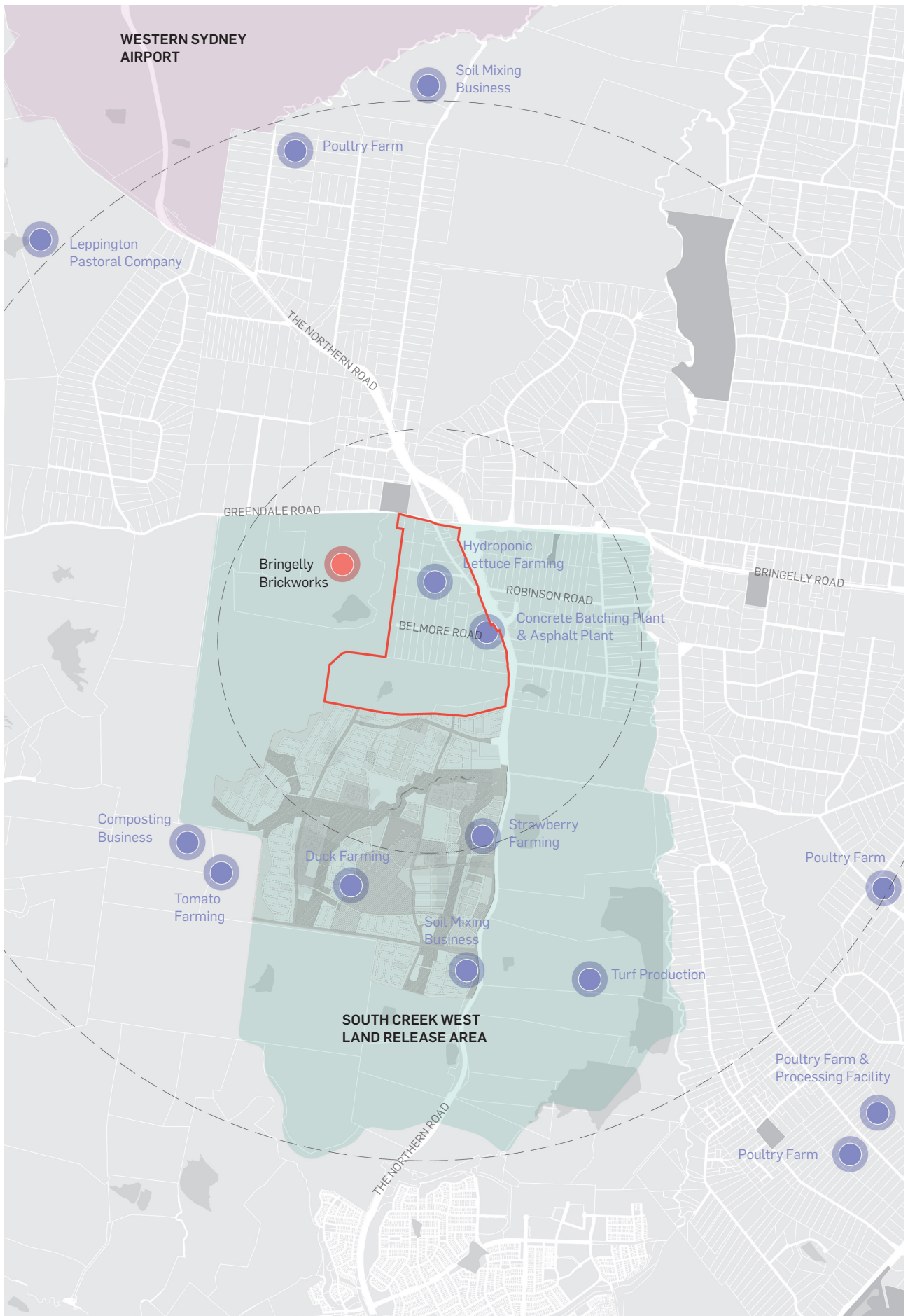
### LEGEND

- |   |                                |
|---|--------------------------------|
|  | Belmore Road Precinct          |
|  | Potential Air Emission Sources |
|  | Major Air Emission Source      |

### KEY DIRECTIONS

- 1 Mitigate the potential air quality impact from Bringelly Brickworks by incorporating landscape buffer along the western boundary of Belmore Road Precinct.
- 2 Conduct dispersion modelling study, dust deposition and PM10 monitoring campaigns to confirm the level of air quality impact from Bringelly Brickworks, in the detailed design phase.





**Figure 15** Potential Air Emission Sources





## A.11 NOISE AND VIBRATION IMPACT ASSESSMENT

The noise level assessment indicated that majority of Belmore Road Precinct is capable of complying with applicable noise criteria without additional noise control measures.

For some areas along the Northern Road, however, will require additional architectural treatments to ensure compliance with acoustic criteria.

Apart from traffic noise along the Northern Road, the following additional sources of noise impact have been considered:

- Proposed Western Sydney Airport
- Proposed Sydney Metro - Western Sydney Airport rail corridor
- Bringelly Brickworks








None of these poses immediate impact to the Precinct.

**Figure 16** illustrate the potential noise impact towards principal private open space (at 1.5m), based on following assumptions:

- 2041 traffic volume along the Northern Road
- 2-storeys dwellings are located along the Northern Road

This can be mitigated by locating buildings around open spaces, where it creates a natural shielding effect from noise.

### LEGEND

	Belmore Road Precinct
	< = 50
	> 50
	> 55
	> 60
	> 65
	70 - 75

### KEY DIRECTIONS

- 1 Provide physical noise controls along the eastern boundary, in the form of acoustic fencing and potential earthworks/berms.
- 2 Arrange individual lots within the superlots in a way that maximises shielding effects for principal private open spaces.
- 3 Provide architectural treatments to dwellings such as alternative ventilation and upgraded glazing.



**Figure 16** Traffic Noise Level to Principle Private Open Areas  
(Day Traffic Noise Level at 1.5m includes +2.5 dB)

1:7,500 @ A4  
0 100 200 300 400

## A.12 ELECTRICITY, TELECOMMUNICATIONS AND GAS

Existing servicing infrastructure in vicinity of Belmore Road Precinct and the review of current and planned projects have indicated that the Precinct can adequately be serviced with water, sewer, electrical, gas and telecommunication infrastructure.

### Bringelly Zone Substation

Endeavour Energy currently operates Bringelly Zone Substation, at the north-west corner of the Precinct. This would be retained as the main substation servicing the Precinct.

Bringelly Zone substation has considerable residual capacity that could be used to supply electricity for the Precinct. Whilst this residual capacity is not guarantee for the Precinct, the significant infrastructure investment across the SWGA and WSA will secure capacity to support future development. Electricity for subsequent stages of development within Belmore Road Precinct can be supplied by constructing new high voltage feeders from the Oran Park or North Leppington substations within the standard shared trench allocation in the road reserve.

### Water and Sewer

The Precinct is currently not serviced by the Sydney Water Potable water network, nor the sewer network.

It is proposed that new water mains will be constructed within the standard shared trench allocation in the reserve of all new roads within the site. Truck supply will be delivered by a 300mm ring main, constructed along key Collector Roads within the Precinct, with smaller reticulation mains constructed along Local Roads to service the dwellings. No potable water lead ins will be required to service the Precinct.

Belmore Road Precinct has three sewer catchments. Sydney Water's Growth Servicing Plan (SWGSP) indicates that the northern parts of the SCW release area are in the strategic planning phase. IDC Consulting has provided three servicing options for the precinct. These options are strategies that will allow precinct development to progress ahead of the regional Sydney Water infrastructure.

### Gas & Telecommunication











Belmore Road Precinct is currently not serviced by the Jemena natural gas network. Should gas be required for future development within the Precinct, it is likely that the truck infrastructure servicing Oran Park dwellings will be extended. The gas servicing requirements for the Precinct will be confirmed with Jemena.

The Precinct will be serviced by NBN Co. fixed line connection. This has been constructed in mid-2020, and the Fibre to the Curb technology is being implemented.

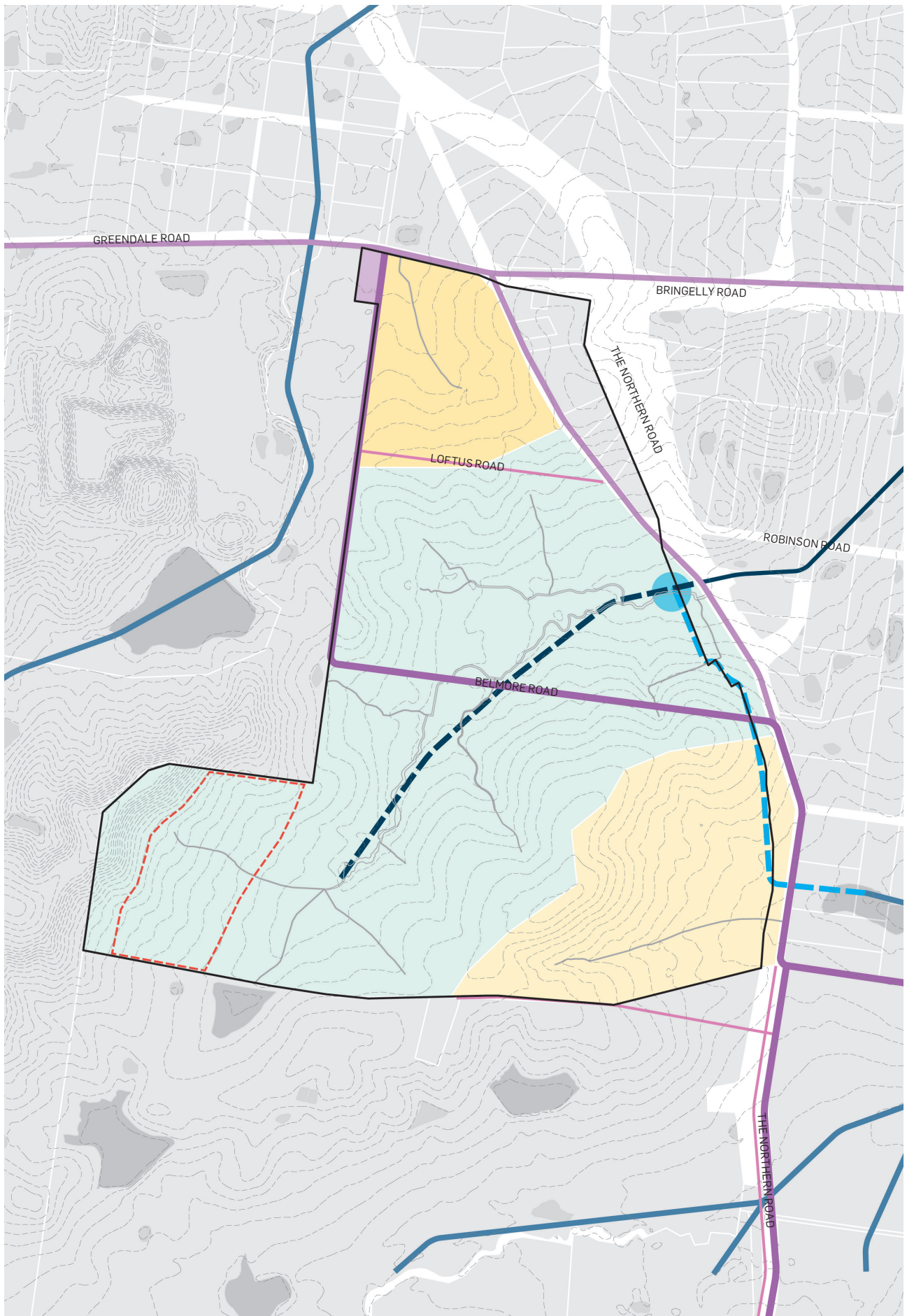
### KEY DIRECTIONS

- 1 Construct development in stages that align with the Infrastructure Servicing Strategy. This is to ensure any future development, particularly, new dwellings are supported by adequate services and utilities.

### LEGEND

	Belmore Road Precinct
	Bringelly Zone Substation
	Potential Area for Sewer Irrigation (up to 500 lots)
	High Voltage Feeders of 11kV
	High Voltage Feeders of 33kV
	High Voltage Feeders of 132kV
	Proposed Internal Sewer Pump Station
	Proposed Gravity Main
	Proposed Rising Main
	Proposed Truck Gravity Main





**Figure 17** Utilities Plan (Electricity and Telecommunications)

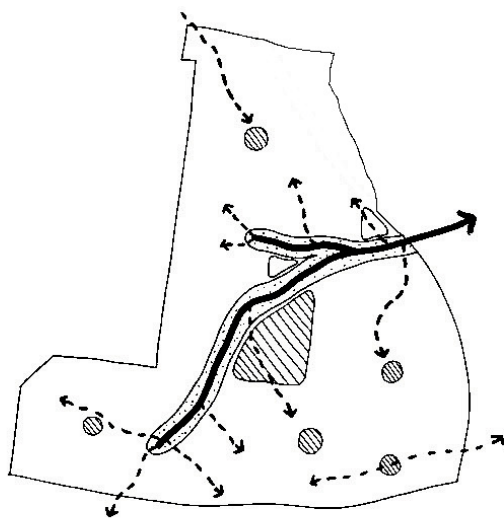




# **PART B:** **REVISED** **INDICATIVE** **LAYOUT PLAN**

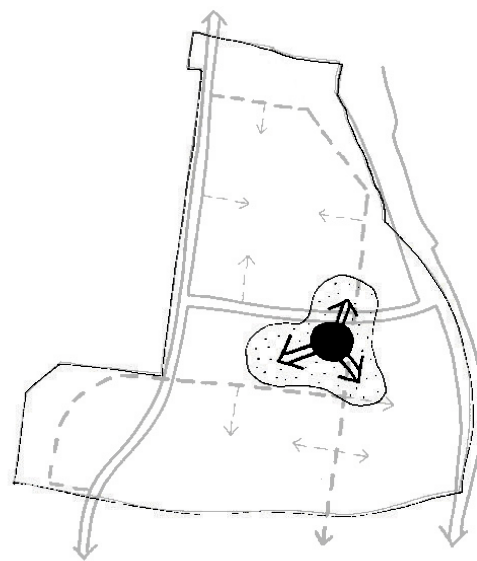


## B.1 VISION AND DESIGN PRINCIPLES



### Seamless Integration with the Blue, Green and Ochre Grids

Enhancing distinctiveness of the place through the grids, whilst promoting a healthier, liveable, and sustainable environments for future communities.



### A Well Defined and Active Community Hub at the heart of the Precinct

Designing a local centre that supports lifestyle convenience, leisure and entertainment, through a vibrant mix of land uses, services and facilities.

## BELMORE ROAD PRECINCT VISION STATEMENT

Belmore Road Precinct is Camden's Gateway to the Western Sydney Aerotropolis. Building on its foundations as a place with rich heritage and landscape character. The Precinct will reflect best practice in design and environmental outcomes in greenfield communities.

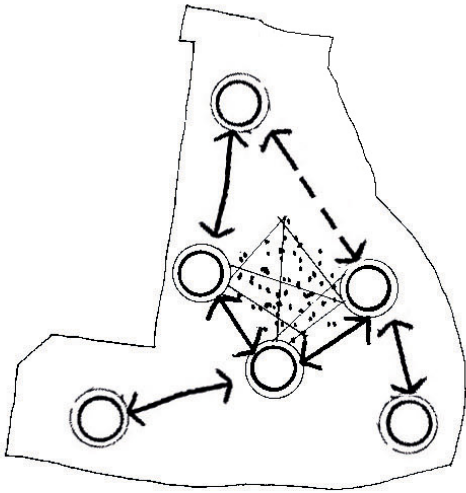
It will be a place where the natural environment integrates seamlessly with the built environment, providing a direct link to the early landscape character of Camden. This new amenity-led neighbourhood will provide much needed housing to many new high order jobs earmarked for the Western Sydney Aerotropolis. New housing within Belmore Road Precinct will support Greater Sydney Commission's vision of a 30-minute city come to fruition, by placing residents close to jobs, education and health facilities, services and great places.

Belmore Road Precinct will exemplify a dynamic and thriving community where residents live in healthy and walkable neighbourhoods served by well-maintained public spaces and facilities, including parks, school, library and recreational space. Residents will be offered a variety of housing choices to match all income levels and lifestyles.

At the heart of the neighbourhood is a dense, active and vibrant local centre, with a mix of land uses and services for convenience. The centre creates a focal point for the community and encourages social gathering and interaction within the Precinct.

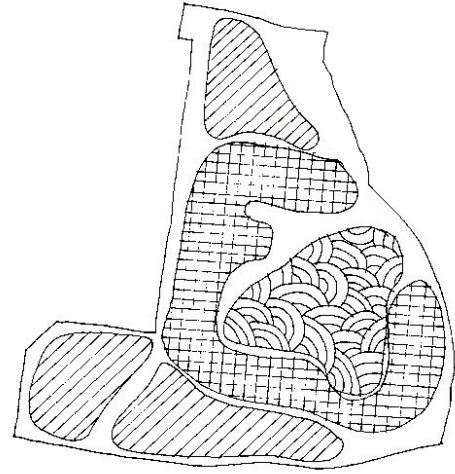
Belmore Road Precinct has a highly connected, and permeable network with convenient access to public transport, public spaces, facilities, and amenities. The road network has been designed to respond to all forms of public transport investments overtime. This allows the precinct to iteratively evolve and respond as the Aerotropolis and surrounding communities, such as Lowes Creek Maryland, develop and grow. Cycleways and footpaths will connect across the Precinct to promote a walkable community.

Belmore Road Precinct celebrates its natural environment through the dedicated conservation of important trees and riparian corridors. Embracing natural green systems has multiple benefits for the community, as it creates cool and attractive built environments, it reduced the impacts of the urban heat island effect, it promotes climate resilience and it enhances biodiversity. Through good housing design with energy efficient measures and the right orientation and location, the Precinct can deliver on low carbon and low energy aspirations.



#### Series of Interconnected Neighbourhood Hubs

Dividing the precinct into a series of smaller, walkable, and interconnected neighbourhood, each with their own unique place characteristics and local amenity.



#### Provision of Housing Diversity and Choice

Catering to variety of household types and needs by providing housing diversity and choice.

**"BELMORE ROAD PRECINCT EXEMPLIFIES A THRIVING COMMUNITY WHERE RESIDENTS LIVE IN HEALTHY NEIGHBOURHOODS SERVED BY WELL-MAINTAINED PUBLIC SPACES AND FACILITIES, SUCH AS LIBRARIES, SCHOOLS AND RECREATION AREAS, ALL WITHIN WALKING DISTANCE."**

## B.2 INDICATIVE LAYOUT PLAN

### LEGEND



#### Belmore Road Precinct

Belmore Road Precinct has a total area of 196ha.



#### Primary Watercourse

The primary watercourse of the riparian corridor is categorised as Strathler stream order 2 and 3.



#### Riparian Corridor

This Riparian Corridor represents a provided buffer of 20-30m for the primary watercourse.



#### Playing Fields

There are three double playing fields located close to the riparian corridor. The size ranges between 5.0ha and 5.5ha. These sporting fields enhance the overall open space network and support the provision of double playing fields. One (1) of the double playing fields will be co-located with the village centre, south of Belmore Road.



#### Local Parks

Parks are distributed across the Precinct based on every 400m radius. These local parks ranges between 0.5ha and 3.7ha.

#### Open Space - Tree Retention



The areas identified for tree retain a maximum of 30% of open space for trees while still allowing passive uses.



#### Neighbourhood Centre

The Neighbourhood Centre will support approx. 5,900m<sup>2</sup> of retail floorspace in GLA, including 1,500m<sup>2</sup> of retail specialties, 400m<sup>2</sup> of mini major and an additional 1,600m<sup>2</sup> of non-retail, convenience-based facilities.

The Neighbourhood Centre will have a maximum height of 4-storeys including 1-storey retail podium and up to 3-storeys residential apartments.



#### School

A government public school (approx. 2ha) is co-located with the playing fields and the village centre, where future multi-purpose community centre will be located.



#### Employment Precinct

The northern end of the Precinct is dedicated for employment generating uses to response to the Employment-based Precinct at Badgers Creek.



#### Heritage Listed Site

The existing cottage on-site is identified as a heritage item of local significance, formerly known as the Fibro House (I2).



#### Bringelly Zone Substation

The operation of Bringelly Zone Substation will be retained, with an opportunity to expand in the future.



#### SP2 Drainage

Six (6) drainage basins have been proposed to appropriately manage water flows. Three (3) of these are integrated with the riparian corridor, with two (3) others located at the north and south-west of the Precinct.

These are designed with dual-use functionality, where it could support passive recreational uses and be treated as an open space.



#### Bio-retention Raingardens

Eleven (11) bio-retention raingardens are located across the Precinct to manage stormwater quality runoff.



#### Sub-Arterial Road

Belmore Road will be the main access route to Belmore Road Precinct. It will be upgraded as a sub-arterial road.

A new sub-arterial road is proposed along the western boundary to provide a north-south connection from Lowes Creek Maryland to Greendale Road.



#### Collector Road

Loftus Road will be upgraded as a collector road, servicing the northern portion of the Precinct. One (1) new north-south collector road is proposed at the east of the Precinct, connecting the southern sub-arterial road at Lowes Creek Maryland to Wentworth Road and Loftus Road.



#### Low Density Residential (LDR) Band 1

LDR-Band 1 (ranging between 10-20dw/ha) is located at the north and south of the Precinct.



#### Low Density Residential (LDR) Band 2

LDR-Band 2 (ranging between 20-25dw/ha) is located around high amenity area, e.g., along riparian corridor and around local parks or playing fields.



#### Medium Density Residential (MDR) Band 1

MDR-Band 1 (ranging between 25-35dw/ha) is distributed within 500m radius of the Local Centre. It acts as a transition zone between the MDR Band 2 and LDR areas.



#### Medium Density Residential (MDR) Band 2

MDR-Band 2 is located around the local centre, typically within 200m radius. The density typically ranges between 35-60dw/ha.



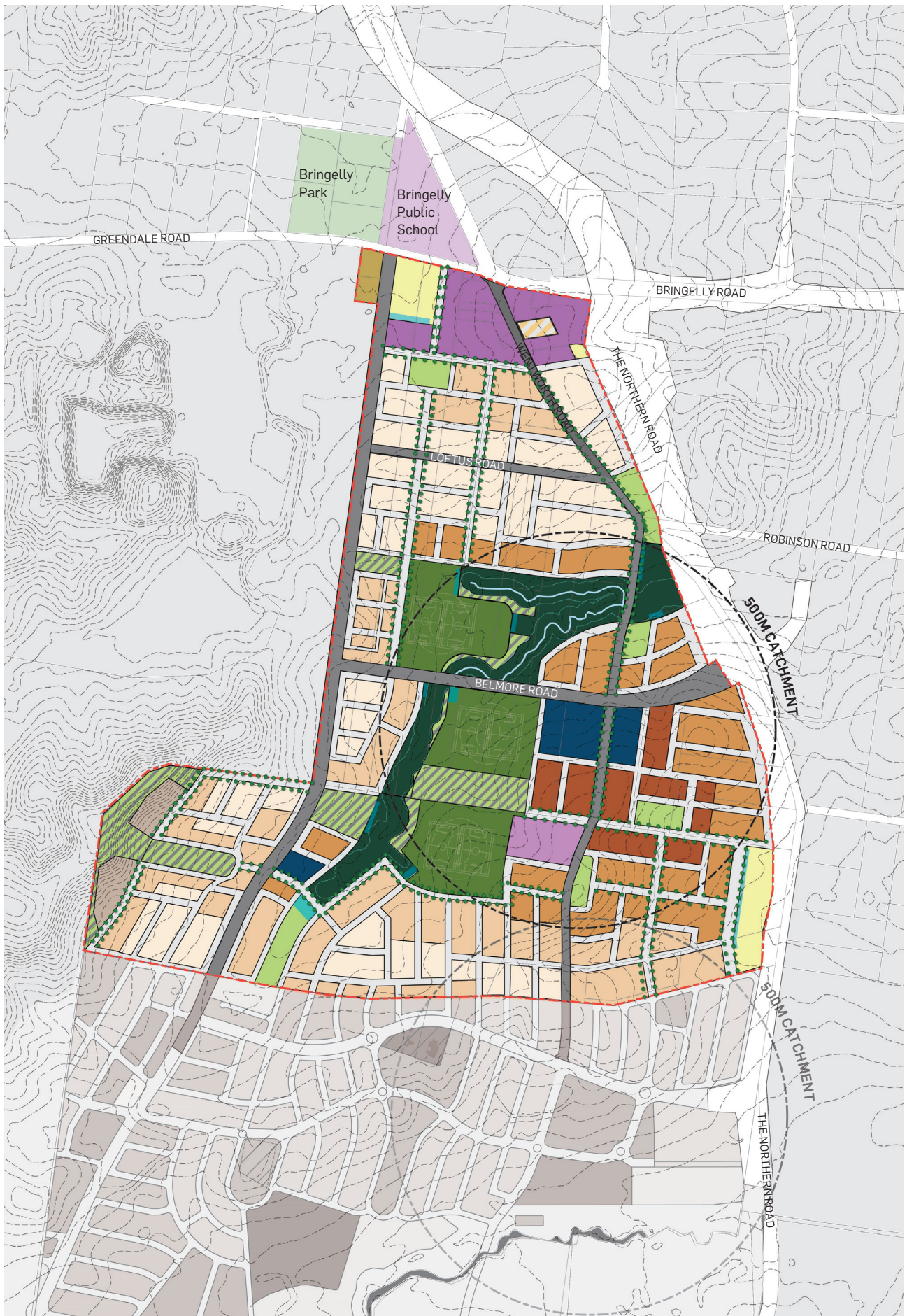
#### Environmental Living

EL band with a maximum of 10dw/ha.



#### 500m Village Centre Walking Catchment

















**Figure 18** Belmore Road Precinct Indicative Layout Plan (ILP)



### B.2.1 BRINGELLY PRECINCT LAND USE COMPOSITION

Belmore Road Precinct ILP has 3 main land use categories, with close to 58% designated for future dwellings, community infrastructure and local centre. The future community living at the Precinct is supported by access to green space, with 25% of the land dedicated to riparian corridor, local parks, playing fields and landscaping.

The table below provides an overview of the land use mix at Belmore Road Precinct.

Land Uses	Area (Ha)	% of Belmore Road Precinct
 <b>Belmore Road Precinct</b>	<b>190.66 Ha</b>	<b>100%</b>
<b>Community Living</b>		
 Residential*	109.8	58%
 Local Centre	4.7	2.5%
 Education Establishment (e.g. primary school)	2.0	1.0%
<b>Infrastructure and Employment</b>		
 Road*	18.39	10%
 Substation	0.80	0.4%
 Employment Land	7.33	3.8%
<b>Landscape</b>		
 Riparian Corridor	14.0	7.3%
 Local Parks	4.70	2.5%
 Open Space - Tree Retention (RE1 Zone)	8.35	4.2%
 Playing Fields	16.04	8.4%
 Drainage Basins	4.55	2.4%

\*Notes:

(1) Residential: represents the net developable area which include half of the road reserve.

(2) Road: represents the additional road infrastructure within the precinct including Sub-Arterial Road, and half of the road reserve along parks and riparian corridors.

**Figure 19** is a land use plan that illustrates the distribution of these land uses across Belmore Road Precinct.





**Figure 19** Land Use Plan





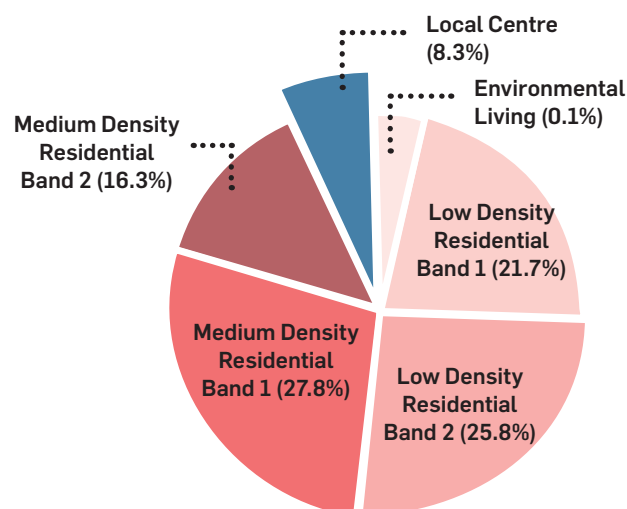
## B.3 DENSITY STRATEGY

Belmore Road Precinct ILP proposes approximately 3,371 dwellings, with an average household size of 3.2 persons. New dwellings will be delivered in the form of detached housing, attached dwellings (semi-detached or rear access terraces) and apartment units.

Figure 22 illustrates the density distribution of Belmore Road Precinct. Each density has a mix of housing types.

The following density range has been proposed:

HOUSING TYPES & LOT SIZES	DENSITY RANGE (DW/HA)	AREA (HA)	MAXIMUM YIELD (DWELLING)	% OF BELMORE ROAD PRECINCT
<b>Environmental Living</b>	5 - 10	2.4	2	0.1%
<ul style="list-style-type: none"> <li>Detached Housing (1000m<sup>2</sup>)</li> </ul>				
<b>Low Density Residential Band 1</b>	10 - 20	36.5	731	21.7%
<ul style="list-style-type: none"> <li>Large Detached Housing (450-600m<sup>2</sup>)</li> <li>Detached Housing (350-450m<sup>2</sup>)</li> </ul>				
<b>Low Density Residential Band 2</b>	20 - 25	34.9	871	25.8%
<ul style="list-style-type: none"> <li>Large Detached Housing (450-600m<sup>2</sup>)</li> <li>Detached Housing (350-450m<sup>2</sup>)</li> <li>Attached: Semi-detached / Rear (150-350m<sup>2</sup>)</li> </ul>				
<b>Medium Density Residential Band 1</b>	25 - 35	26.8	937	27.8%
<ul style="list-style-type: none"> <li>Large Detached Housing (450-600m<sup>2</sup>)</li> <li>Detached Housing (350-450m<sup>2</sup>)</li> <li>Attached: Semi-detached / Rear (150-350m<sup>2</sup>)</li> </ul>				
<b>Medium Density Residential Band 2</b>	35-60	9.2	549	16.3%
<ul style="list-style-type: none"> <li>Detached Housing (350-450m<sup>2</sup>)</li> <li>Attached: Semi-detached / Rear (150-350m<sup>2</sup>)</li> <li>Units (Low-rise, walk-up apartments)</li> </ul>				
<b>Apartments (above retail podium of local centre)</b>	60	4.7	280	8.3%
<ul style="list-style-type: none"> <li>2-3 storeys apartment</li> </ul>				
<b>TOTAL</b>	-	-	<b>3,371</b>	<b>100%</b>

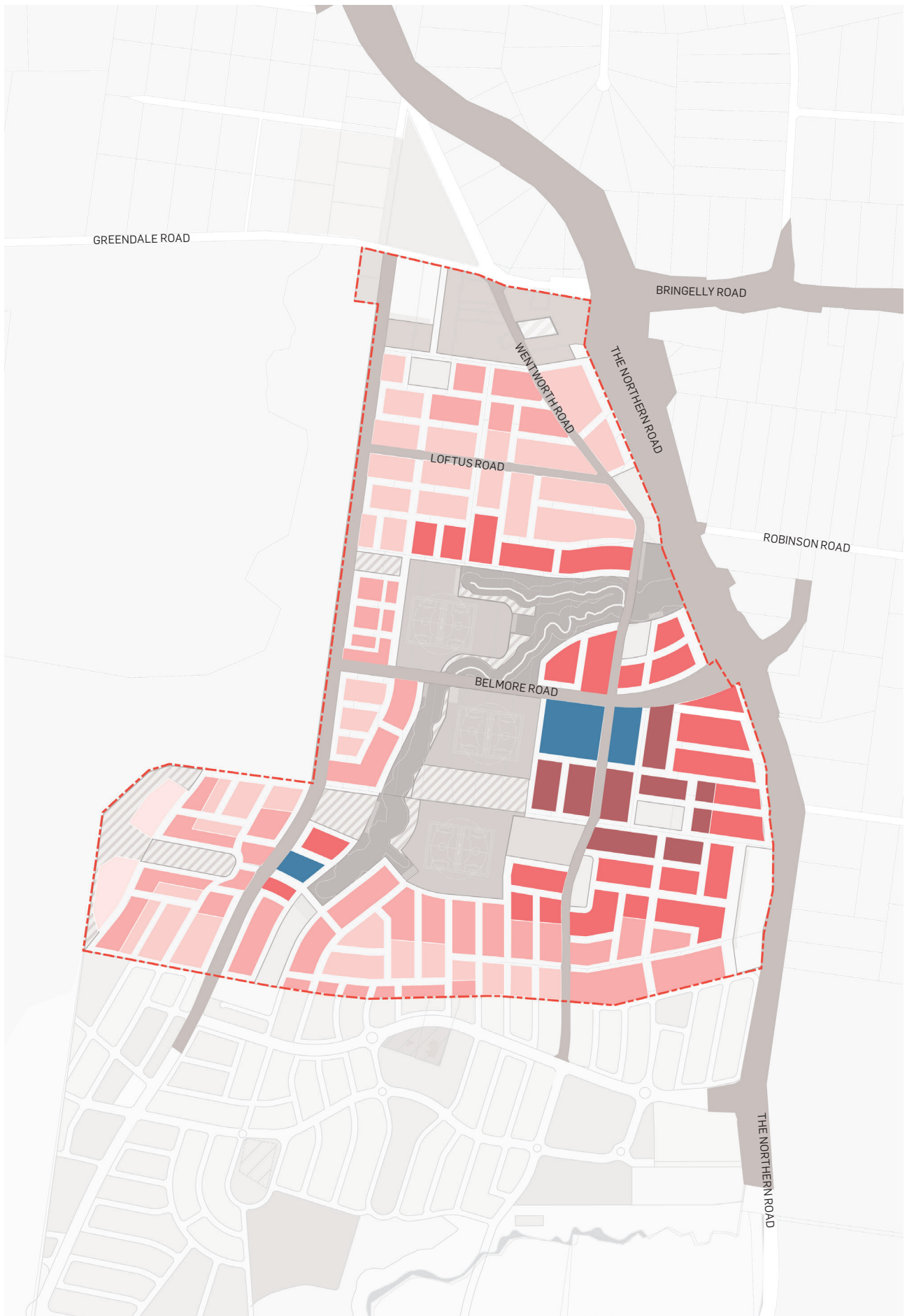


The adopted density ranges (bands) and housing mix within each band are informed by a density study. This density study is developed with reference to the Low Rise Housing Diversity Design Guide, Low Rise Medium Density Design Guide and the Apartment Design Guide.

The following pages illustrate the density study summary and the resulting mix and dwelling yield at Belmore Road Precinct. The density study demonstrates the typical lot sizes and density of different housing typologies and the possible end products.

### LEGEND

	Belmore Road Precinct
	Environmental Living
	Low-Density Residential Band 1
	Low-Density Residential Band 2
	Medium Density Residential Band 1
	Medium Density Residential Band 2
	Local Centre (Mixed-use Residential)



**Figure 20** Residential Density Plan



**Density** means the net developable area in hectares of the land on which the development is situated, divided by the number of dwellings proposed to be located on that land.

**Net Developable Area** means the land occupied by the development, including internal streets plus half the width of any adjoining access roads that provide vehicular access, but excluding land that is not zoned for residential purposes.

## ASSUMPTIONS

**Net Developable Area (HA)** 1 HA

**Superlot (ha/m<sup>2</sup>)** 0.7 HA  
(7,000m<sup>2</sup>)

Road reserves,  
open spaces etc. 0.3 HA

Housing Typology	Apartments *	Attached/ Terraces	
		 	
<b>Average Lot Size</b>	Minimum Development Site Area of 1,500m <sup>2</sup>	150	200
<b>Average # of Lots (per ha)</b>	-	47	35
<b>Density (dw/ha)</b>	-	46.7	35.0
<b>Typical Lot Dimension</b>	2-3 beds	5 x 30	6.5 x 30
<b>Height of Building</b>	4-6 Storeys	2 Storeys	2 Storeys
<b>Example Products</b>	Mix of the following <ul style="list-style-type: none"> <li>• Studio 35m<sup>2</sup></li> <li>• 1-Bed 50m<sup>2</sup></li> <li>• 2 Beds 70m<sup>2</sup></li> <li>• 3 Beds 90m<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Rear Loaded</li> <li>• 1 Car Garage</li> <li>• 2 Beds</li> </ul>	<ul style="list-style-type: none"> <li>• Rear Loaded</li> <li>• 2 Car Garage</li> <li>• 3 Beds</li> </ul>

\* The design of apartment buildings will need to refer to NSW Apartment Design Guide (ADG).





## Semi-detached Housing

## Detached Housing



250	300	350	400	450	600
28	23	20	18	16	12
28.0	23.3	20.0	17.5	15.6	11.7
8.5 x 30	10 x 30	12 x 30	13.5 x 30	15 x 30	20 x 30
2 Storeys	2 Storeys	1-2 Storey	1-2 Storey	1 Storey	1 Storey
<ul style="list-style-type: none"> <li>• Front Loaded</li> <li>• 1 Car Garage</li> <li>• 4 Beds</li> </ul>	<ul style="list-style-type: none"> <li>• Front Loaded</li> <li>• 1 Car Garage</li> <li>• 4 Beds</li> </ul>	<ul style="list-style-type: none"> <li>• Front Loaded</li> <li>• 3 Car Garage</li> <li>• 4 Beds</li> </ul>	<ul style="list-style-type: none"> <li>• Front Loaded</li> <li>• 3 Car Garage</li> <li>• 4 Beds</li> </ul>	<ul style="list-style-type: none"> <li>• Front Loaded</li> <li>• 2 Car Garage</li> <li>• 4 Beds</li> </ul>	<ul style="list-style-type: none"> <li>• Front Loaded</li> <li>• 2 Car Garage</li> <li>• 4 Beds</li> </ul>

### B.3.1 APPROACH TO HOUSING DIVERSITY

#### SUMMARY OF DWELLING MIX WITHIN DENSITY BANDS

Each density band has adopted a mix of housing typologies to achieve housing diversity at Belmore Road Precinct. Table below provides a summary of the dwelling yield at Belmore Road Precinct. The Precinct has the potential to deliver up to 3,371 dwellings with the following housing mix:

**Table 1** Density Bands and Dwelling Mix at Belmore Road Precinct

AVERAGE HOUSEHOLD SIZE (PEOPLE/DW)	DWELLING TYPE	LOT SIZE (M <sup>2</sup> )	ENV. LIVING	LOW DENSITY BAND 1	LOW DENSITY BAND 2	MEDIUM DENSITY BAND 1	MEDIUM DENSITY BAND 2	VILLAGE CENTRE (2-3 STOREYS APARTMENT)
3.6	Detached Large	450 - 600	100%	25%	10%	5%		
3.4	Detached	350 - 450		75%	80%	50%	30%	
2.9	Attached -Semi detached / Rear	150 - 350			10%	45%	50%	
2.3	Units	-					20%	100%
			100%	100%	100%	100%	100%	100%

**Table 2** Residential Yield at Belmore Road Precinct

AVERAGE HOUSEHOLD SIZE (PEOPLE/DW)	DWELLING TYPE	LOT SIZE (M <sup>2</sup> )	ENV. LIVING	LOW DENSITY BAND 1	LOW DENSITY BAND 2	MEDIUM DENSITY BAND 1	MEDIUM DENSITY BAND 2	VILLAGE CENTRE (2-3 STOREYS APARTMENT)	TOTAL YIELD	% OF YIELD	TOTAL POP.
3.6	Detached Large	450 - 600	2	183	87	47			317	9%	1,140
3.4	Detached	350 - 450		548	697	469	165		1,879	56%	6,388
2.9	Attached -Semi detached / Rear	150 - 350			87	422	275		784	23%	2,273
2.3	Units	-					110	280	390	12%	898
	<b>TOTAL</b>		<b>2</b>	<b>731</b>	<b>871</b>	<b>937</b>	<b>549</b>	<b>280</b>	<b>3,369</b>		<b>10,698</b>

The density bands and housing mix proposed at Belmore Road Precinct aligns with the Housing Market Assessment, where there is higher demand for lot sizes ranging from 300 - 450m<sup>2</sup> followed by 150-200m<sup>2</sup>.

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## B.4 OPEN SPACE STRATEGY

Belmore Road Precinct ILP proposes 46.5 hectares of open space, with approximately 30 hectares of usable open space in accordance with the Camden Places and Spaces Strategy (2020).

Table 2 below documents the types of open spaces provided within Belmore Road Precinct.

**Table 3** Belmore Road Precinct Open Space Provision

OPEN SPACE CATEGORIES	OPEN SPACE (HA)
Passive Open Space (Parks)	4.70
Playing Fields	16.04
Open Space - Tree Retention (RE1 Zone)	8.05
Open Space - Tree Retention (RE1 Zone)	1.49
<b>Total</b>	<b>30.27</b>

### Qualitative Design and Effective Use of Open Space






Belmore Road Precinct ILP adopts a 400m-catchment rule in locating open spaces. This helps to create a series of interconnected neighbourhood across the Precinct, whilst enriching the leisure and recreational experience.

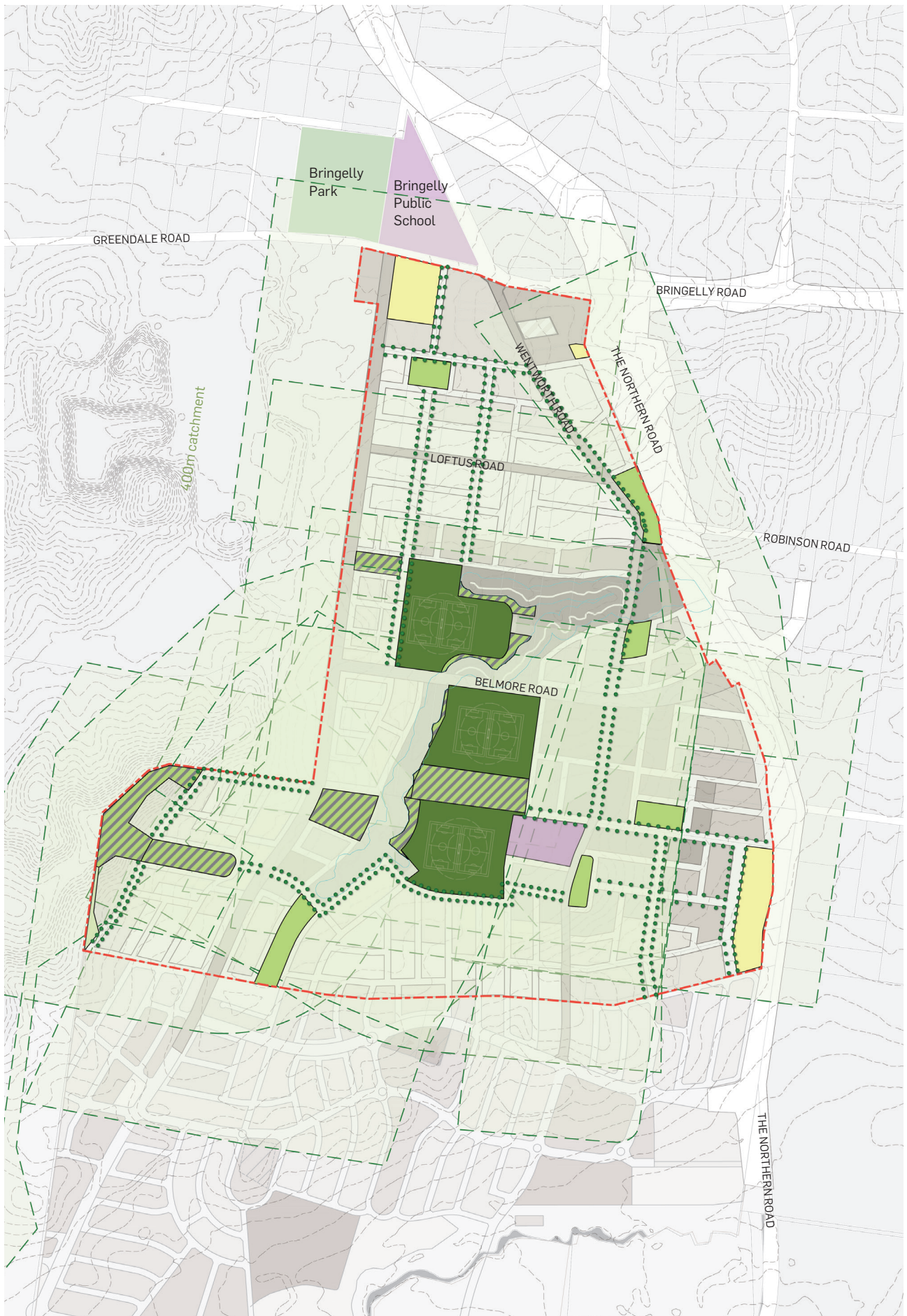
The open spaces at the Precinct have a minimum of 5,000m<sup>2</sup> in size and are designed around a landscape program that aims to form synergy with surrounding amenities, and enable active use of these spaces in community daily life.

Whilst majority of the riparian corridor is reserved as an ecological asset and the drainage basins are primarily used for water management, these areas can be sensitively designed to enable active and passive recreational uses, including incorporation of pedestrian route and cycle network along the edges.

**Refer to Belmore Road Precinct Landscape Master Plan Report for detailed program, with design specification for the sporting fields and a guide to ensure usability of the open space on employment land at the north-east corner of the precinct.**

### LEGEND

	Belmore Road Precinct
	Existing School
	Existing Open Space
	Future New Public School
	Drainage Basins
	Proposed Open Spaces
	Proposed Open Space - Tree Retention
	Proposed Playing Fields
	Riparian Corridor
	Open Space Connection (Landscape Buffer)



**Figure 21** Open Space Provision Plan



## B.5 ACCESS AND MOVEMENT STRATEGY

**Belmore Road Precinct ILP proposes a new sub-arterial road along the western boundary that provides a north-south connection from Lowes Creek Maryland to Greendale Road.**

The road network of the Precinct has five main typologies, including sub-arterial road, collector road, local road, green link streets and park streets.

### Sub-Arterial Road

Belmore Road will be upgraded as a sub-arterial road, providing main access to the Precinct from the Northern Road. The connection to Lowes Creek Maryland and existing Bringelly facilities up north will be enhanced through the proposed north-south connection along the western boundary of the Precinct.

The sub-arterial roads provides a 30.6m road reserves with 4-lanes. A minimum road width of 29.1m is adopted at Lowes Creek Maryland.

### Collector Roads

Loftus Road and Wentworth Road will be the local connectors of the Precinct, providing safe access between the sub-arterial routes and neighbourhood streets.

Belmore Road Precinct ILP proposes to extend Wentworth Road further south to create a direct link from Lowes Creek Maryland.

A new east-west collector road is also proposed at the south of the Precinct to strengthen permeability around the village centre and higher density area.

The collector roads are designed based on a 21m road reserve.

### Green Link Streets and Park Streets

Few local streets are dedicated as green link streets to provide immediate connection to open spaces. These streets are designed based on a 16.7m road reserve, with greater emphasis on street trees planting, landscaping and a safe shared path for pedestrian and cyclist.

Park Street are streets along the riparian corridor and open spaces. These streets are designed as a 13.6m road reserve with a 5m buffer area that is incorporated along the park or riparian corridor boundary. This is to ensure a smooth interface and an activated edge between the park and the street.

### Local Roads











Local Roads at the Precinct are designed as 16.7m road reserve, with flex zone on both sides to accommodate street parking and more trees planting.

Local roads around the local centre has a different treatment to support support bus and truck access.

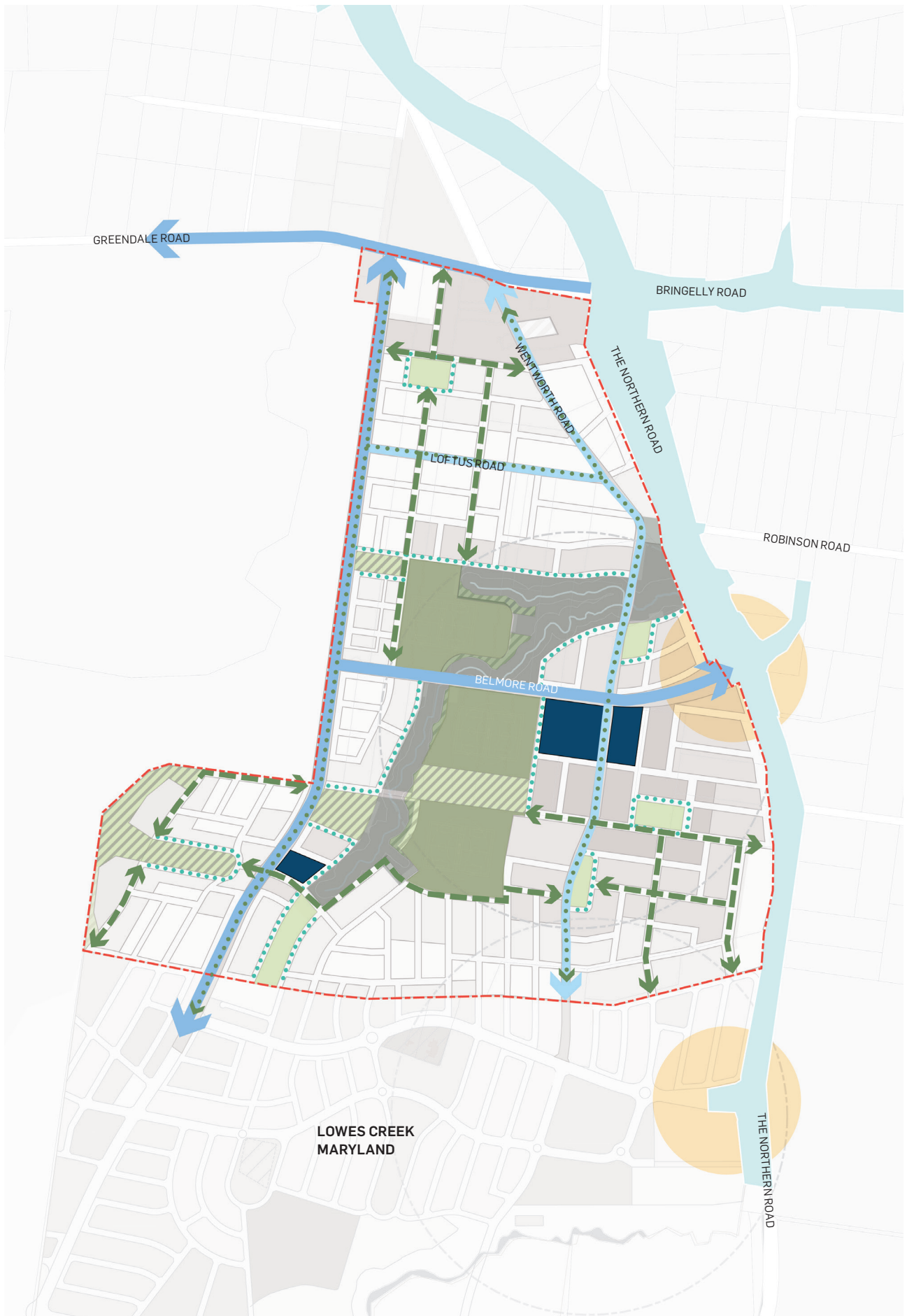
### Future Public Transport Network

Both sub-arterial road and collector roads are designed to support future bus network. The bus network will have the potential to connect to future Sydney Metro - Western Sydney Airport line.

#### LEGEND

	Belmore Road Precinct
	Local Centre
	Open Space
	The Northern Road
	Major Intersections
	Sub-Arterial Road
	Collector Road
	Park Streets
	Green Link Streets
	Green Link Connectivity along Sub-Arterial Road and Collector Road





**Figure 22** Access and Movement Plan



### B.5.1 PEDESTRIAN AND CYCLE CONNECTIVITY









The proposed road typologies at the Precinct focuses on the pedestrian and cycle connectivity. Whilst the main pedestrian and cycle route is aligned along the green link streets and park streets, all other roads form part of the network.

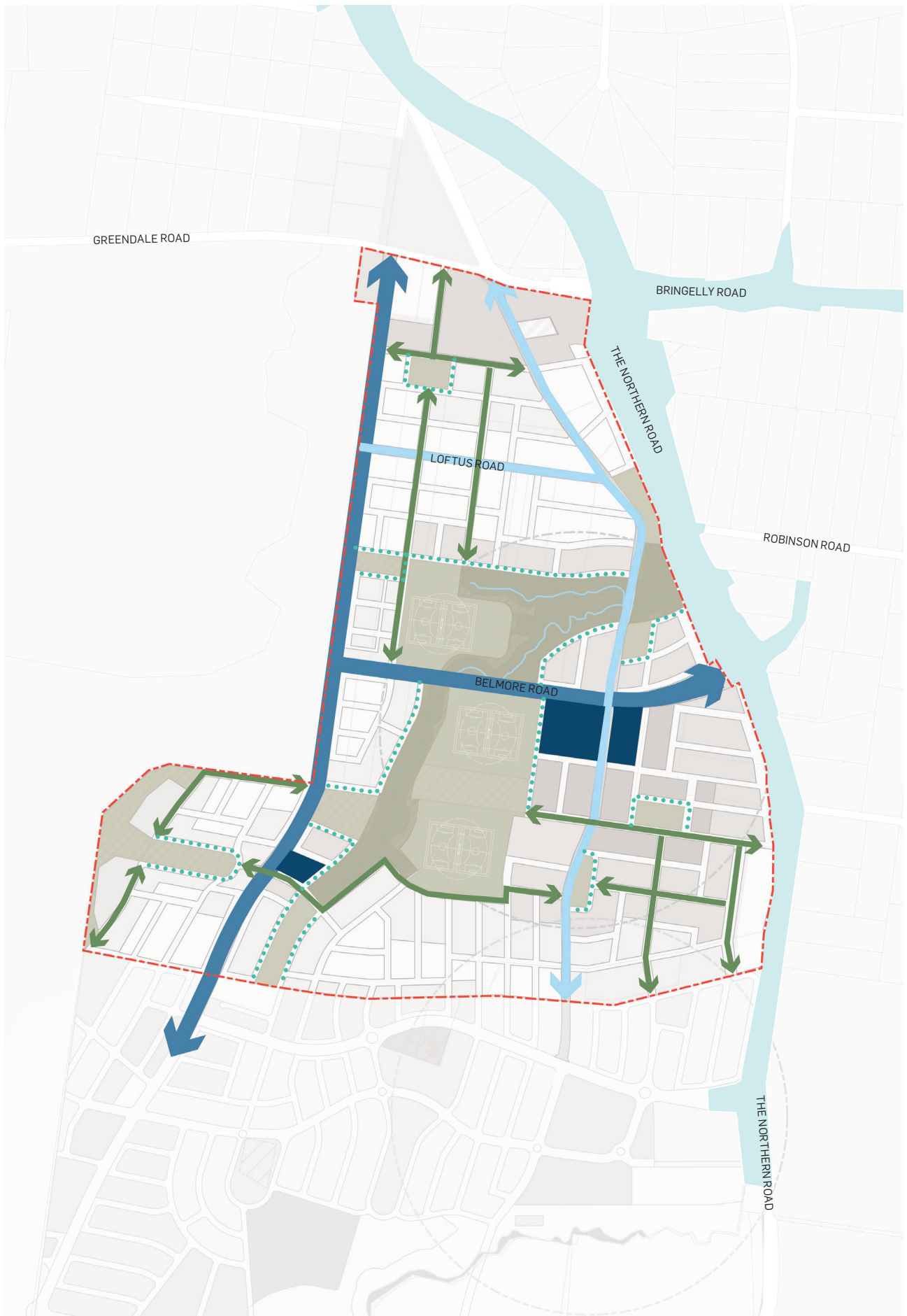
**Figure 23** provides an overview of the pedestrian and cycle network within Belmore Road Precinct.

All roads and streets at the Precinct have dedicated pedestrian pathways. Pedestrian and cycle routes at the Precinct is accommodated in 3 forms:

- Pedestrian and off-road cycle routes (a minimum of 2.5m shared path)
- Off-road cycle routes (at a minimum of 1.65m)
- Pedestrian Paths (at a minimum of 1.5m)

#### LEGEND

	Belmore Road Precinct
	Local Centre
	Open Space
	The Northern Road
	<b>Main Cycle Network</b> (On-road cycle route)
	<b>Secondary Cycle Network and Main Pedestrian Connection</b> (Off-road cycle routes with pedestrian paths)
	<b>Key Cycle Network Connector</b> (Off-road cycle routes, with shared pedestrian paths)
	<b>Cycle Network Connectors</b> (Off-road cycle routes with shared pedestrian paths)



**Figure 23** Pedestrian and Cycle Connectivity





## B.5.2 STREET TYPOLOGIES

To ensure Belmore Road Precinct has a set of street typologies that is consistent with the growth area, the street configuration of the precinct has been designed with reference to the following documents:

- Camden Growth Centres DCP
- Lowes Creek Maryland Draft DCP
- Pondicherry Tranche 41 Draft DCP

There are ten (10) main street typologies at the Precinct. 'Park Street' is the only new typology introduced in the precinct.

The street configuration design of 'Park Street' focuses in:













- enhancing the interface between open spaces and the road reserve;
- activating the edges of the park and riparian corridor to ensure effective use of the natural amenity and enable passive surveillance.

### Interface along Northern Road and the south-west boundary

A 10m landscape buffer is added to the typical local residential road along the eastern boundary to mitigate noise impact from the Northern Road.

A 5m linear open space connection is added to the Green Link Street along the south-western boundary to ensure biodiversity connectivity. This open space connection will also help minimise potential noise and visual impact from Bringelly Brickworks at the north-west.

#### LEGEND

	Belmore Road Precinct
	Sub-Arterial Road (30.6m)
	Typical Collector Road (20.1m)
	Local Centre's Collector Road (20.1m)
	Green Link Street (16.7m)
	Green Link Street along the south-western boundary (16.7m + 5m landscape buffer)
	Park Street (13.6m + 5m)
	Local Centre Road (18.2m)
	Typical Residential Local Road (16.7m)
	Residential Local Road along the Northern Road (16.7m + 10m landscape buffer)
	Laneway (8m)
	Section marker



**Figure 24** Street Typologies

1A SUB-ARTERIAL ROAD (TYPE A)- (30.6)

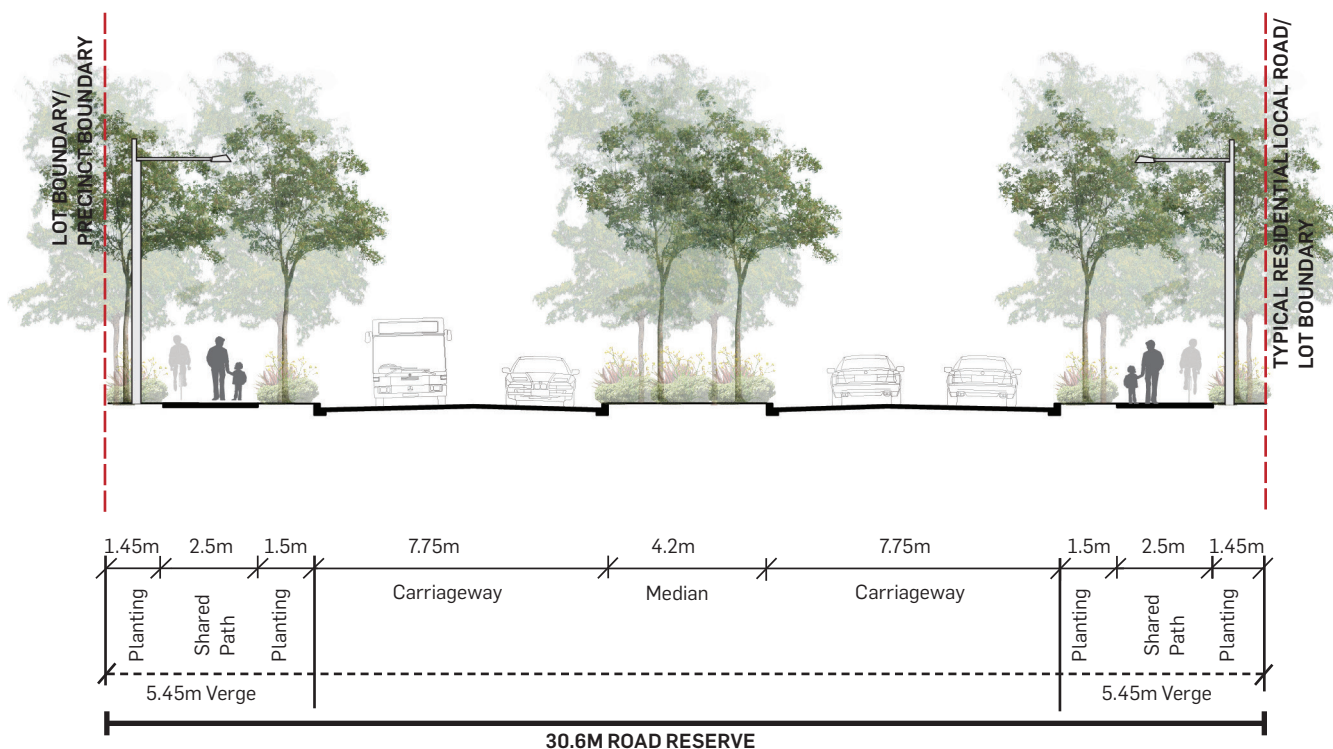


Figure 26 Belmore Road Precinct Sub-Arterial Road Type A (30.6m)



1B SUB-ARTERIAL ROAD (TYPE B)- (30.6M)

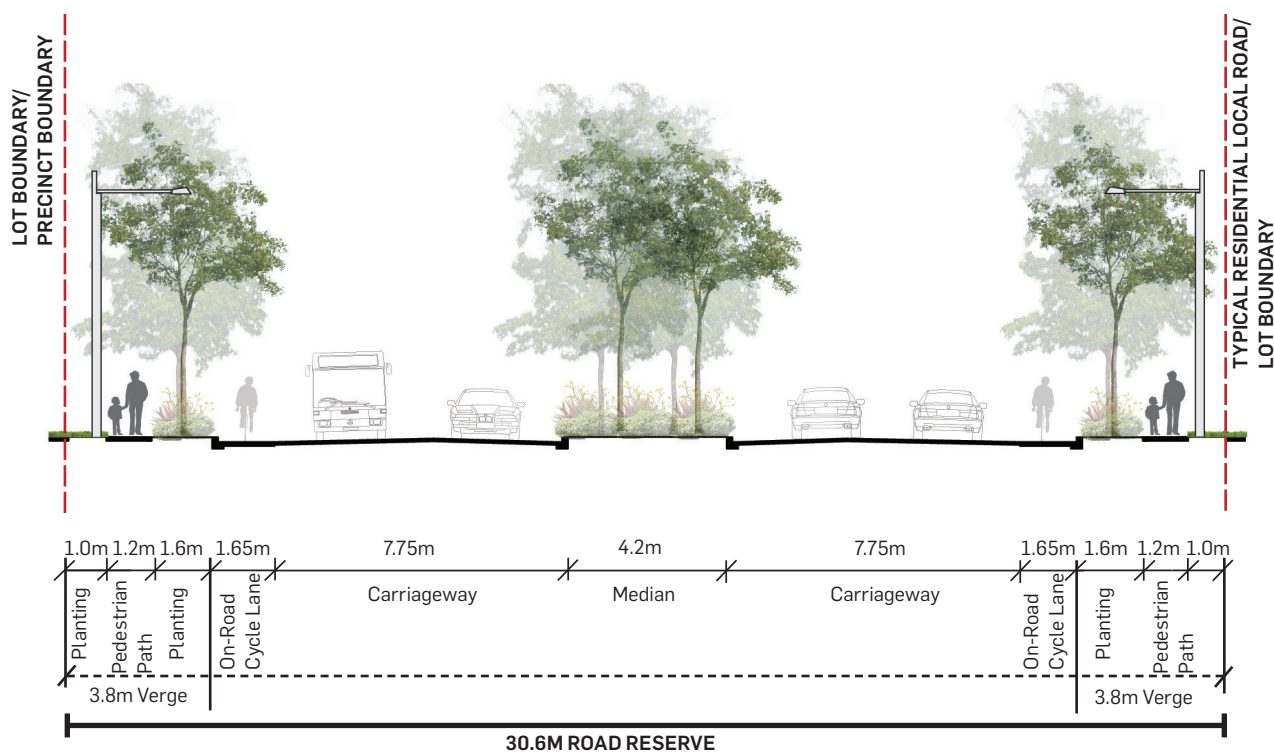


Figure 25 Belmore Road Precinct Sub-Arterial Road Type B (30.6m)





## 2 COLLECTOR ROAD (20.1M)

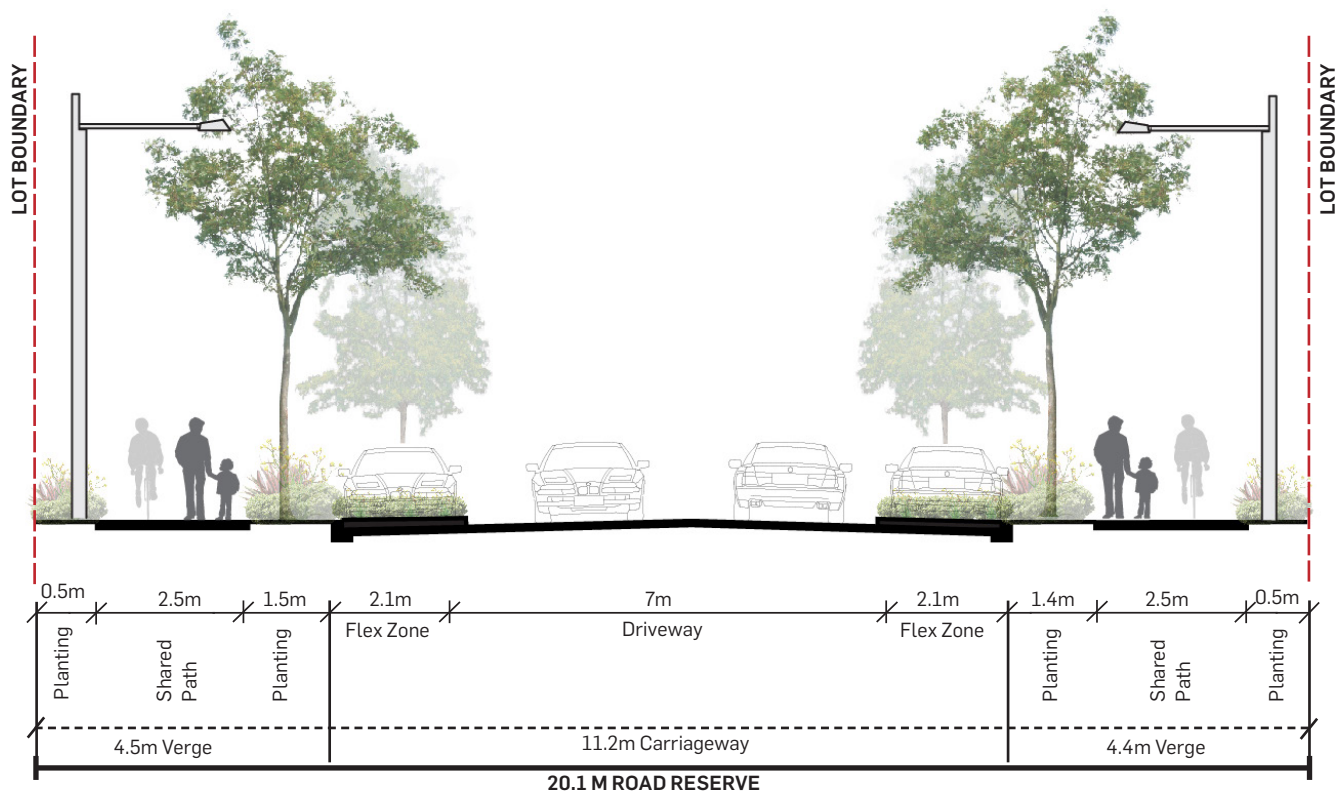


Figure 27 Typical Collector Road (21m)



## 3 LOCAL CENTRE'S COLLECTOR ROAD (20.1M)

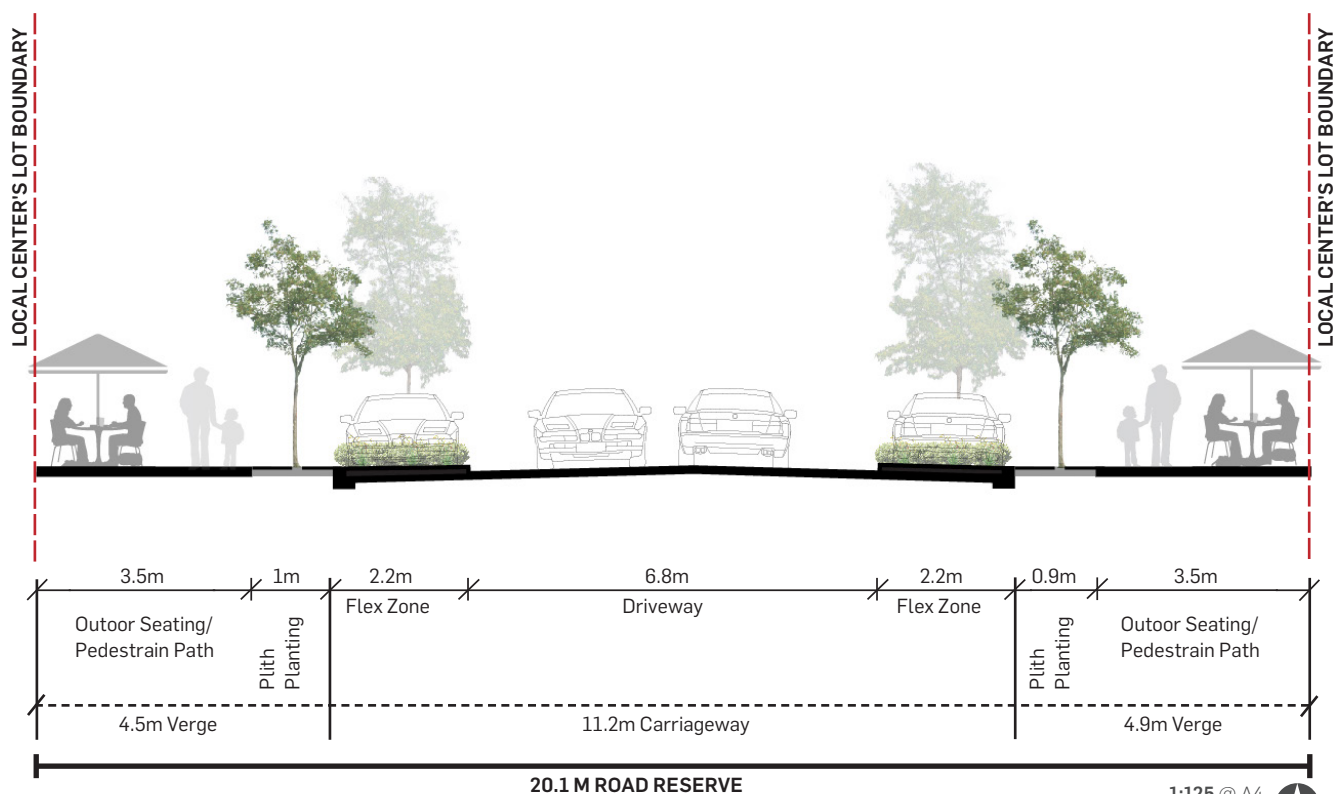


Figure 28 Local Centre's Collector Road (20.1m)



④ TYPICAL LOCAL ROAD (16.7M) - FOR RESIDENTIAL

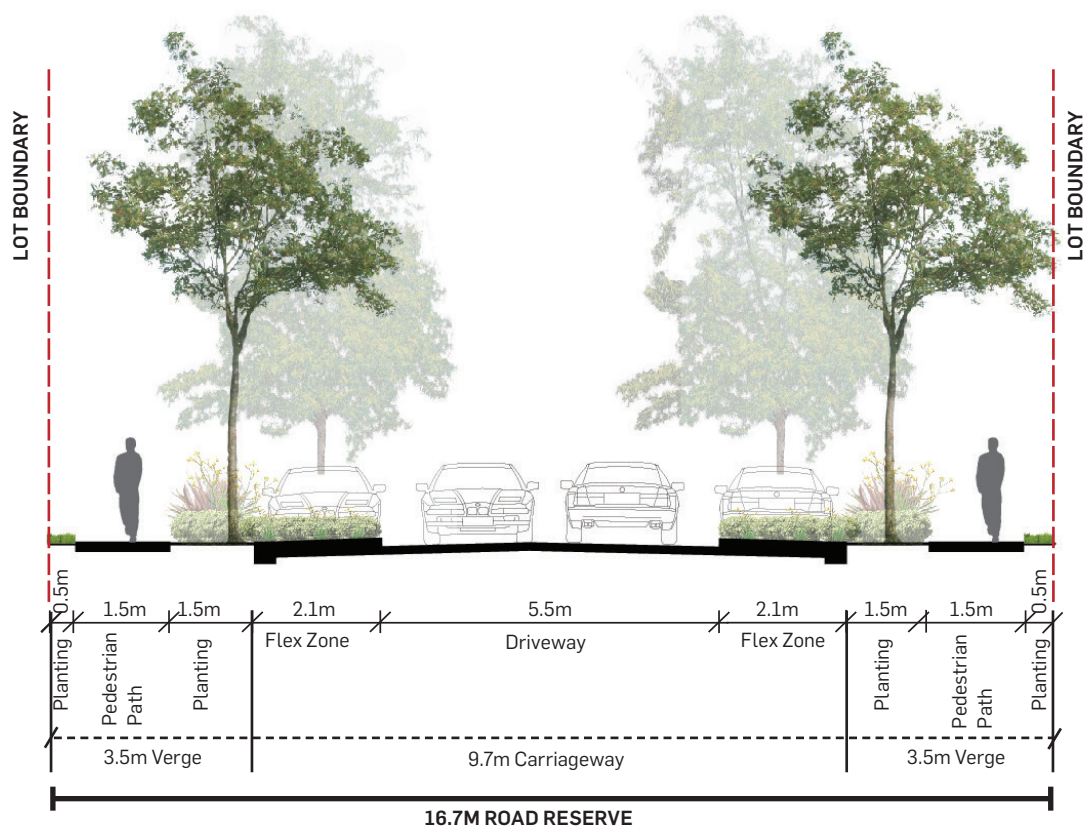


Figure 30 Local Road (16m)



⑤ LOCAL CENTRE ROAD- (18.2M)

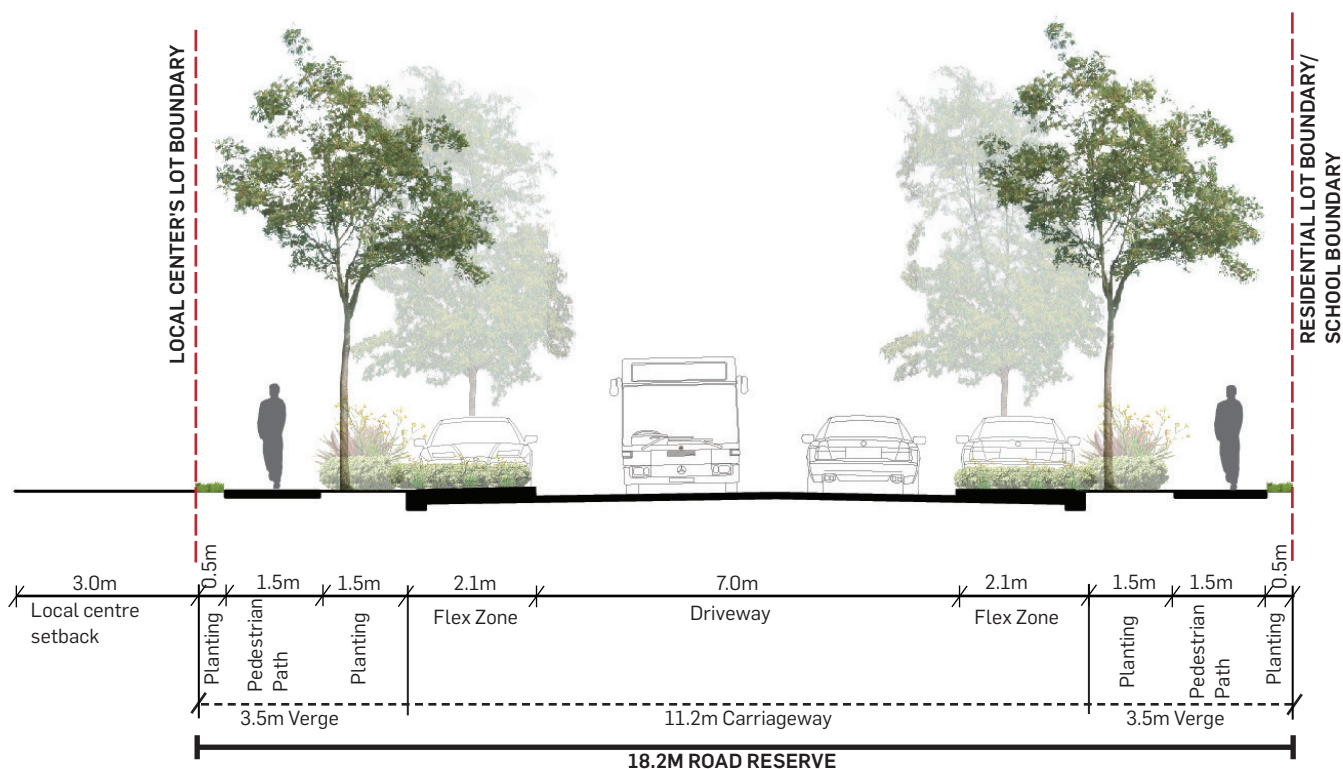
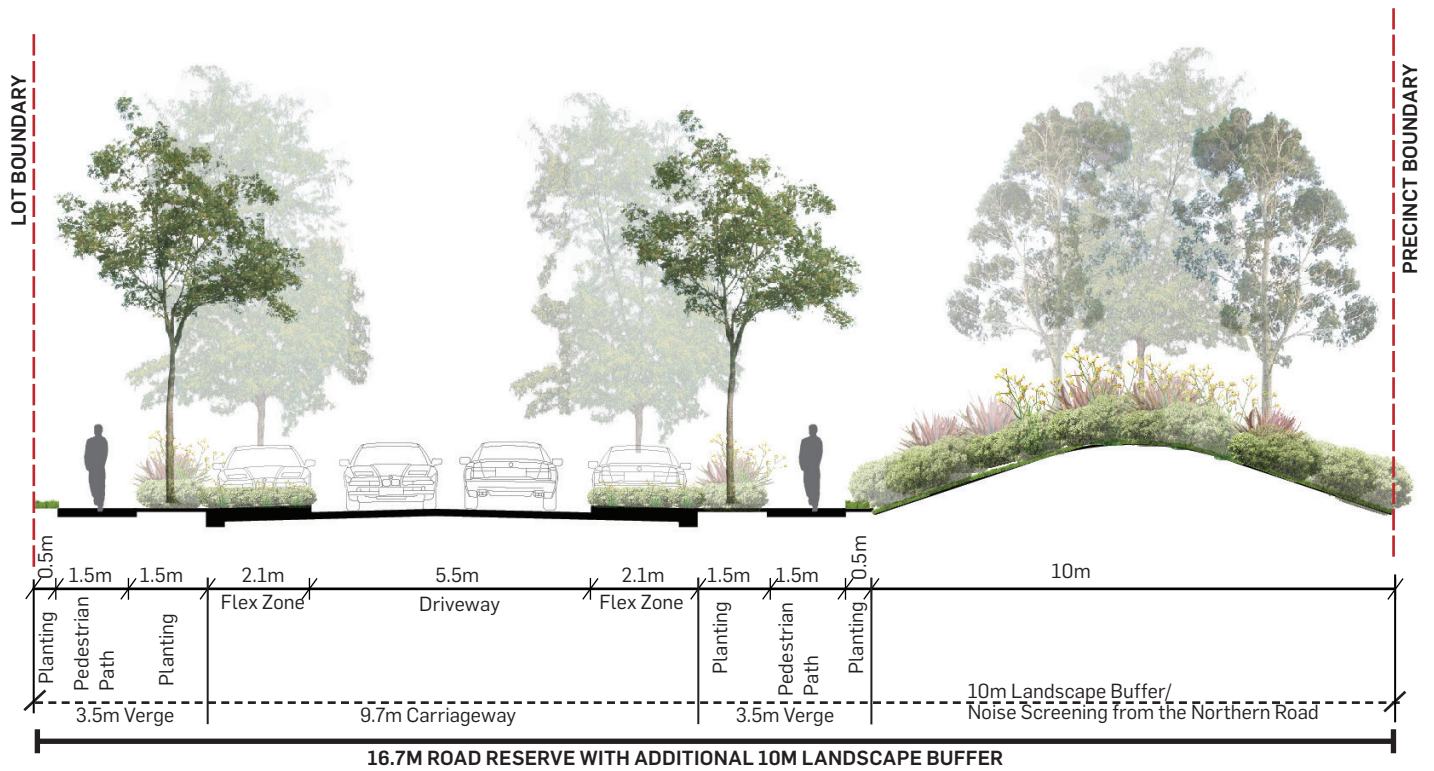


Figure 29 Local Centre Road (18.2m)



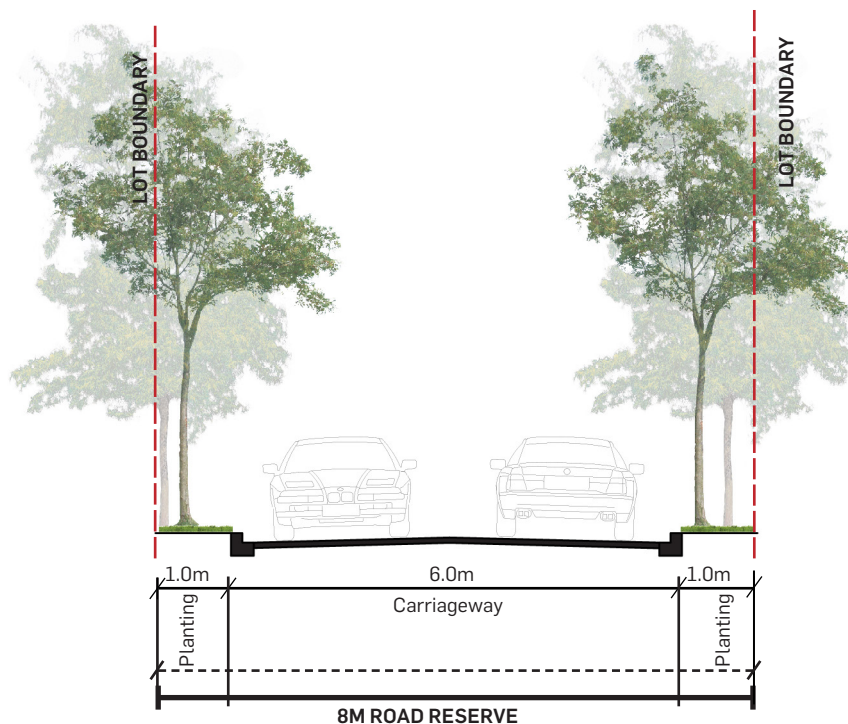
6 LOCAL ROAD (ALONG THE NORTHERN ROAD)- 16.7M +10M LANDSCAPE BUFFER



1:150 @ A3

Figure 31 Residential Local Road along the Northern Road (16.7m + 10m)

7 LANEWAY (8M)



1:200 @ A3

Figure 32 Laneways (8m)



8 GREEN LINK STREET (16.7M)

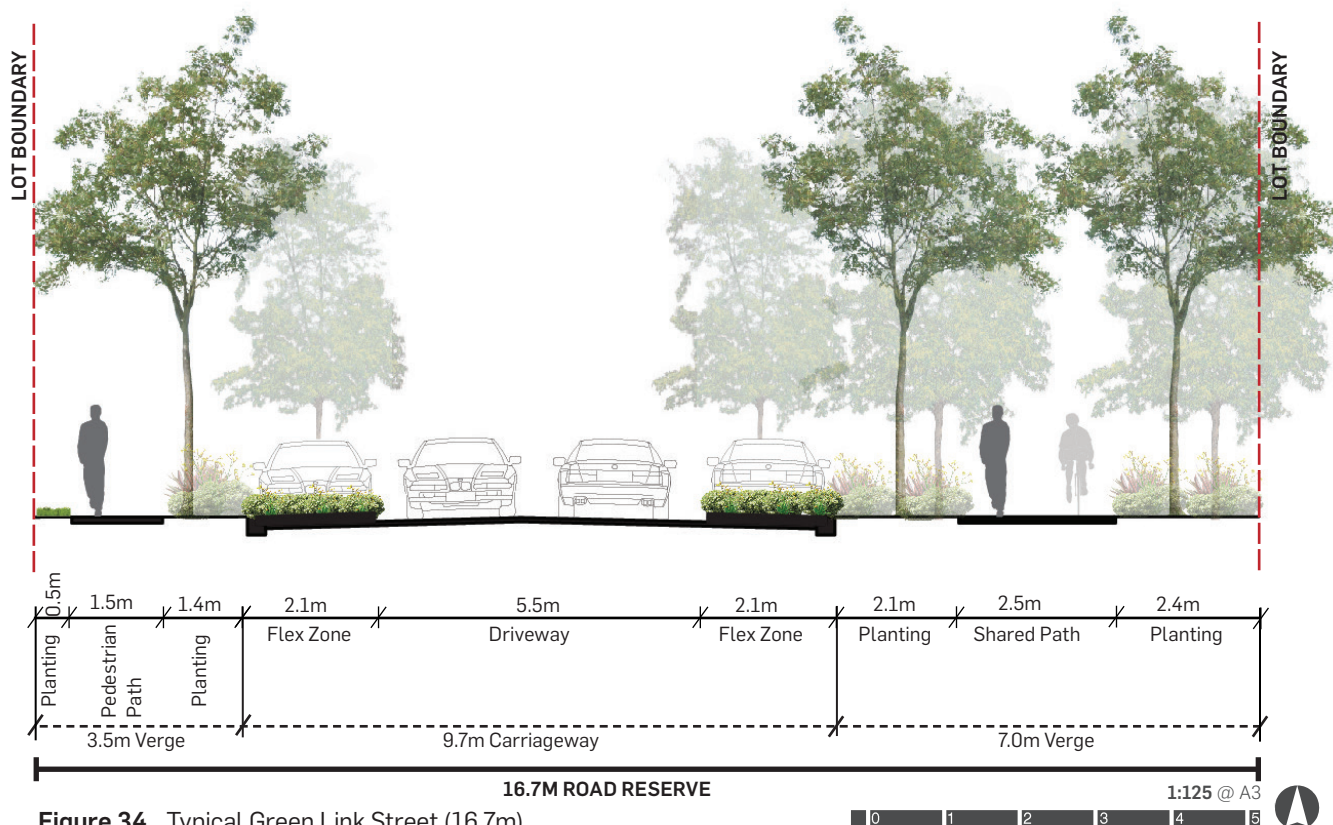


Figure 34 Typical Green Link Street (16.7m)

9 GREEN LINK STREET WITH ADDITIONAL LANDSCAPE BUFFER (ALONG SOUTH-WESTERN BOUNDARY) - (16.7M+ 5M)

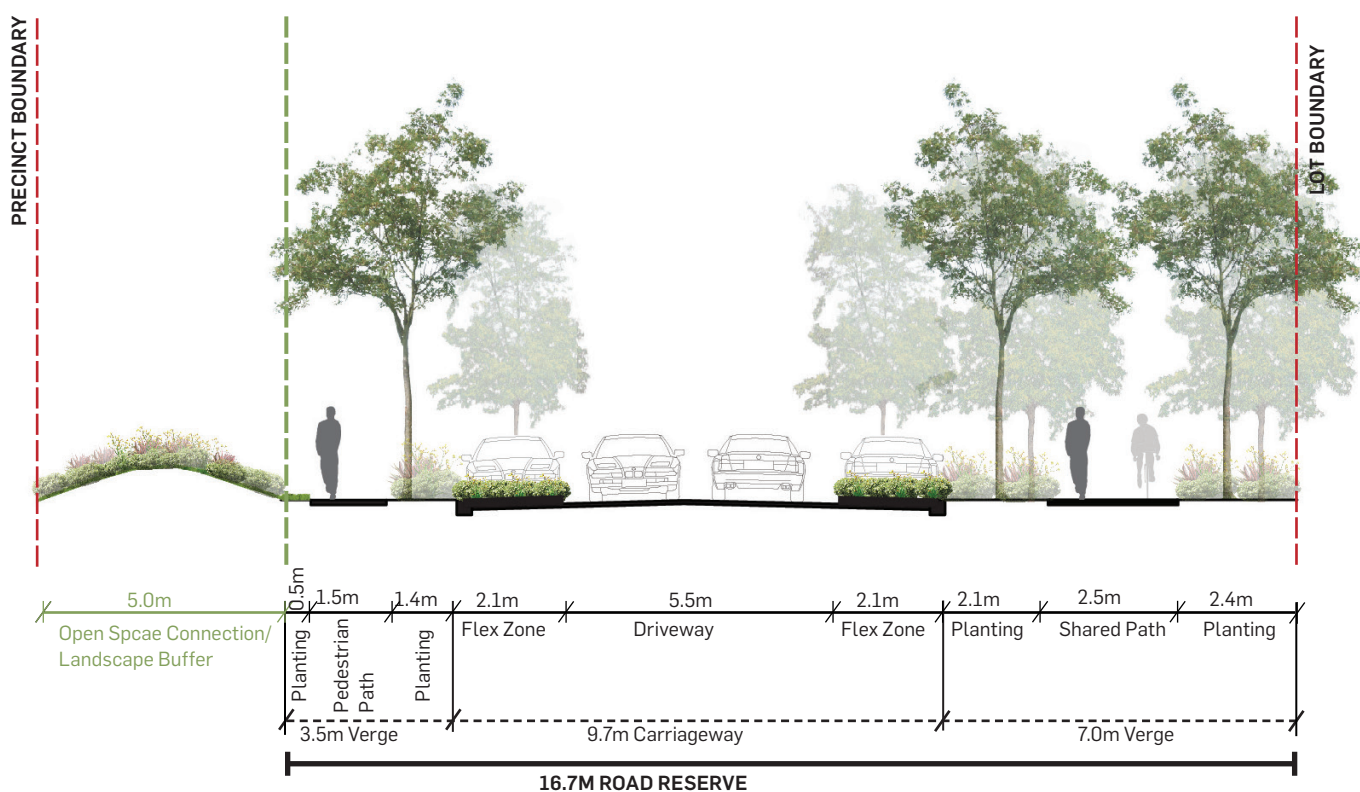


Figure 33 Green Link Street with Additional Landscape Buffer (21.7m)

10 PARK STREETS- (13.6M)

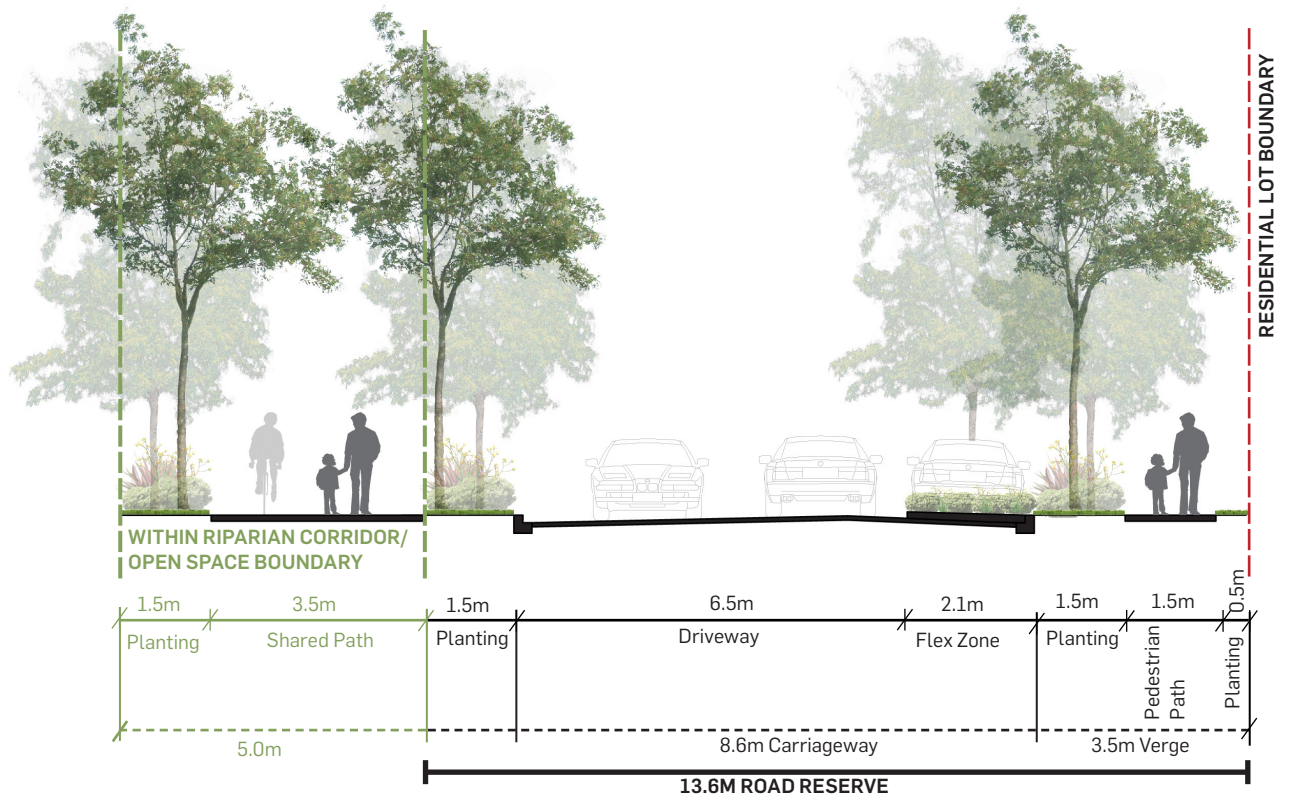


Figure 35 Park Street (13.6m)



### B.5.3 ACHIEVING URBAN TREE CANOPY

Planting areas within the road reserves have a standard minimum width of 1.4m. This is to ensure there is sufficient space to support street tree planting with medium to large canopies.

The design of flex zones have been incorporated where possible across street typologies to increase areas for street tree planting. These flex zones will have planting areas of 2x2.1m width spaced out between the carriageways and verges.

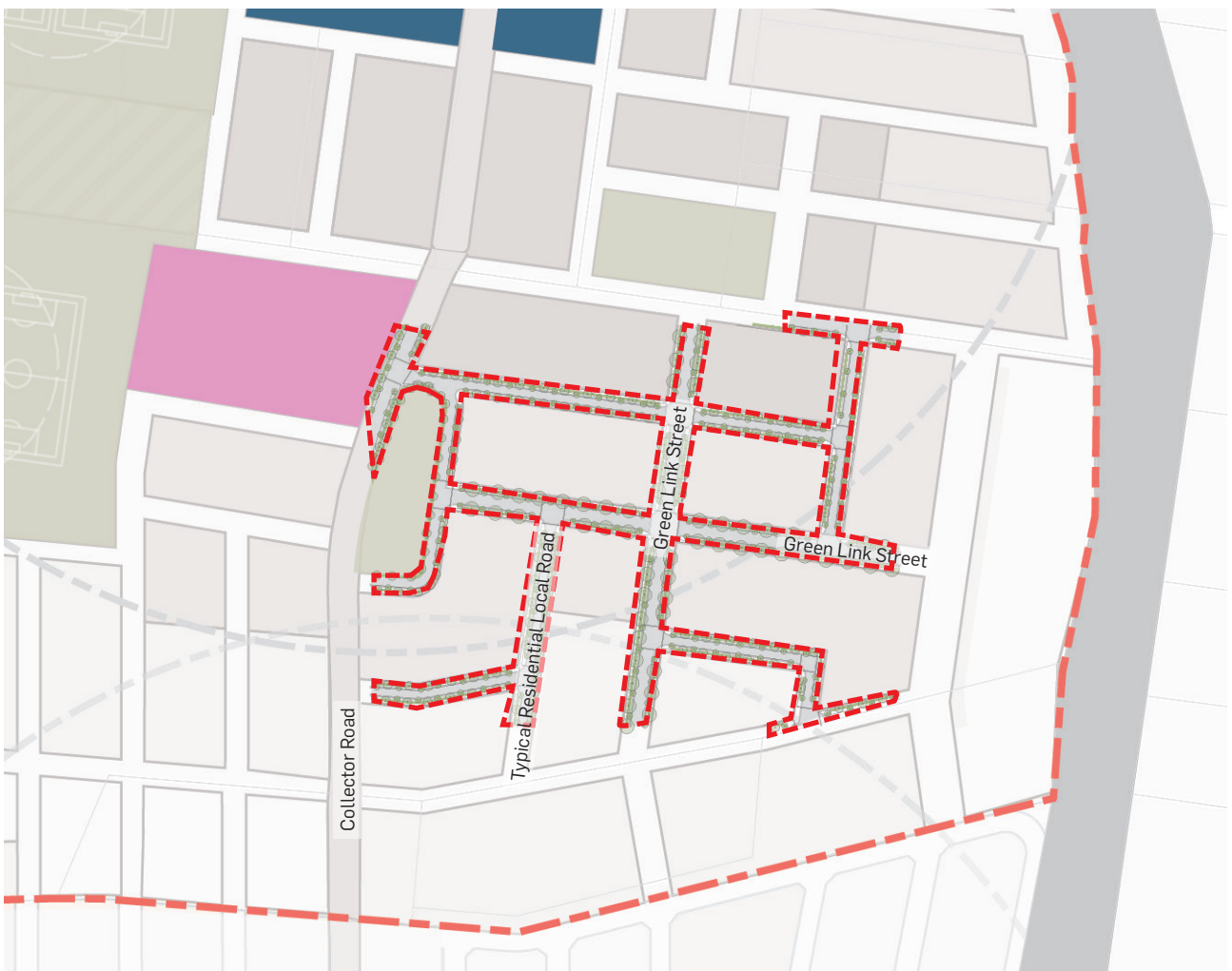
An area of the Precinct has been selected to test the possibility to achieve urban tree canopy target across different mix of street typologies. The following spread demonstrates an indicative tree planting strategy for the selected area (investigation area) and the resulting tree canopy cover.



	TOTAL AREA (M <sup>2</sup> )	PERCENTAGE (%)
<b>Site</b>	<b>31,242.1m<sup>2</sup></b>	<b>100%</b>
<b>ROAD RESERVE</b>		
Carriageway and Pathways	19,868.8m <sup>2</sup>	63%
Side Car Parking (within Flex Zones)	4,394.6m <sup>2</sup>	14%
Planting Area (including flex zones' planting area)	6,978.7m <sup>2</sup>	23%
<b>TREE CANOPY</b>		
Required Tree Canopy Cover (40% of site area)	18,745.7m <sup>2</sup>	40%
Achievable Tree Canopy Cover (based on Indicative subdivision layout)	10,602.54m <sup>2</sup>	42%

LEGEND	
	Tree Canopy
	Investigation Area
	Proposed Open Space
	Future New Public School
	Neighbourhood Centre
	Proposed Roads





**Figure 36** Indicative Subdivision Layout and Tree Planting Zones within Investigation Area

### B.5.4 LOT LAYOUT CONFIGURATION ALONG SUB-ARTERIAL ROADS: LEARNING FROM BUILT EXAMPLE

#### Lot Orientation

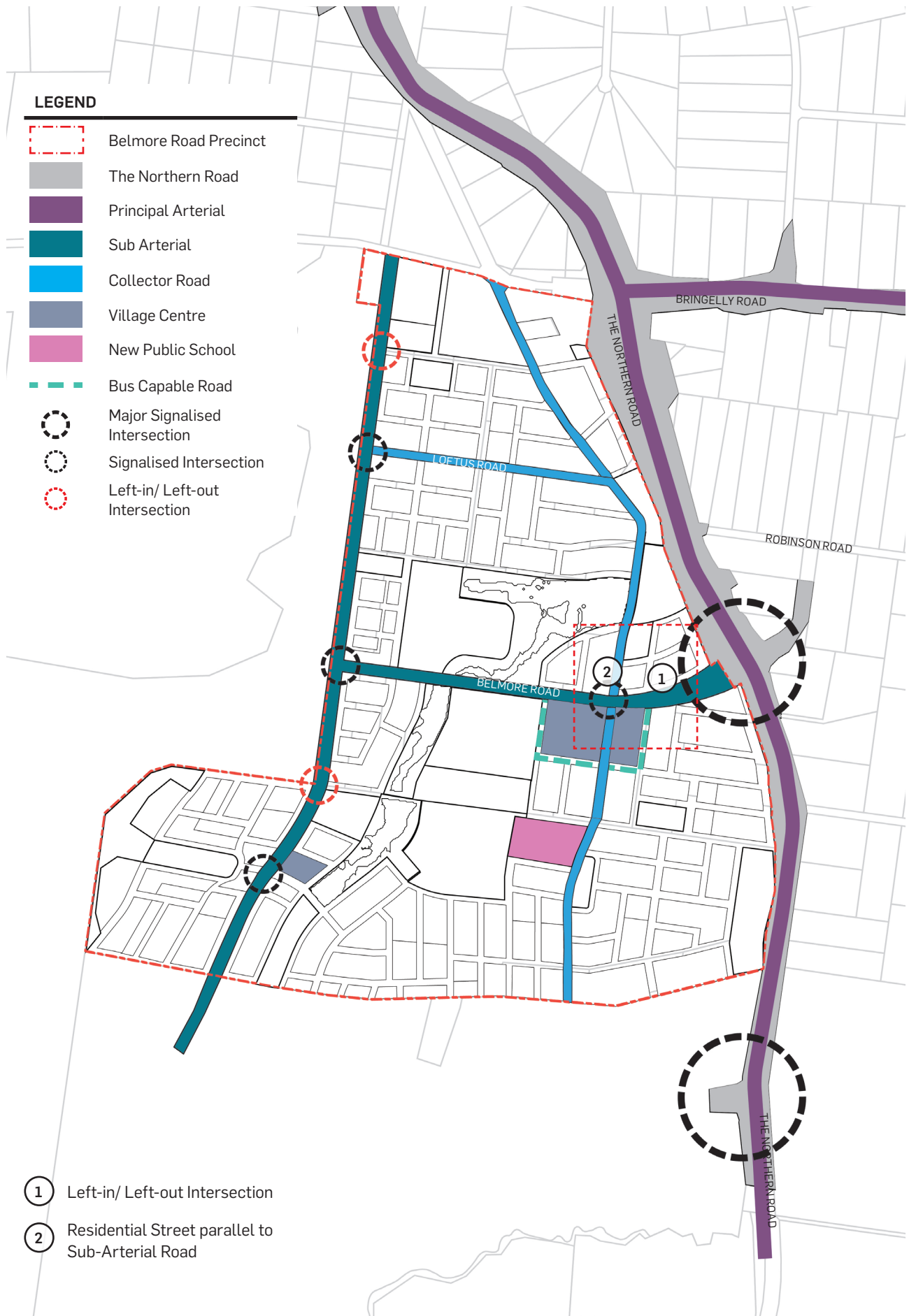
**Lots located along the sub-arterial road will have an orientation towards local roads.**

The lots will be oriented to the local road with secondary frontage to the sub-arterial road.

Lots with secondary frontage to the sub-arterial road will require acoustic fencing or hedges to minimise potential noise and visual impact. Design guidelines for these acoustic fencing can be incorporated in the detailed design stage.



**Figure 37** Lot layout and orientation along Sub-Arterial Road (Built Example Precedent: Oran Park)



**Figure 38** Primary Frontage Reference Plan



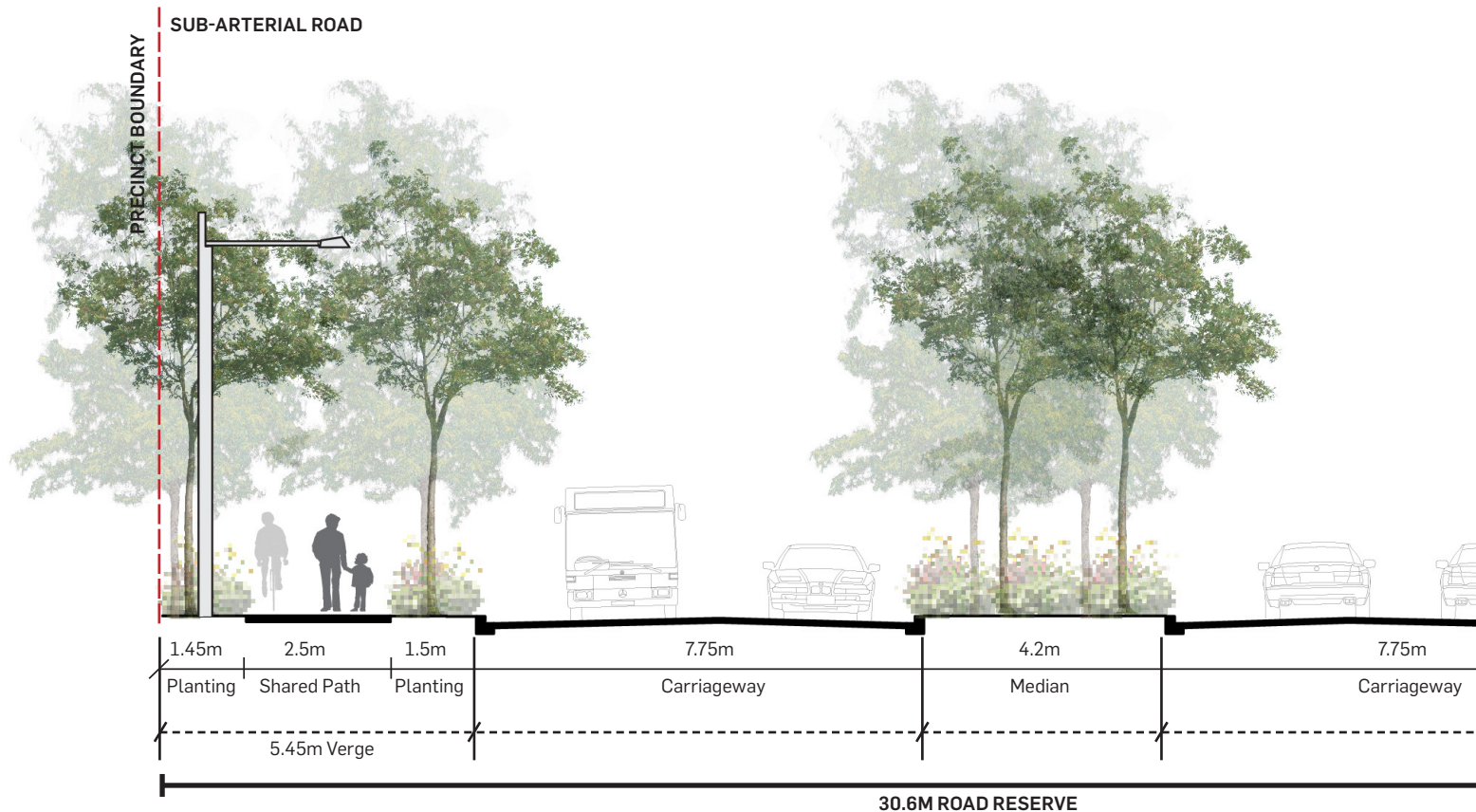


## B.5.5 TRANSITION TO THE WESTERN EDGE OF THE PRECINCT

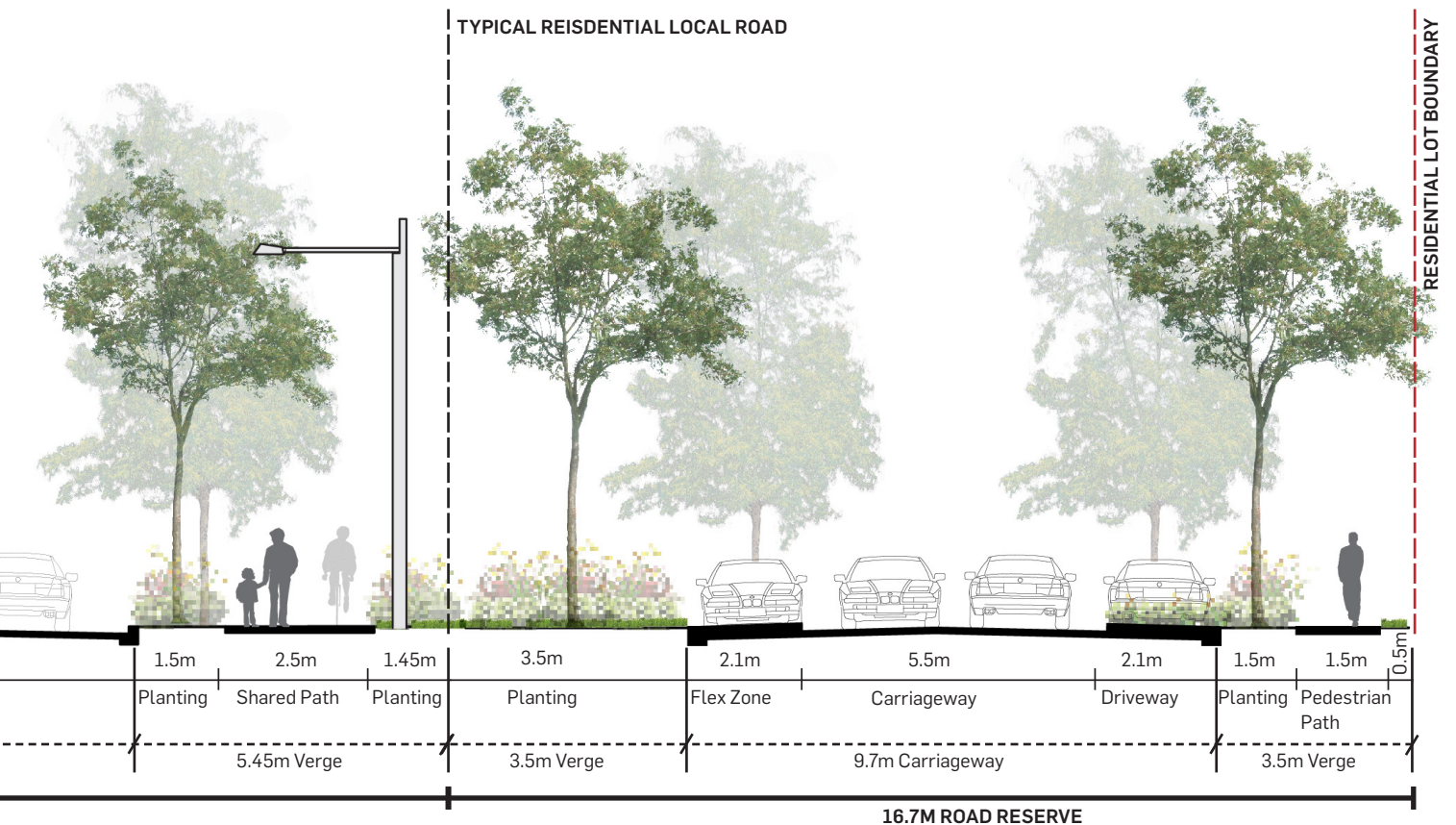
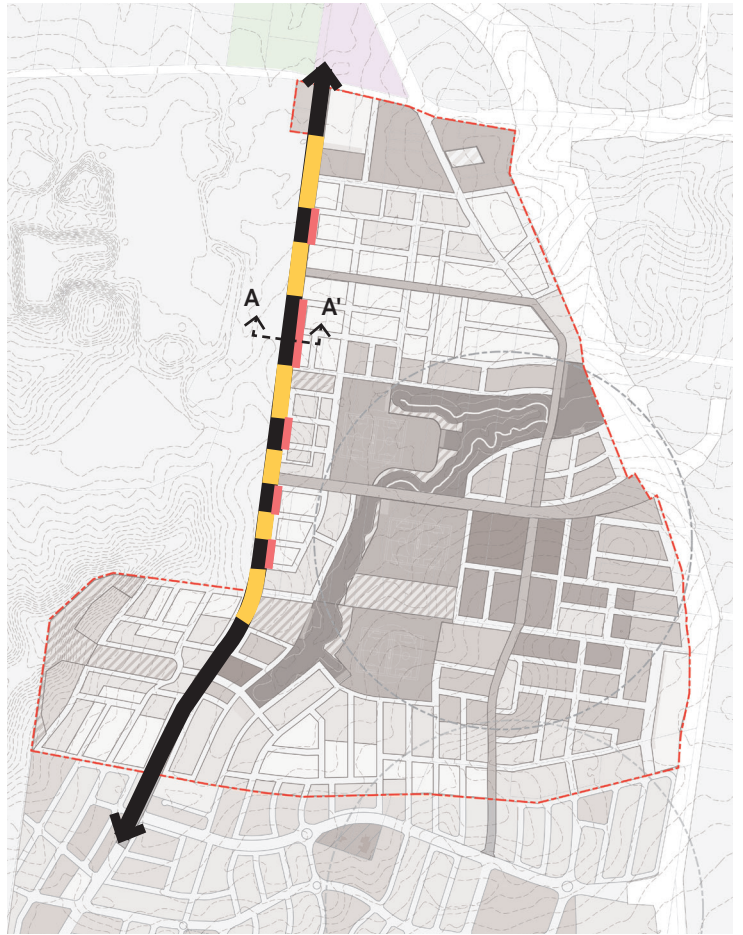
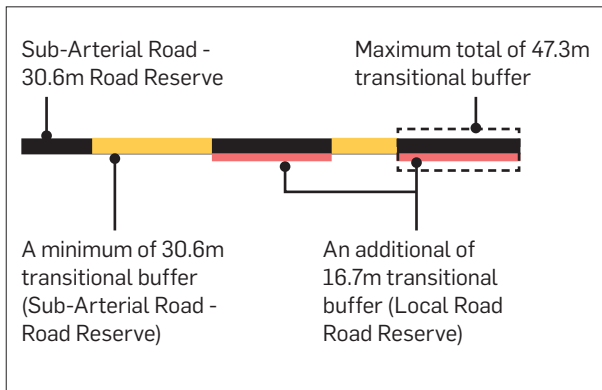
### Road Reserve as the Transitional Buffer

The low density residential area along the western edge of Belmore Road Precinct is separated from Bringelly Brickworks by a distance of 30.6m at the minimum and 47.3m at the maximum. This distance represents the total road reserve of the sub-arterial road and the typical residential local road that runs parallel to it.

Both road reserves act as transitional buffers. The intermitting planting areas across road reserves create a visual screen that diminishes the potential negative impacts of Bringelly Brickworks on the low density area along the western edge of the Precinct. The width of the intermitting planting areas range between 10m and 18m. These planting areas will have sufficient width and depth to support street trees planting with larger canopies.



**Figure 39** Cross Section of Combined Road Reserve (Transitional Buffer along the western edge of the Precinct)



## B.6 WATER CYCLE MANAGEMENT

Belmore Road Precinct ILP proposes a water management system that is integrated with the open space network. There are five (5) basins proposed across the Precinct, with three (3) integrated with the riparian corridor.

The table below provides the scale of each basin, and the extent of area that needs to be treated as service area along the riparian corridor. Service area refers to the area needed to accommodate structure such as rock-lined floor walls and embankment batters. Apart from this service area, drainage basins can be designed and function as part of the riparian corridor.

BASINS	AREA (HA)	SERVICE AREA (AREA REQUIRED OFF RIPARIAN CORRIDOR)	
1	1.77	N/A	N/A
2	2.43	20%	0.49 HA
3	0.87	0%	0
4	1.12	0%	0
5	2.64	N/A	N/A
6	0.15	N/A	N/A
<b>Total</b>	<b>8.98</b>		

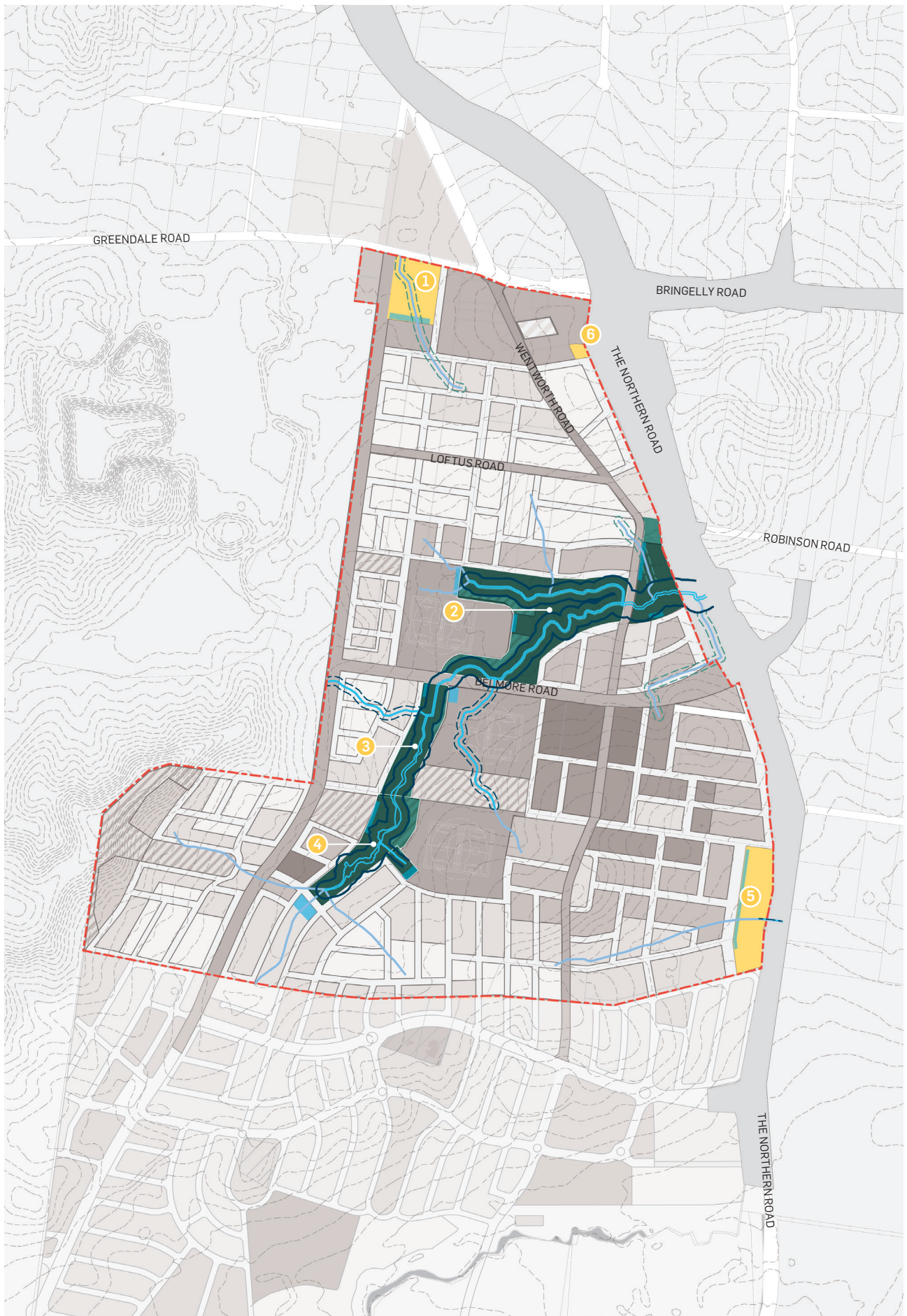
### Bio-retention Raingardens

A total of eleven (11) bio-retention raingardens have been proposed across Belmore Road Precinct to manage stormwater quality runoff. These raingardens will be integrated with the landscape design of the open spaces.

### LEGEND

	Belmore Road Precinct
	Retained riparian corridor (Strathler stream order 2 & 3)
	Potential riparian corridors (Strathler Stream Order 1)
	Unlikelihood of a Watercourse/ riparian corridor (Strathler Stream order 1)
	Not A watercourse (Pending NRAR Approval)
	Proposed Basin
	Proposed Basin within Riparian Corridor
	Proposed riparian corridors
	Rain Garden





**Figure 40** Indicative Water Basins and Raingardens










### B.6.1 FLOODING AND WATER CYCLE MANAGEMENT (UNDER DEVELOPED CONDITION)

The water cycle management strategy manages the potential increase in flood levels generated by new development. Detention basins are proposed at a location that will appropriately manage flows back to the existing (pre-development) conditions.

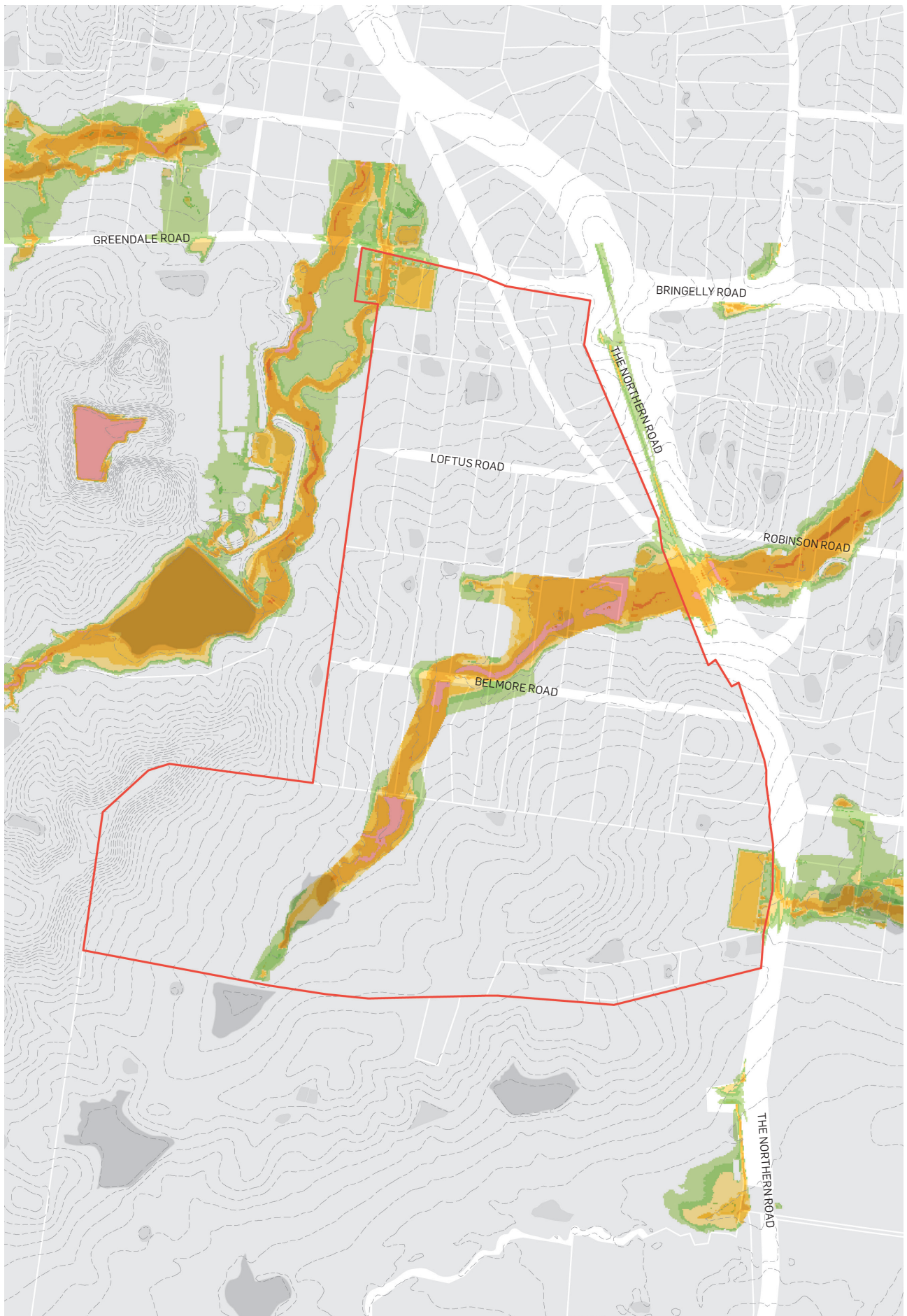
**Figure 24** illustrates the probable maximum level of flood hazard within Belmore Road Precinct under a developed condition. This assumed that the central riparian corridor are to be retained and there will be one basin located at the north-west and south-east corner of the Precinct.

**The designation of roads, open spaces and residential lands for Belmore Road Precinct responses to this flood hazard.**

#### LEGEND

	Belmore Road Precinct
	H1 Generally Safe
	H2 Unsafe for small vehicles
	H3 Unsafe for vehicles, children and the elderly
	H4 Unsafe for people and vehicles
	H5 Unsafe for vehicles and people. All buildings vulnerable to structural damage
	H6 Unsafe for vehicles and people. All buildings vulnerable to failure.





**Figure 41** Flood Hazard Plan (at Probable Maximum) Under Developed Conditions





## B.7 ACTIVATION STRATEGY

Belmore Road Precinct ILP proposes a Village Centre at the core of the Precinct and an employment precinct to the north. This will help create a central hub for retail, leisure and recreation at the Precinct, whilst enabling a synergy with Western Sydney Aerotropolis to the north.

### Neighbourhood Centre

The activation strategy builds upon the presence of three sporting fields at the core of Belmore Road Precinct. The addition of the Neighbourhood Centres help create a community hub for the Precinct, where recreational uses, retail services, and convenient-based facilities are all accessible around one location.









### New Public School

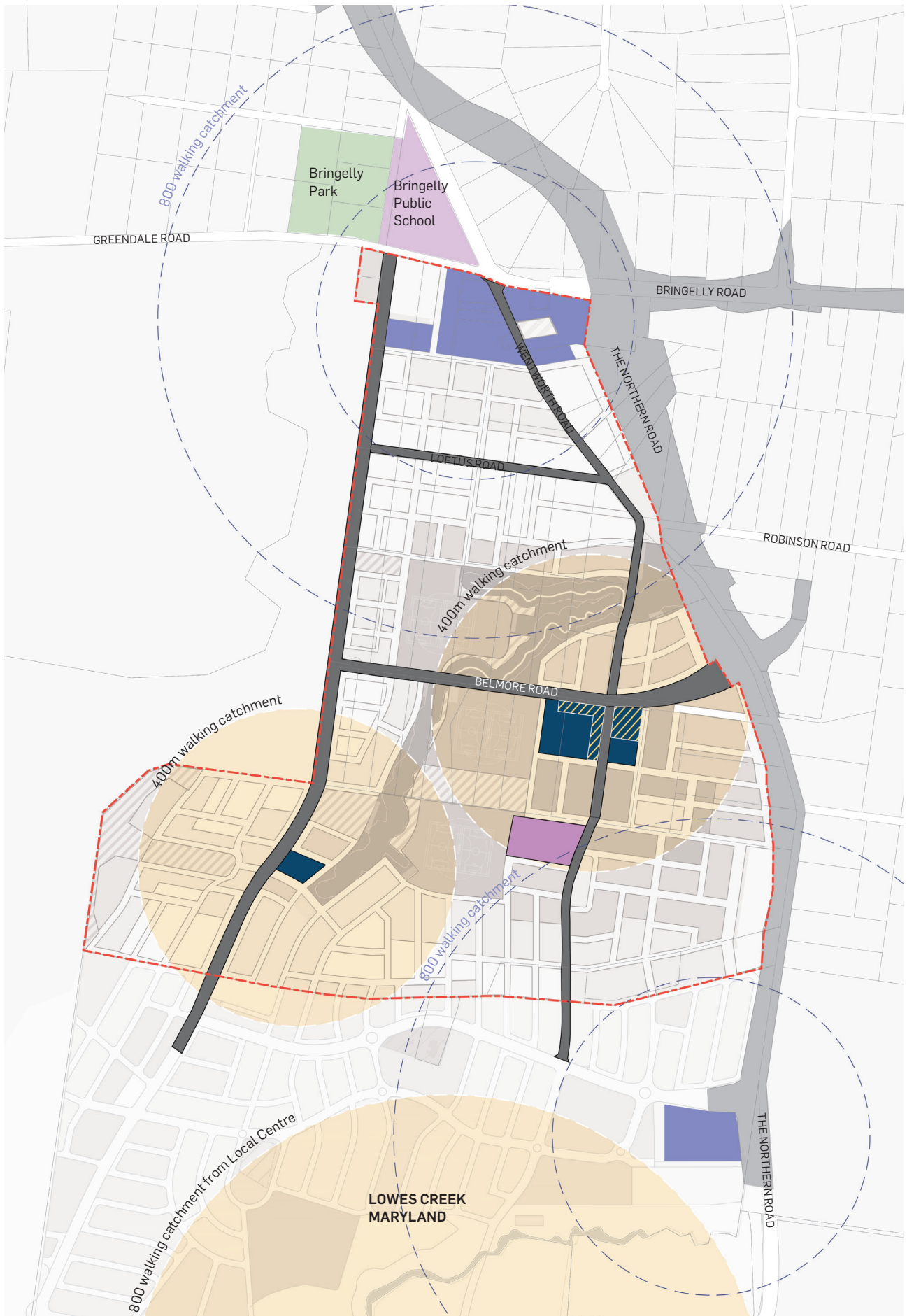
Belmore Road Precinct ILP proposes a new public school to the core of the Precinct, co-located with the sporting fields and village centre. This helps strengthen the community hub of the precinct and help ensures the sporting fields and youth recreation facilities to be fully utilised.

### Job Creation

The Northern end of the Precinct has been dedicated for employment-based uses. This is in response to the presence of amenities to the immediate north and the precinct's proximity to Western Sydney Aerotropolis.

#### LEGEND

	Belmore Road Precinct
	Existing School
	Existing Open Space
	Employment Precinct
	Heritage Listed Site of Local Significance
	Ground floor Retail Activation
	Neighbourhood Centre
	New Public School



**Figure 42** Village Centre, Retail and Convenient Services Offering



### B.7.1 BELMORE ROAD PRECINCT LOCAL CENTRE (THE PRECINCT LOCAL CENTRE)

The Precinct Local Centre has an approximate area of 3.6ha. It will support the delivery of two (2) supermarkets, with a total area of approximately 6,100m<sup>2</sup>, a multi-purpose community centre at approximately 2,360m<sup>2</sup> and other recommended convenient-based facilities.

The multi-purpose community centre is proposed to be co-located with the playing field. The community centre is planned to accommodate youth recreation space and potentially a library.

The local centre adopts a mixed-use model with residential development designed above a retail podium. Page 85 and 86 demonstrate an indicative layout for the local centre based on the following five (5) design principles.

#### Five Design Principles

- 1 **Co-locate community centre with youth recreational space and the sporting field.**
- 2 **Provide clear separation between the residential apartments and the community centre. This will provide the opportunity to offer a well-defined centre in relation to the use of community, leisure, recreational and entertainment; as well as future architectural design.**
- 3 **Provide a plaza at the intersection of Belmore Road and the proposed local road along the eastern boundary of the playing field.**
- 4 **Provide sufficient parking, loading, and servicing area for retail operation.**
- 5 **Provide communal open spaces on the podium level, where residents can easily access.**

#### Height Benchmark with Comparable Centres

Most new growth areas such as Turner Road Precinct planned for a neighbourhood centre with a typical height of 4-storeys. More recent growth areas such as Lowes Creek Maryland proposes a maximum height of 21m for the local centre, equivalent to a 5-6 storeys building.

Adopting the average case scenario, Belmore Road Precinct proposes a **maximum height of 4-storeys** for the local centre, accounting for 1-storey retail podium and 2-3 storeys residential apartments.

#### Place-centred Design

The North Village at North Kellyville and Rouse Hill Town Centre set an exemplar in creating a vibrant centre and a pleasant living environment:

- Mixed-use core with range of retail offering;
- Community-focused, i.e. provide community facilities and services;
- Pedestrian-focused streets, safe crossing and ample tree planting along the verge;
- Generous open spaces, both public and private.

Both of these examples demonstrated the successful implementation of the five design principles, and the integration of ground floor retail that provides street activation and responds well to adjacent residential development.

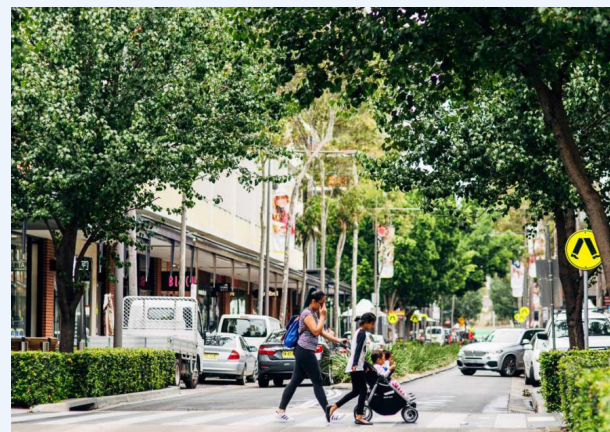


## North Kellyville - The North Village and Mixed-use



Source: Meridien; Google Street View

## Rouse Hill Town Centre



Source: Brett Boardman, AJC; HDR



Local Centre Ground Floor  
Activation, Access & Pedestrian Treatment

Active frontage is located along Belmore Road and the intersection with the proposed Collector Road to create an entrance feature to the Precinct and the centre.

Plaza is positioned at north to enable equal access between sporting field users, communities and retailers, whilst ensuring there's maximum exposure to natural sunlight.

Primary school access depends on the Collector Road to the east and south, where it is public transport accessible. Retail traffic (including car parking access and loading area) is diverted to the Local Road at the rear of the local centre. This is mainly to ensure the Collector Road will remain as a clear thoroughfare, and the Local Road between the playing field and the community centre will have minimal traffic (i.e. more pedestrian-friendly).

Design Principles

1

Co-locate community centre with youth recreational space and the sporting field.

3

Provide a plaza at the intersection of Belmore Road and the proposed local road along the eastern boundary of the playing field.

4

Provide sufficient parking, loading, and servicing area for retail operation.

LEGEND	
	Belmore Road Precinct Local Centre Boundary
	Landmark Corner
	Potential Laneway
	Key North-South Pedestrian Connection
	Pedestrian Connections
	Safe Pedestrian Crossings
	Parking and Loading Area Entrances
	Supermarket Entrances
	Ground Floor Residential Lobby Access
	Active Retail Frontages
	Large Format Retail
	Community Centre & Child Care Centre
	Residential Apartments
	Convenience-based facilities (incl. medical centre, gym etc.)
	Loading Area
	Car Parking Area

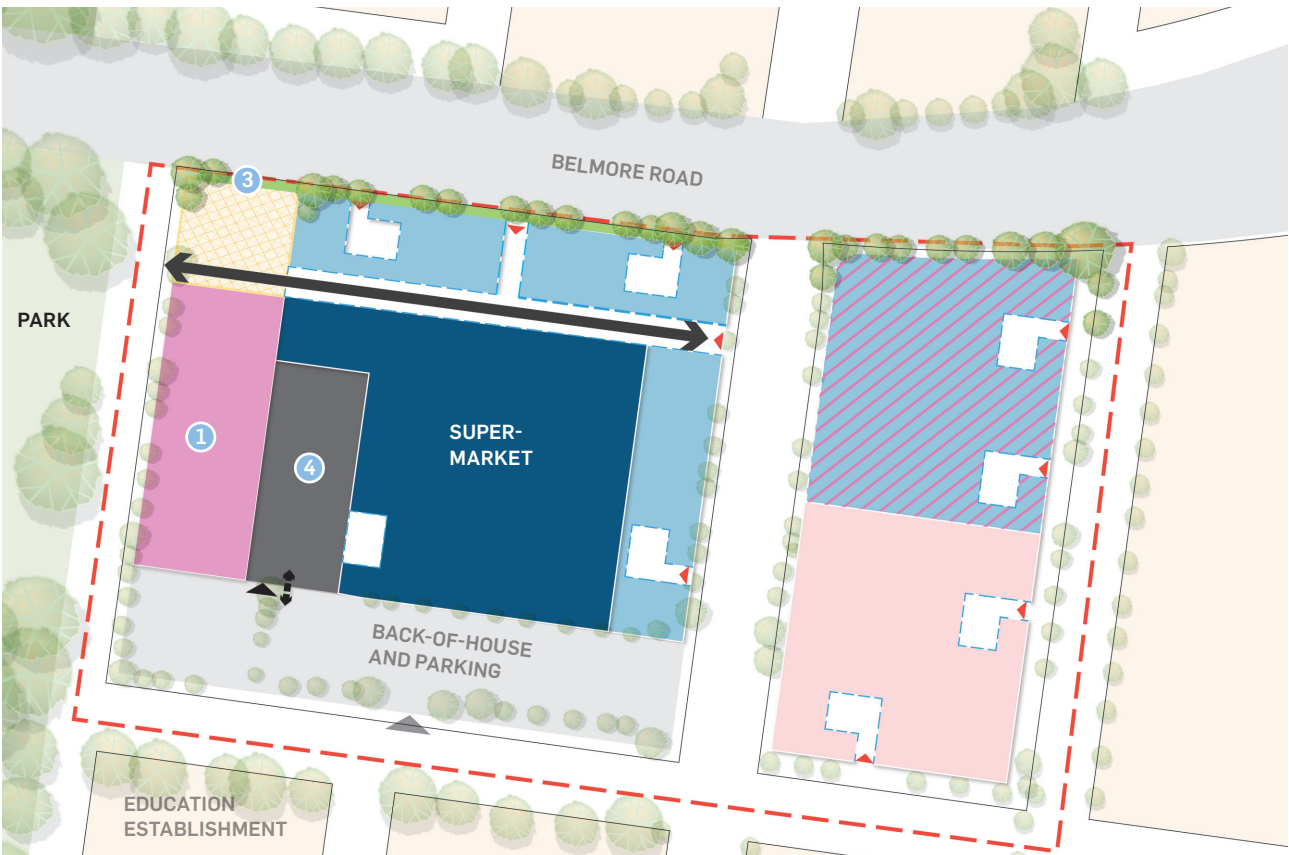


Figure 43 Indicative Ground Floor Plan

## Car Parking Provision For Residential Apartments

Car parking is to be provided as underground parking at the local centre. Based on Camden Development Control 2019 (DCP), the village centre will need to provide approximately 1,600 car parking spaces, catering for both residential and non-residential uses. This amount of car parking spaces can be accommodated in a single basement level.

**This above estimated is based on the following rates:**

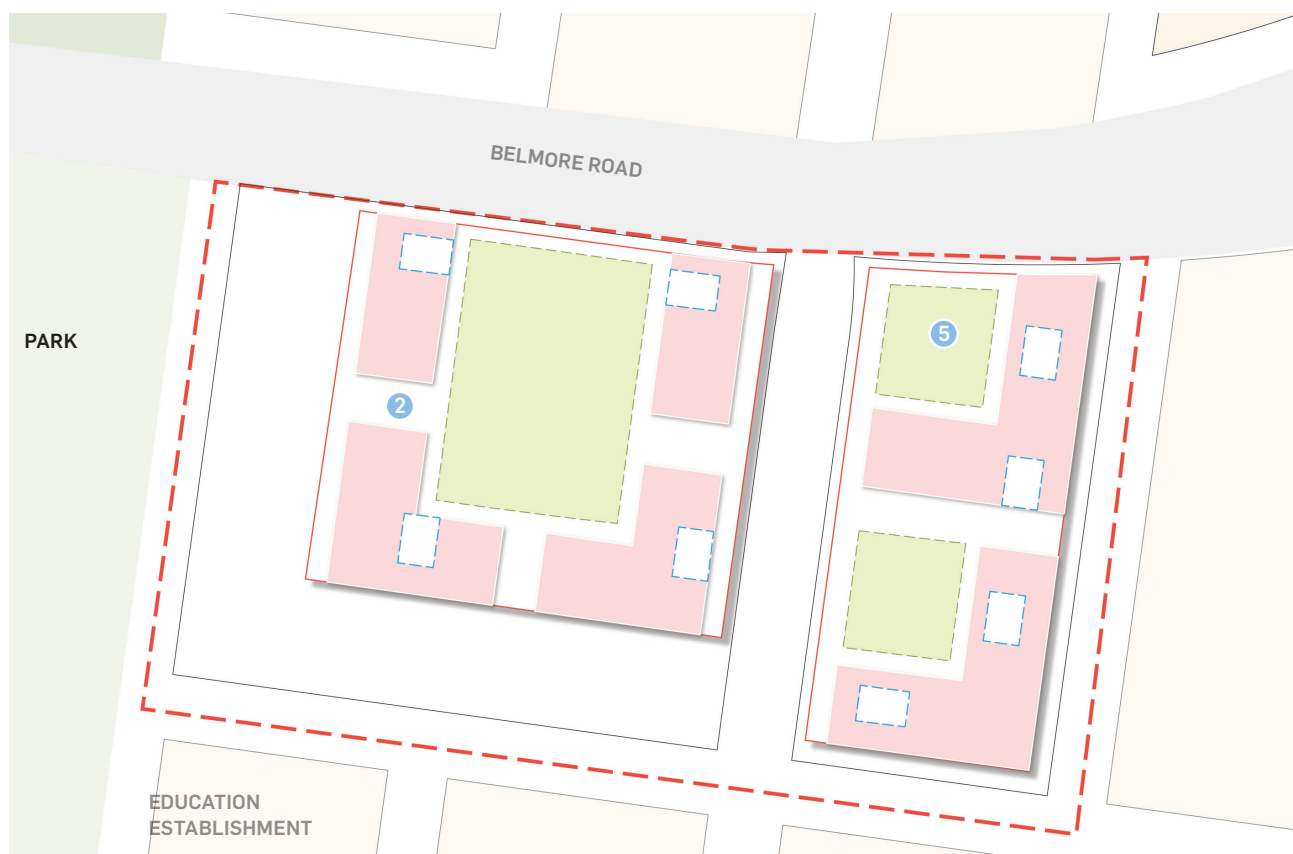
- 1 car parking space per 22m<sup>2</sup> Retail GFA;
- 1 car parking space per residential unit, plus
- 0.2 car parking spaces per 2 bedroom unit, plus
- 0.5 car parking spaces per 3 or more bedroom unit;
- 1 visitor car parking space per 5 units.
- 15 car parking spaces per 100m<sup>2</sup> GFA room (Function Centre).
- 50 car parking spaces per sporting field

### Design Principles

- 2 **Provide clear separation between the residential apartments and the community centre. This will provide the opportunity to offer a well-defined centre in relation to the use of community, leisure, recreational and entertainment; as well as future architectural design.**
- 5 **Provide communal open spaces on the podium level, where residents can easily access.**

### LEGEND

- Belmore Road Precinct Local Centre Boundary
- Retail Podium
- Residential Apartments
- Communal Open Space



**Figure 44** Indicative Roof Plan



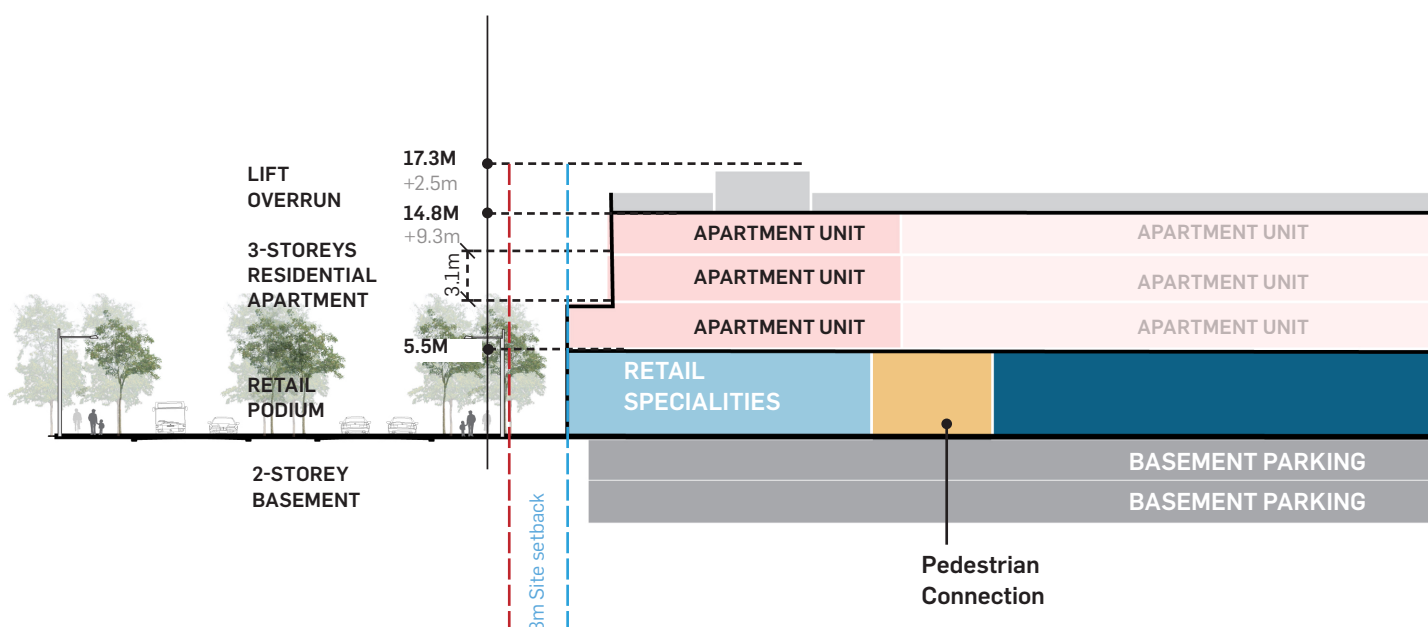
### Local Centre's Maximum Building Height of 23.5m (6 storeys)

The proposed building height for Belmore Road Precinct typically ranges between 9.5m to 16m, accounting for 1-2 storeys dwelling types including detached, semi-detached and attached housing (terraces). The **maximum building height of 16m** only applies to Bringelly Local Centre.

The maximum building height of 16m accounts for:

- 5.5m ground floor retail podium
- 3-storeys residential tower with 3.1m typical residential floor to floor height
- 2.5m lift overrun

Car parking provision is anticipated to be accommodated within 1-storey basement level.



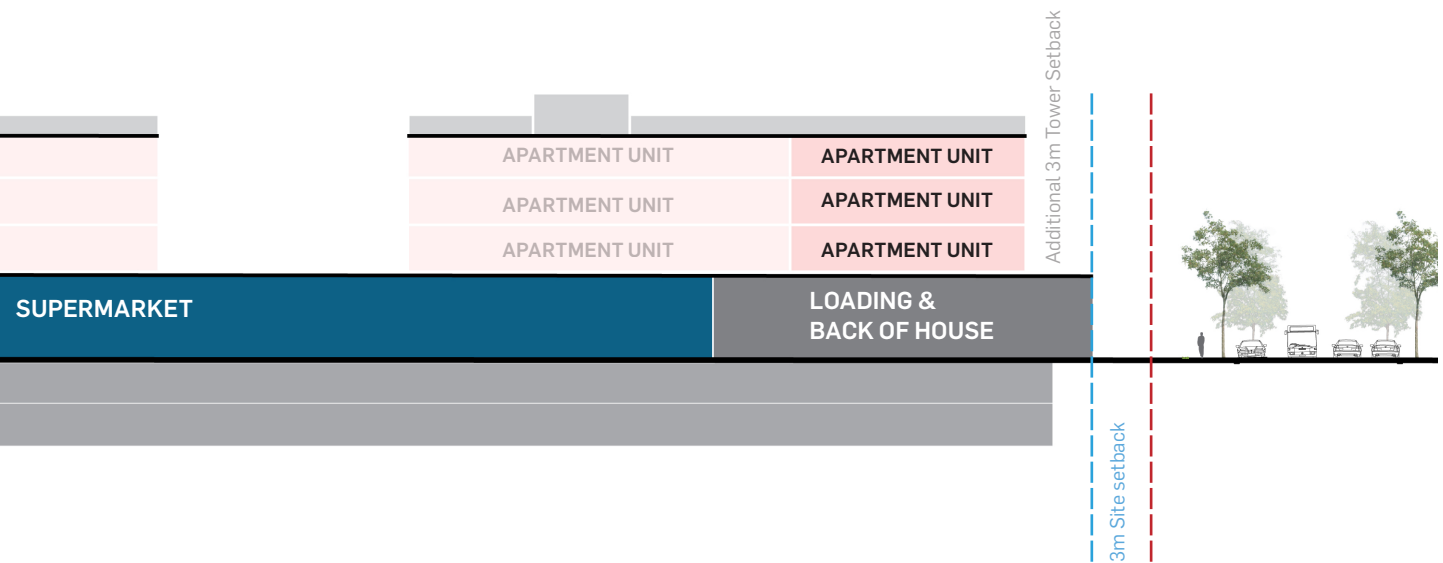
**Figure 45** Cross Section of Belmore Road Precinct's Local Centre



INDICATIVE GROUND FLOOR LAYOUT



INDICATIVE UPPER LEVEL LAYOUT



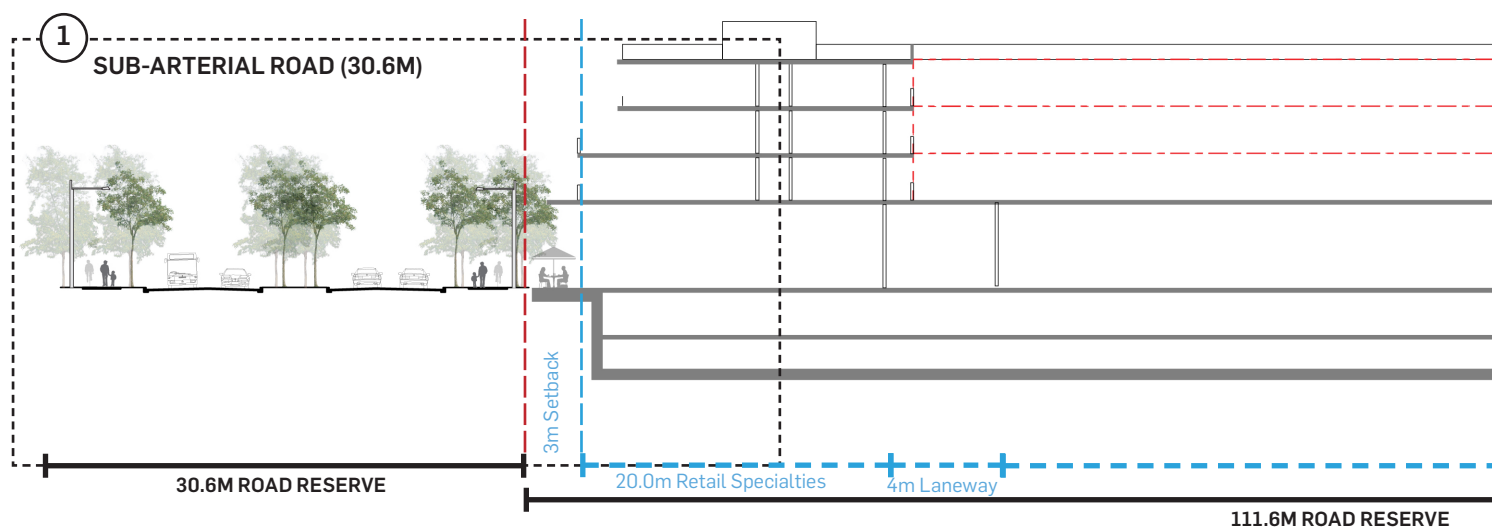


Figure 47 Cross Section of the Precinct Local Centre's Street Interfaces

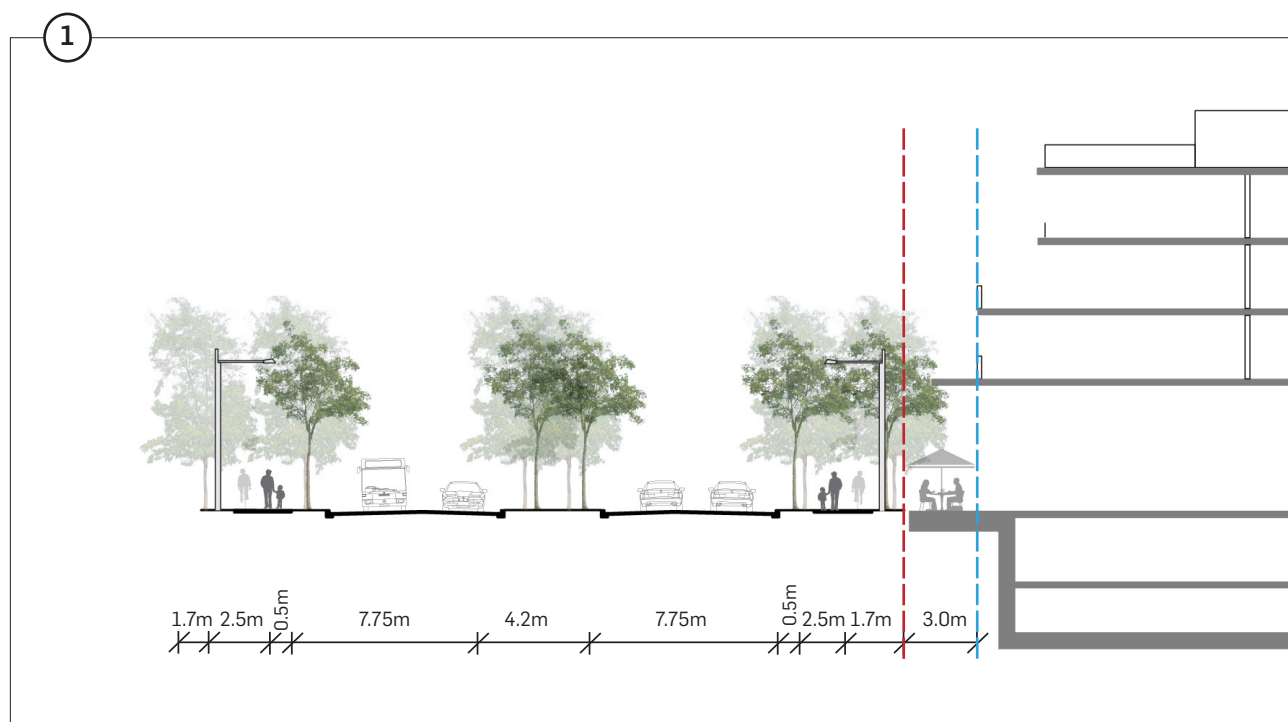
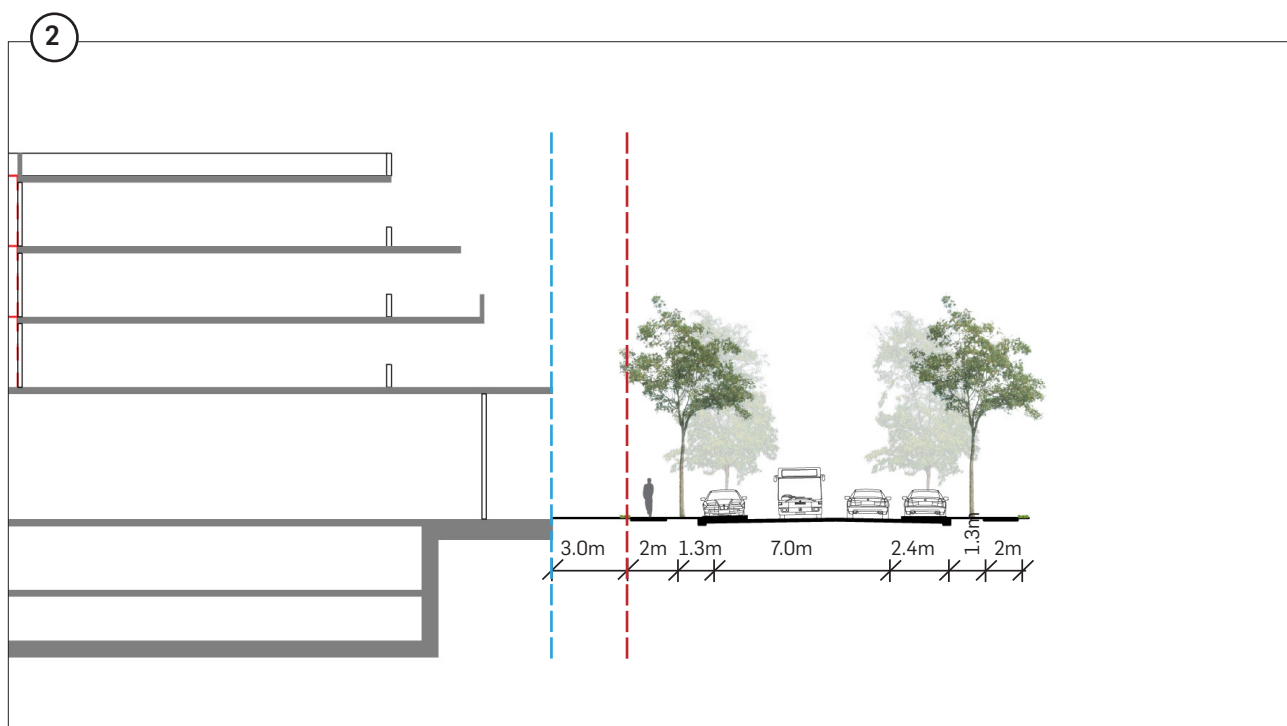
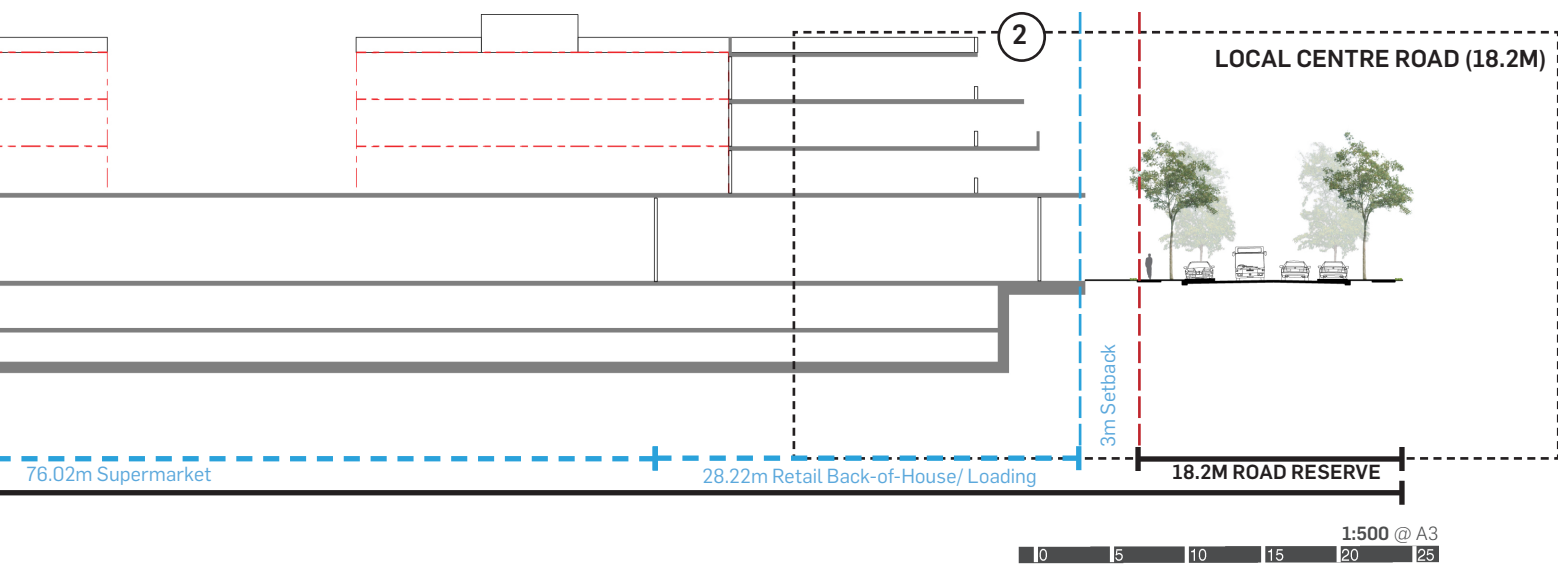


Figure 46 Cross Section of Sub-Arterial Road (30.6m) - Belmore Road Interface with Local Centre





**Figure 48** Cross Section of Local Centre Road (18.2m) Interface

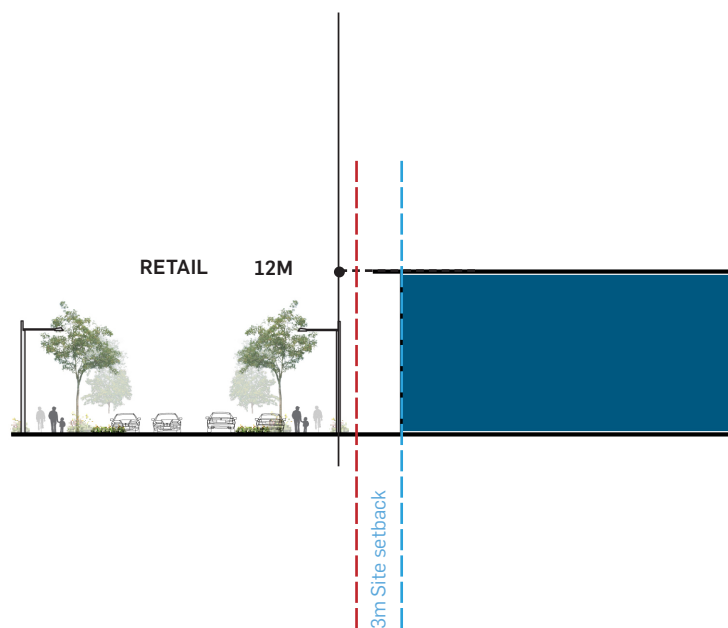
### Neighbourhood Centre (Convenience) Maximum Building Height of 12m (1 storey)

The proposed Neighbourhood Centre (Convenience) has a maximum building height of 12m.

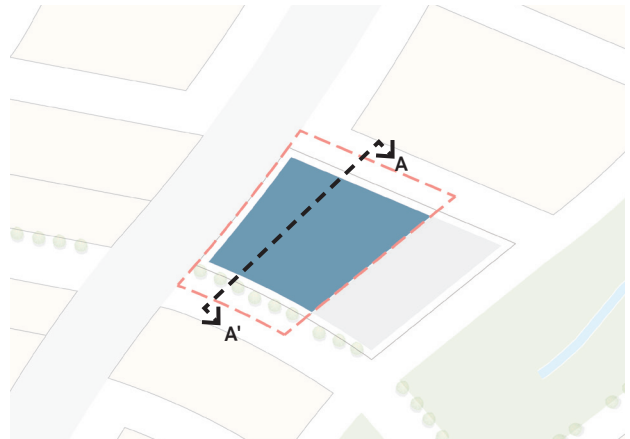
**The maximum building height of 12m accounts for:**

- 12m ground floor retail

Car parking provision is anticipated to be accommodated on the ground floor.



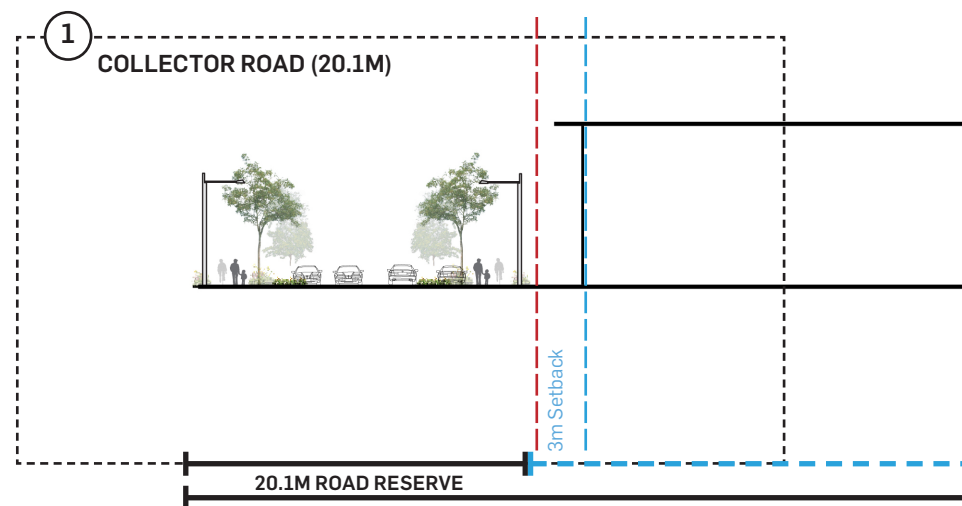
**Figure 49** Cross Section of Belmore Road Precinct's Neighbourhood Centre (Convenience)



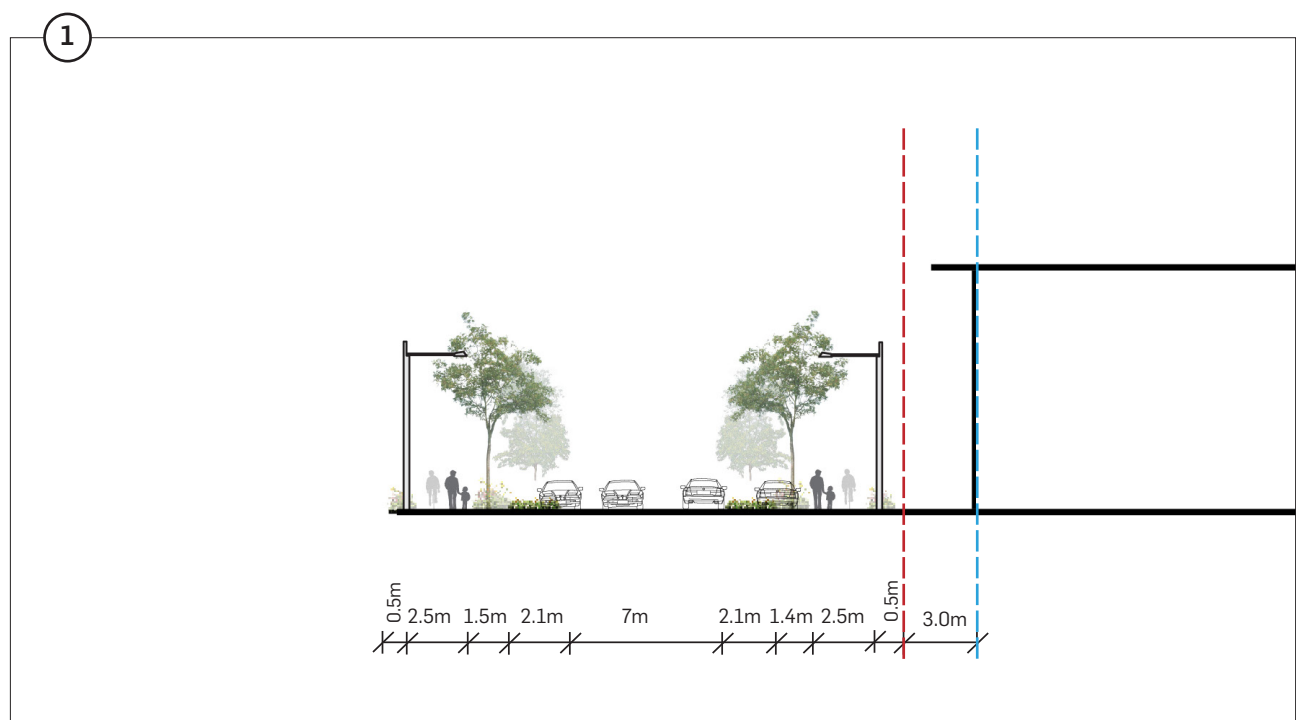
INDICATIVE GROUND FLOOR LAYOUT



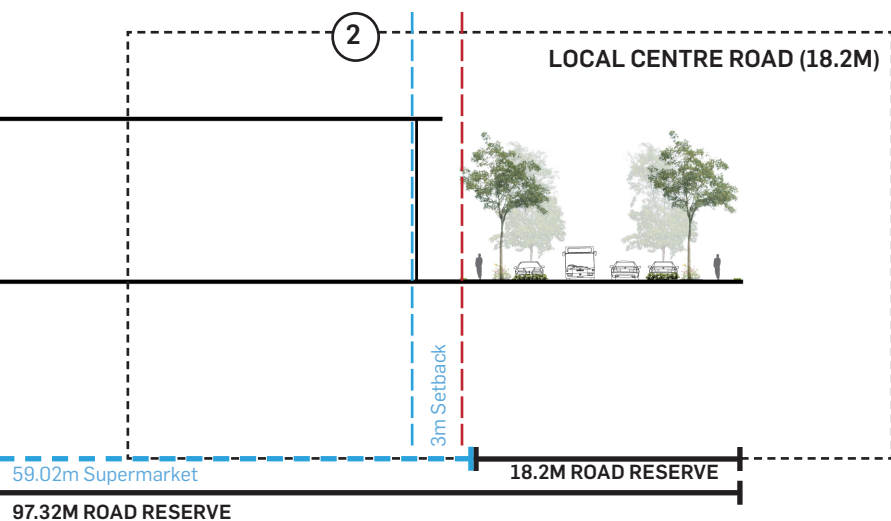




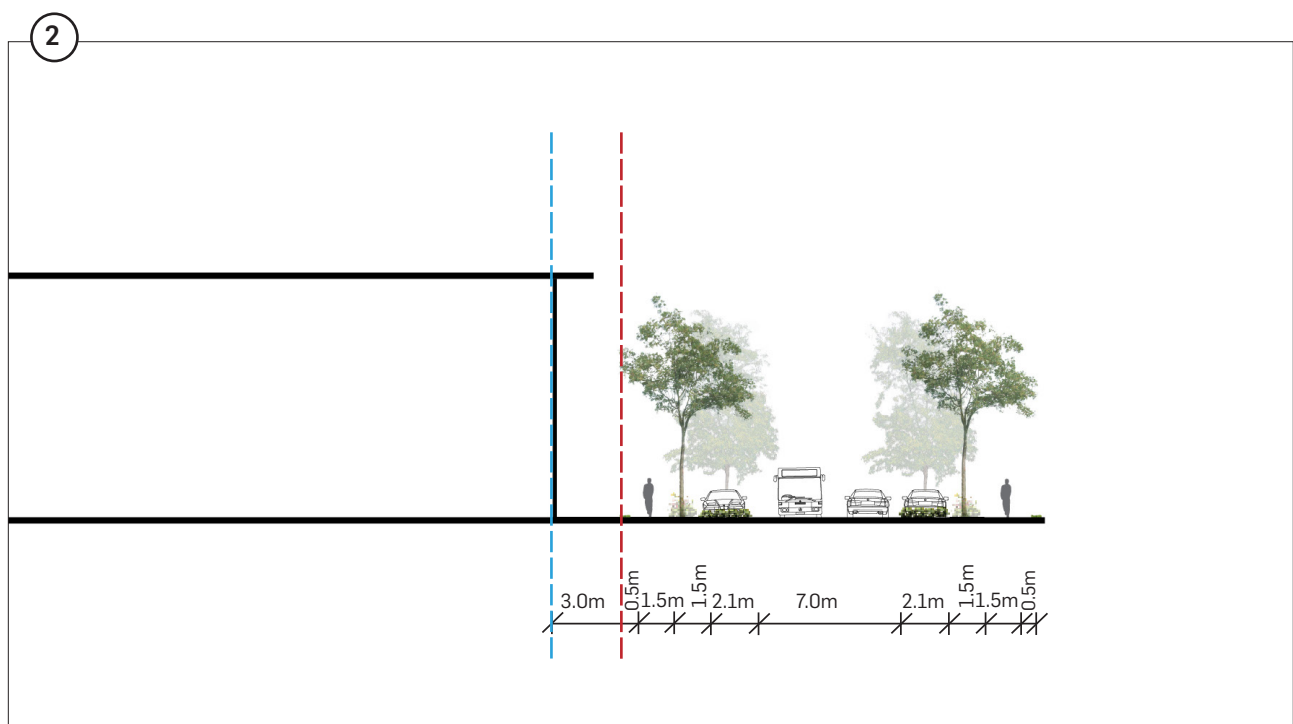
**Figure 51** Cross Section of the Precinct Neighbourhood Centre (Convenience) Street Interfaces



**Figure 50** Cross Section of Collector Road (20.1m) - Belmore Road Interface with Neighbourhood Centre (Convenience)



1:500 @ A3  
0 5 10 15 20 25



**Figure 52** Cross Section of Local Centre Road (18.2m) Interface

1:300 @ A3  
0 2.5 5 7.5 10 12.5 15

## B.7.2 BELMORE ROAD PRECINCT EMPLOYMENT PRECINCT

The Precinct's Employment Precinct is located at the northern boundary of Belmore Road Precinct. It has an approximate area of 7.5ha. This employment precinct is anticipated to be rezoned as B6 Enterprise Corridor.

The Precinct's Employment Precinct can support the development for a mix of business, office, bulky good retailing and other light industrial type of development. Any form of development will need to sensibly respond to the low density dwellings at the immediate south of the employment precinct.

**Figure 29** demonstrates the possible layout for the Employment Precinct based on four key design principles.

### Four Design Principles

- 1 Provide a 11m setback from the drainage basins as a setback and access street for future use.
- 2 Provide flexible subdivision layout that supports a mix of office-warehouses, bulky good retailing and urban services.
- 3 Provide a minimum 5m landscape setback as a landscape buffer or screening for the surrounding residential development.
- 4 Retain and enhance existing businesses and enterprises at the north-east corner of Belmore Road Precinct, including existing Bringelly Village Centre.
- 5 Support a corner landmark building at the intersection of The Northern Road, Greendale Road and Wentworth Road, to mark the northern entrance of Belmore Road Precinct.

### LEGEND

- Belmore Road Precinct
- Bringelly Precinct's Employment Precinct
- Min. 3m Landscape Setback
- 5m Landscape Buffer
- ▲ Lots Access
- Lots
- Existing Building
- Existing Heritage Building
- Indicative Building Layout



**Figure 53** Indicative Layout of Belmore Road Precinct Employment Precinct



## PRECEDENCES

### Newington Business Park



*Source: Goodman; Google Street View*

### Homebush Business Village



*Source: GJS Property*

### Sydney Business Park



*Source: Gray & Walsh*

### The Grounds of Alexandria



*Source: The Brick Pit*

# **PART C:**

# **PROPOSED SEPP**

# **AMENDMENTS**

## B.8 PROPOSED SEPP AMENDMENTS

EXISTING SEPP (PRECINCTS - WESTERN PARKLAND CITY) 2021		PROPOSED SEPP AMENDMENTS	
Land Zoning	<ul style="list-style-type: none"> <li>RU1 Primary Production</li> <li>RU4 Primary Production Small Lots</li> </ul>	<ul style="list-style-type: none"> <li>B1 Neighbourhood Centre / E1 Local Centre</li> <li>B6 Enterprise Corridor/ E3 Productivity Support</li> <li>E2 Environmental Conservation / C2 Environmental Conservation</li> <li>E4 Environmental Living / C4 Environmental Living</li> <li>RE1 Public Recreation</li> <li>R2 Low Density Residential</li> <li>R3 Medium Density Residential</li> </ul>	
Net Residential Density Ranges		DENSITY RANGES (DW/HA)	
		Minimum	Maximum
E4 Environmental Living	N/A		
Environmental Living		0	10
R2 Low Density Residential	N/A		
Low Density Band 1		10	20
Low Density Band 2		20	25
R3 Medium Density Residential	N/A		
Medium Density Band 1		25	35
Medium Density Band 2		35	60
Floor Space Ratio (FSR)	N/A	<ul style="list-style-type: none"> <li>Maximum 2:1 for B1 Neighbourhood Centre</li> </ul>	
Height of Building (HOB)	9.5m	<ul style="list-style-type: none"> <li>9.5m for Low Density Band 1, Low Density Band 2 and Medium Density Band 1</li> <li>12m for Medium Density Band 2</li> <li>16m for B2 Local Centre</li> </ul>	



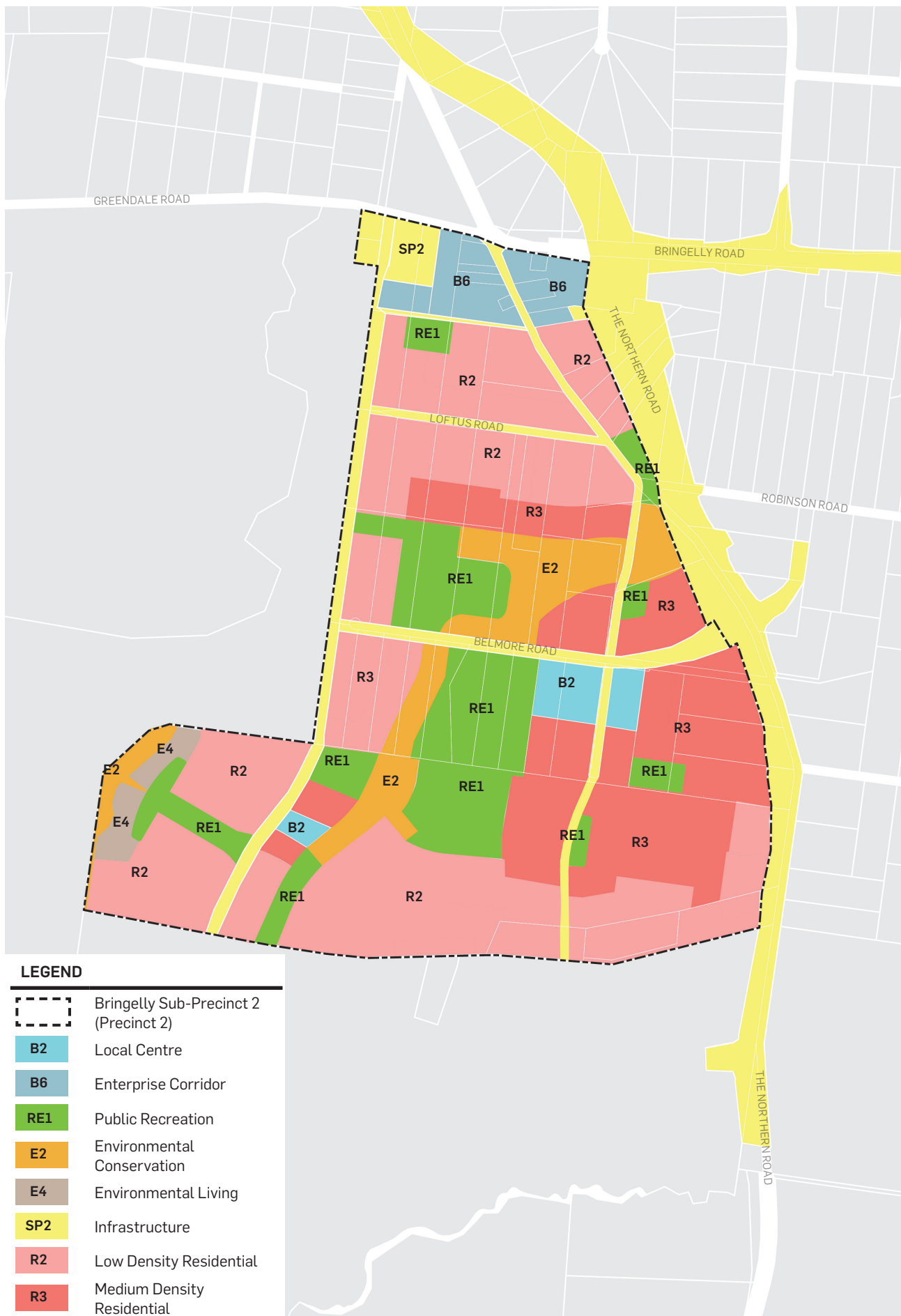
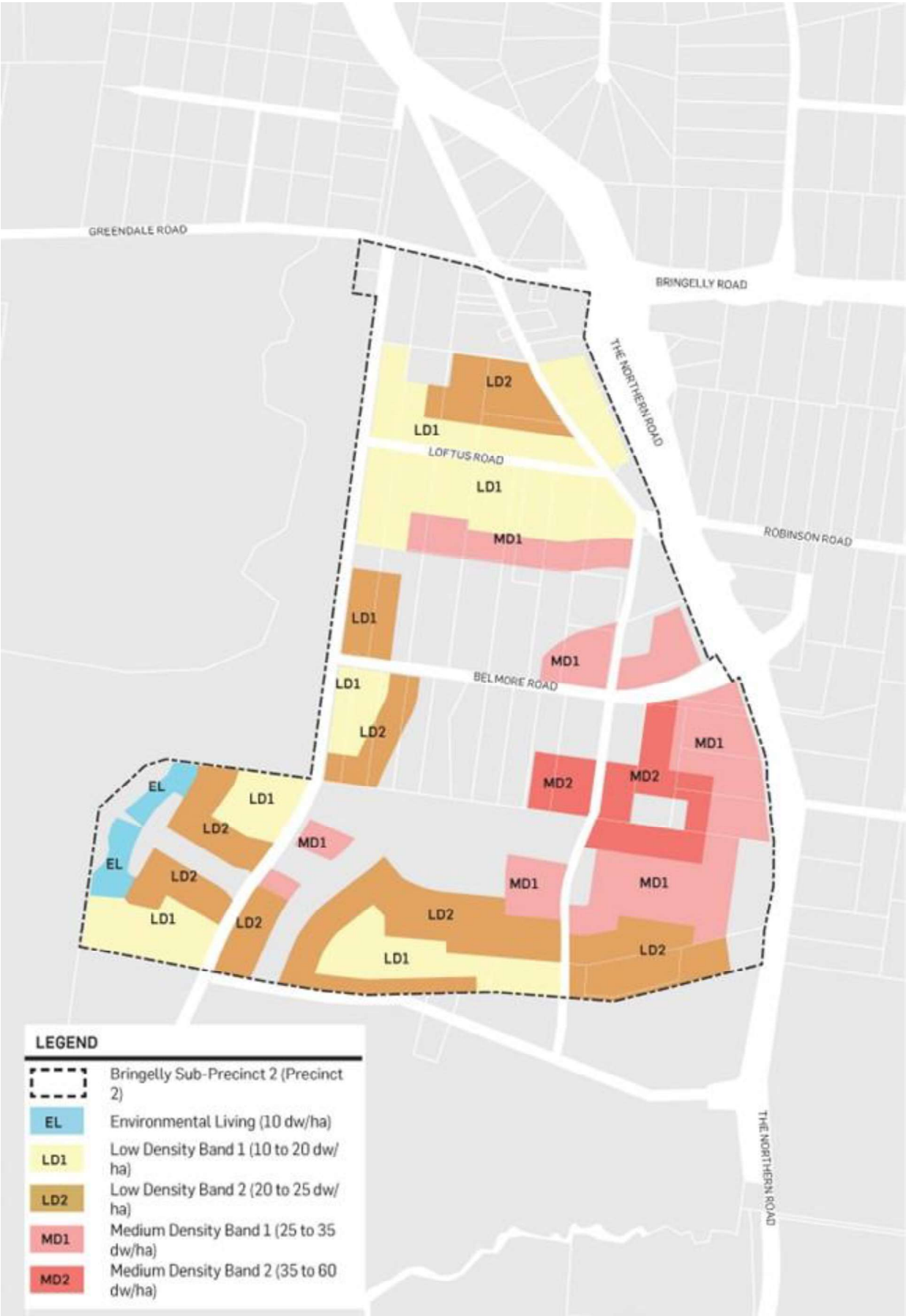


Figure 1 Proposed Land Zoning

Figure 22 Proposed Height of Building Map



Figure 21 Proposed Residential Density Map







**Figure 56** Proposed Floor Space Ratio (FSR)





**Figure 58** Riparian Protection Area Map



**Figure 59** Heritage Map







**Figure 60** Permitted Uses Map



