

URBAN DESIGN REPORT



PREPARED FOR
LENDLEASE
11 NOV 2022
DRAFT REPORT



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

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

The *Draft Connecting with Country Framework* by the NSW Government Architect (GANSW) has been developed in close collaboration with senior knowledge holders from 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.

ACKNOWLEDGEMENT OF THE COUNTRY

CONNECTING WITH COUNTRY

Gilead is committed to supporting the health and wellbeing of Country by valuing, respecting, seeing, hearing, learning and applying Aboriginal peoples knowledge to guild us as we care for Country.

We value the First Nations networks across our project and the richness they bring to Gilead and the lives of our new residents.

We encourage and seek out opportunities for Aboriginal people and businesses within Gilead and support the outcomes that advance their chosen aspirations.

We believe Traditional Owner relationships are partnerships that make Gilead a richer community now and for future generations.



EXECUTIVE SUMMARY

"DEFINED BY NATURE, DESIGNED FOR LIVING"

Gilead is situated between Appin Road and the Nepean River, at the heart of the Greater Macarthur region. It will be the first priority precinct to make a considerable impact to housing supply and securing key conservation corridors.

Inspired by the beauty of country, Gilead is surrounded by protected natural bushland, framing wide open green spaces, with plenty of places to explore. With parks designed for adventure and streets designed for connection - this is a place to put down roots and built your life.

With a commitment to the future, sustainable living comes naturally here. Gilead is a unique and welcoming place, offering new ways of living.

Connected to the regions most stunning beaches, foodie hubs and educational institutions and outdoor adventures, you can build an incredible life with endless possibilities here.

The Structure Plan will seek to deliver the following outcomes:

- Utilises the existing land form for visual connection.
- Celebrate the rich cultural landscape characteristics within the Site.
- Preserve the ecology and high biodiversity value by establishing the koala corridor.
- Celebrates the natural green and blue assets of Woodhouse Creek and Nepean Creek and Menangle Creek.
- Deliver an approximately up to 3,300 dwelling with varied housing offer in response to their proximity to key service and amenities.
- Establishes place activation within the village centre precinct with retail service, primary school and sporting field.

The following key place proposition outcomes are envisioned for Gilead:



INSPIRED BY NATURE

A place to explore and discover, in a sustainable way.



CONSIDERED AND CONNECTED

Where families grow and friendships are made.



FIRST NATIONS FIRST

Where history is respected and new chapters are created.



A UNIQUE GATHERING PLACE

Where home feels like an expression of you.

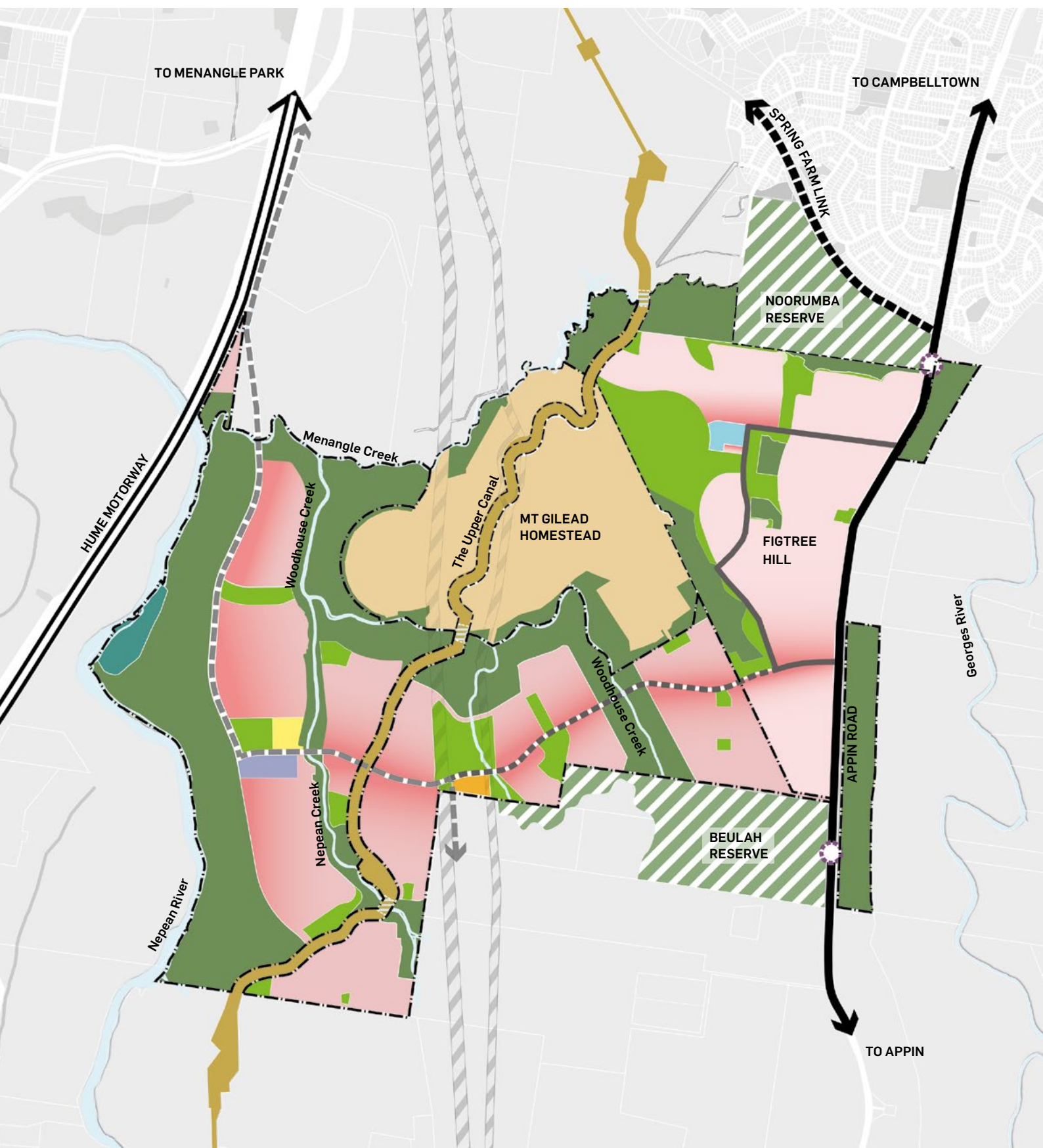




Figure 1 Mount Gilead Concept Plan








DRAFT GILEAD PRECINCT STRUCTURE PLAN (PART)

The opposite diagram illustrates the Gilead Precinct Structure Plan (part) that is subject to the planning proposal.






LEGEND

-  Gilead
-  Figtree Hill and Homestead








LAND USE

-  Urban Area
-  Medium Density Urban Area
-  Village Centre
-  Proposed School
-  Utility and Service


OPEN SPACE & PUBLIC DOMAIN

-  Conservation Area
-  Indicative Open Space
-  Proposed Riverside Reserve
-  Sydney Upper Canal
-  Water body

STREET NETWORK

-  Motorway
-  Arterial Road
-  Proposed Arterial Road
-  Approved Secondary Collector Road
-  Proposed Secondary Collector Road
-  Indicative Potential Transport Corridor
-  Proposed Appin Road Underpass

OTHER

-  Transmission and Gas Easement Line

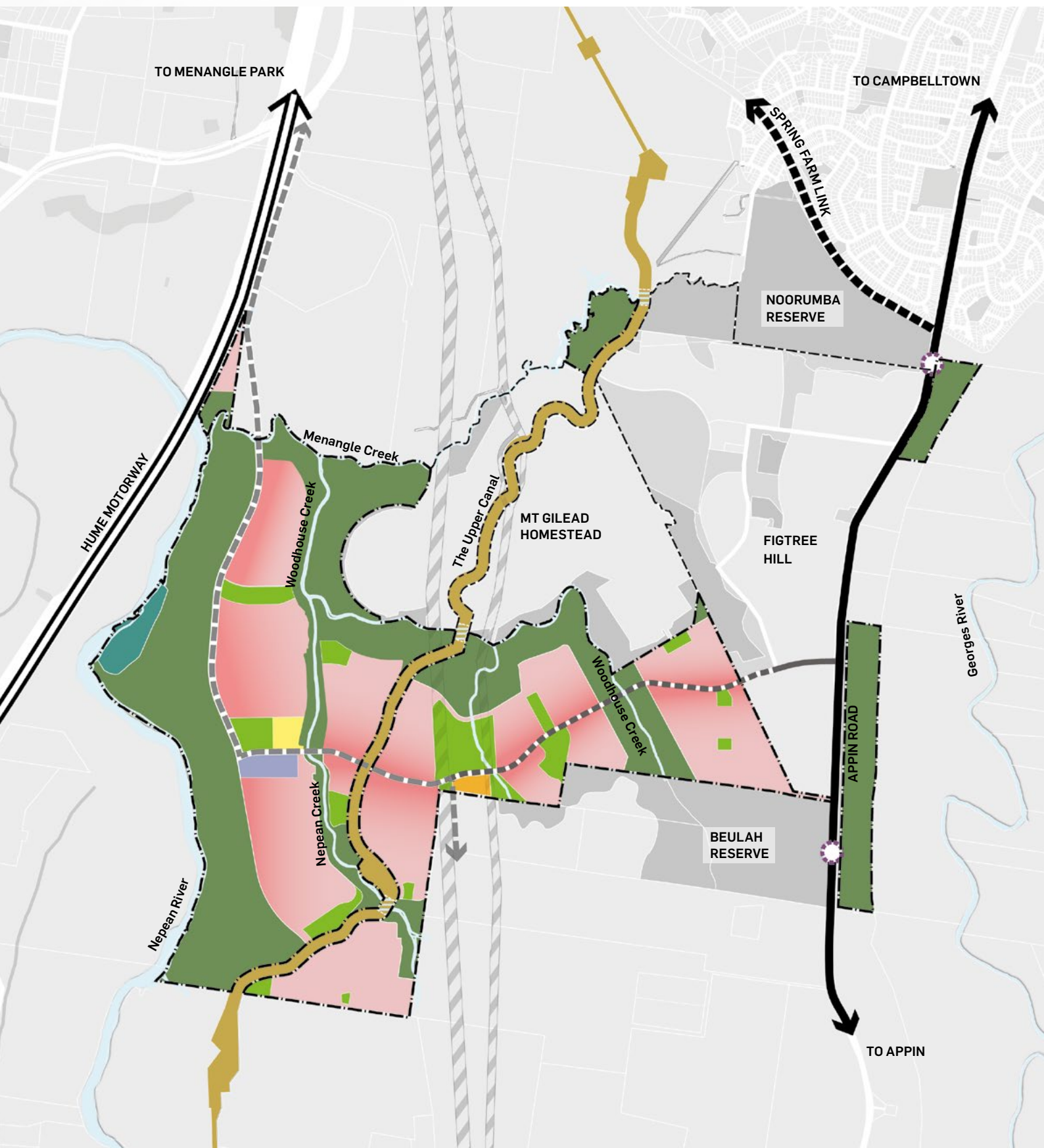


Figure 2 Draft Gilead (part) Precinct Structure Plan



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ACKNOWLEDGMENT OF COUNTRY

We acknowledge 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. We would like to pay our respects to the Elders past and present of the Dharawal Nation, and we extend that respect to other indigenous people who are present.

INTRODUCTION

PROJECT BACKGROUND

This Urban Design Report has been prepared to support Lendlease's rezoning of the Gilead Site (the Site). The Site is located within the Gilead Precinct (the Precinct) as identified in the Greater Macarthur 2040 Interim Plan. The Site has an area of 495 hectares and is the subsequent stage of Figtree Hill which received the rezoning approval in 2017.

In 2019, the NSW DPIE established a Technical Assurance Panel (TAP) that comprises of multiple government agencies to assess the future developments within the Greater Macarthur Area including the Site. As part of the TAP process, the koala habitat protection and corridor were re-assessed, which resulted in an increased conservation area required within the Site.

The structure plan that accompanies this report is based on the approved biobanking and conservation area and the ongoing engagement process with the TAP since 2019.

PURPOSE OF THE REPORT

Urbis has been engaged by Lendlease to prepare the Urban Design report to support the planning proposal that seeks approval for the rezoning of the Site. The Structure Plan was prepared through a comprehensive urban design process in collaboration with the Client and a team of technical experts.

This report provides a summary of the process undertaken and rationale in developing the Structure Plan considering:

- The existing and future context of Gilead.
- An understanding of place through analysing existing physical and ecological conditions of the Site to investigate opportunities and constraints for development.

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

- Indigenous and European heritage;
- Landform and topography;
- Biodiversity and riparian corridors;
- Flooding and water cycle management;
- Roads and public transport; and
- Social infrastructure and open spaces.

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

Part A: Place Analysis

Collates the key findings from the technical studies into a series of site opportunities and constraints' maps.

Part B: Vision and Structure Plan

Provides an overview of the vision, guiding principles for the indicative structure plan and the layered strategies.

Part C: Proposed LEP Amendment

Provides the summary of the proposed LEP amendment for the rezoning.

SITE LOCATION AND DESCRIPTION

Site Location and Description

The Site is located in the suburb of Gilead in the southern end of the Campbelltown Local Government Area. It is located 47km to the south west of the Sydney CBD located in the vicinity of regional centres at Campbelltown, Macarthur, Narellan and Camden. The Site adjoins Lendlease's Figtree Hill community that is currently being developed to the immediate east.

Land in the locality is currently used for rural residential, grazing and extractive industries. The current character of the locality will change dramatically as rural land uses gradually transition to urban land uses consistent with the vision of Greater Macarthur 2040.

The Site consists of five properties including Lot 2 in DP 1218887, Lot 2 in DP 249393, Lot 1 in DP 603675, Lot 2 DP 603674 and part of Lot 5 in DP 1240836 and has a combined area of 495ha.

The Site has been subject to significant clearing and used for cattle grazing. Intact stands of vegetation are generally contained within incised creeklines that traverse the Site including Menangle Creek, Nepean Creek, Woodhouse Creek and the Nepean River. Outside of these areas, vegetation is generally characterised by pasture land and scattered paddock trees.




Access to the Site is provided by a battle axe handle on the eastern side of Lot 2 in DP 1218887 that connects to Appin Road. Access to the Site is also provided via an easement over land to the east that will be formalised by public roads being delivered by Lendlease as part of the Figtree Hill community.

Rural properties boarder the southern boundary of the Site including Beulah Reserve which contains a State Heritage Item and a registered BioBank. The Nepean River forms the western boundary of the Site with Menangle Creek forming the majority of the northern boundary of the Site.

A minor portion of the Site (Lot 2 in DP 249393) has frontage to the Hume Highway and is accessed from Medhurst Road.

The Upper Canal is a State Heritage Item that traverses the Site from South to North and there are a series of electrical transmission lines and gas pipeline easements that traverse the central part of the Site from north to south.

The Site sits to the south and west of the Mt Gilead Homestead complex that is a State Heritage Item with its curtilage contained within Lot 1 in DP 1218887.

	LAND PARCEL	SITE AREA (HA)
	GILEAD	495
	The Homestead Lot	150
	Figtree Hill	216
TOTAL LAND AREA		861

Figtree Hill is subject to a current Planning Proposal for urban development in accordance with the Sydney Region Metropolitan Development Program. The proposal has been planned to accommodate up to 1,700 residential lots.

The Homestead Lot along with the Upper Canal are state-listed heritage sites and curtilage. It provides intact evidence of the Aboriginal occupation and use of the land prior to its colonial development and expansion. The outstanding picturesque qualities, the estate's artificial lake an mill tower are rare and unique to Gilead.

Existing Infrastructure

Gilead is well-served by existing blue, green, and grey infrastructure. The structure plan area is bound by two major regional road connections, with Hume Motorway to the west, and Appin Road to the east.

Gilead is wrapped by three (3) major Green Grid projects, including:

- Nepean River along the western boundary;
- Georges River along the eastern boundary; and
- The Upper Canal dissecting the west and eastern portion of the Site

These grids reflect the natural landform and cultural landscape of Gilead.



Figure 3 Gilead Site

STRATEGIC PLANNING CONTEXT SUMMARY

Gilead is set within one of the major growth precincts in Greater Sydney. The Site is located within the Greater Macarthur Growth Area, which includes the Menangle Park, Gilead, North Appin and Appin Precincts.

The Greater Macarthur Growth Area is envisioned to deliver approximately 40,000 homes, of which 15,000 will be delivered within the Gilead Precinct.

The overall objectives for Greater Macarthur Growth Area are to:

- Achieve higher density residential development around the future centres and along the transport corridor.
- Rezone and release land for urban development.
- Deliver around 15,000 new homes within a scenic landscape.
- Conservation of biodiversity corridors and waterways.
- Create a central transport corridor to connect public transport to the Campbelltown to Macarthur rail lines.
- Create road upgrades and connections to Appin and Douglas Park.

Gilead is well positioned in the context of the growth area, with the

- City Serving Transport Corridor being planned to traverse across the site, connecting the site to Campbelltown-Macarthur
- Outer Sydney Orbital at ease access from the site, connecting Gilead to St Marys at the north through Western Sydney Aerotropolis, and Wollongong at the south
- Potential future train/ mass transit being investigated at Campbelltown-Macarthur, creating immediate connection between Campbelltown and the Western Sydney Airport.

KEY CONSIDERATIONS FOR GILEAD

Relevant to the Site, Greater Macarthur 2040 sets the direction for the broader Gilead Precinct to:

- Achieve higher density residential development around the future centres and along the transport corridor;
- Rezone and release land for urban development;
- Conservation of biodiversity corridors and waterways;
- Create a central transport corridor to connect public transport to the Campbelltown to Macarthur rail lines.
- Create road upgrades and connections to Appin and Douglas Park.

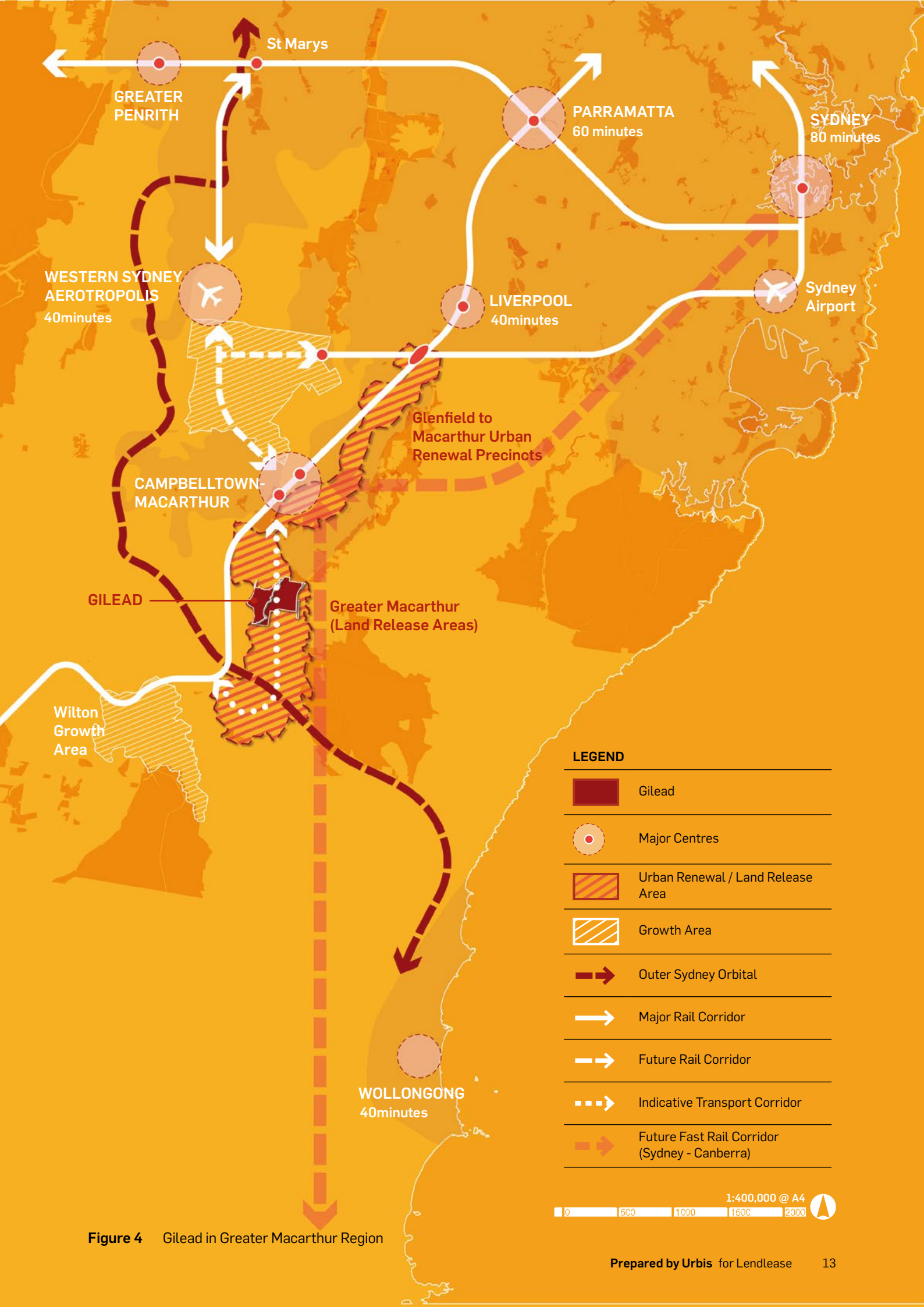


Figure 4 Gilead in Greater Macarthur Region

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PART A

PLACE ANALYSIS

A.1 LANDFORM AND TOPOGRAPHY



Gilead



Figtree Hill and Homestead

ELEVATION AND VIEW CORRIDORS

Contours



The Site is characterised by an undulating topography that varies in height by over 135m across the structure plan area.

Ridgelines



There are six main ridgelines. The northern most ridgeline traversing the Homestead Lot is a landmark of the Gilead landscape with the presence of Old Mill, Figtree Hill and One Tree Hill.

High Points



High points are predominantly located towards the south-east and north-east of the Site.

Indicative Distant View



Long distance views span from the south of the Site towards northwest to Blue Mountains.

Indicative Local View Corridors



There are three main local view corridors from the southern most ridgelines spanning north towards Old Mill and the hills north of the Site..

Indicative Visual Connections



Key visual connections exist between One Tree Hill and Old Mill in the north-east.

Highest Point - RL 201



Highest point is towards the north and south-east (201m).

Lowest Point - RL 90

The lowest point is towards the north-west (90m).

Existing Creeks



KEY CONSIDERATIONS

- Optimise distant views from high points.
- Create view corridors through aligning the local street network and open spaces.
- Leverage the ridgelines within the Site for primary street corridors.
- Maintain and enhance views to prominent key landmarks such as Old Mill, Figtree Hill and One Tree Hill.

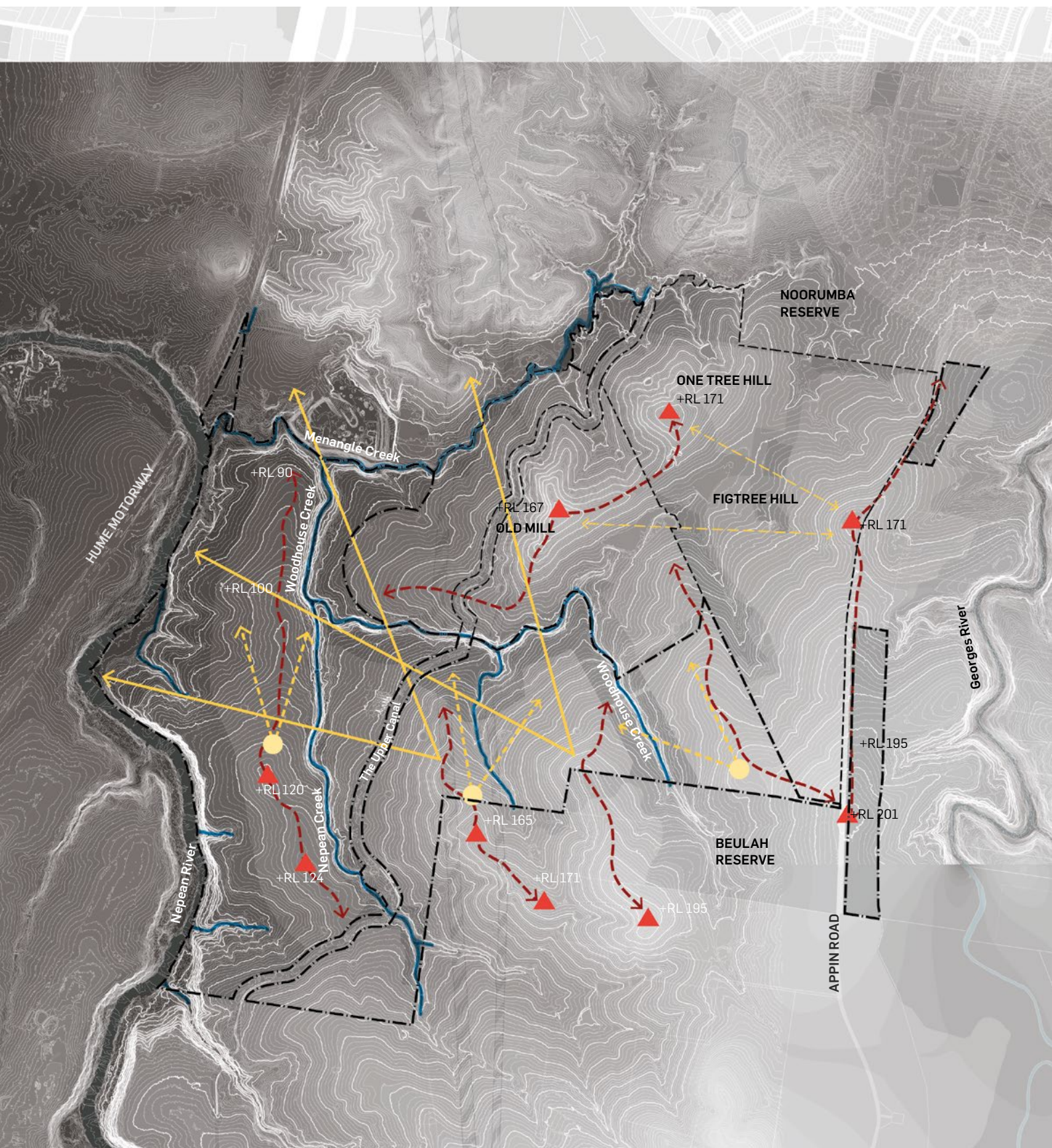


Figure 5 Elevation Analysis





Gilead



Figtree Hill and Homestead

SLOPE

Contours



The Site is characterised by an undulating topography that varies in height by over 135m across the structure plan area.



10-15% Slope Gradient



15.1%-18% Slope Gradient

>18% Slope Gradient



The steep slopes within the Site are predominantly situated along the creek corridors and the southern most portion of the Nepean River.



Conservation Area

KEY CONSIDERATIONS

- Optimise the developable land within areas of 0-15% slope gradients.
- Include steep slope gradient areas within the open space networks or large lots.

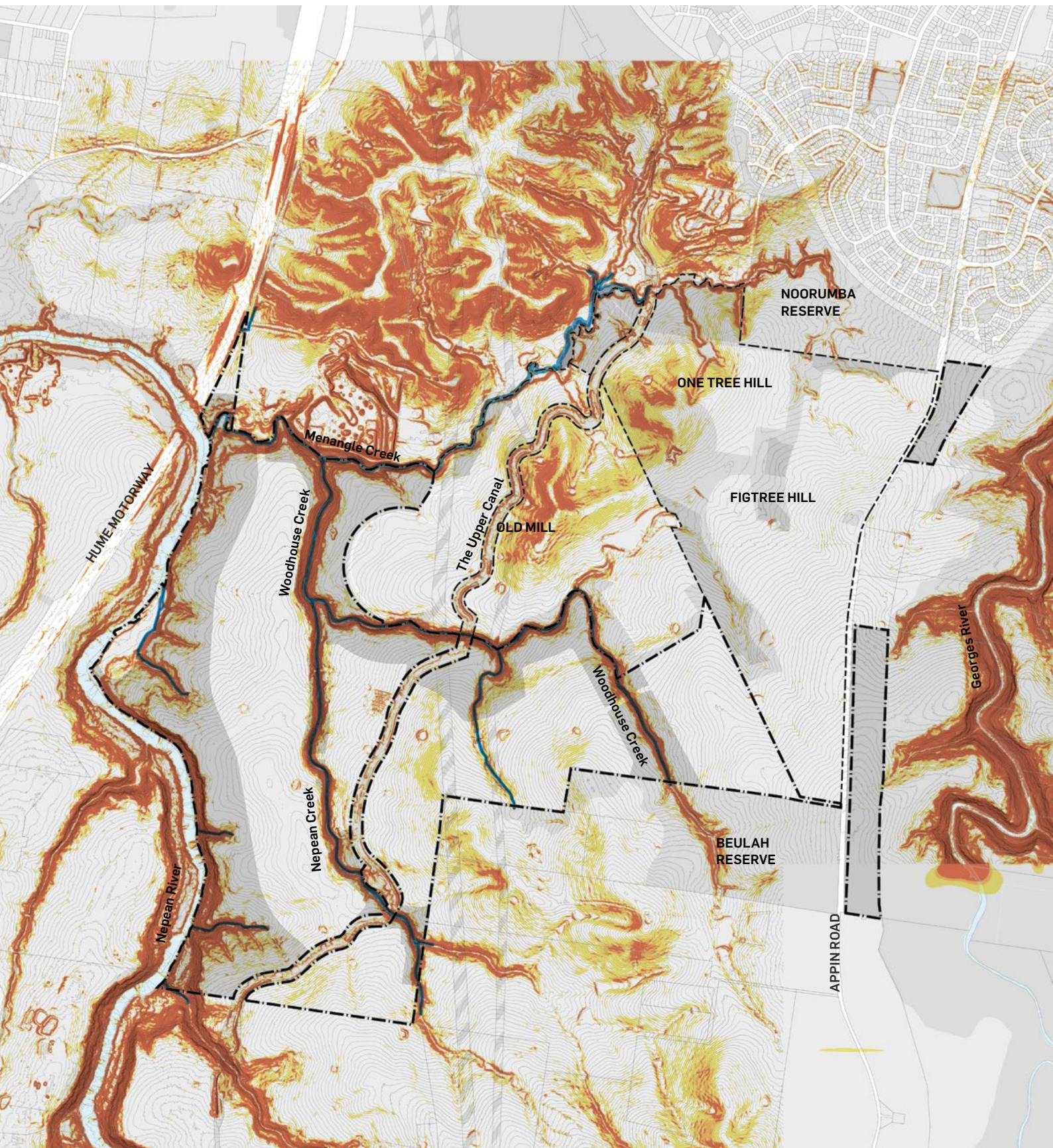


Figure 6 Slope Analysis



A.2 ECOLOGY AND GREEN INFRASTRUCTURE

Gilead is set within an agrarian landscape where the majority of the land has been kept to its natural state.



Gilead



Figtree Hill and Homestead

ECOLOGY AND GREEN INFRASTRUCTURE



Conservation Area

Gilead currently has over 45% of the land zoned as Environmental Conservation Area.



Fauna Corridor

The green infrastructure present at Gilead are natural assets of the broader region and plays a role as a habitat protection corridor for native wildlife. Three fauna corridors are identified within the Site which run along:

- **Corridor A** - Menangle Creek out towards Noorumba Reserve, connecting the Nepean and Georges River
- **Corridor B** - Woodhouse Creek out towards Beulah reserve.
- **Nepean River** - Primary Corridor.



Biobanking Zone



Conservation Area - Surrounding

Noorumba Reserve and Beulah Reserve are adjacent to the Site. Large area of reserve along Georges River sits to the east.



Environmental Area - Surrounding

KEY CONSIDERATIONS

- Protect and integrate the biodiversity corridors within the open space network.
- Provide a sensitive design response to Environmental Conservation Zone interfaces.
- Further detailed investigations will be required to validate the ecological values.

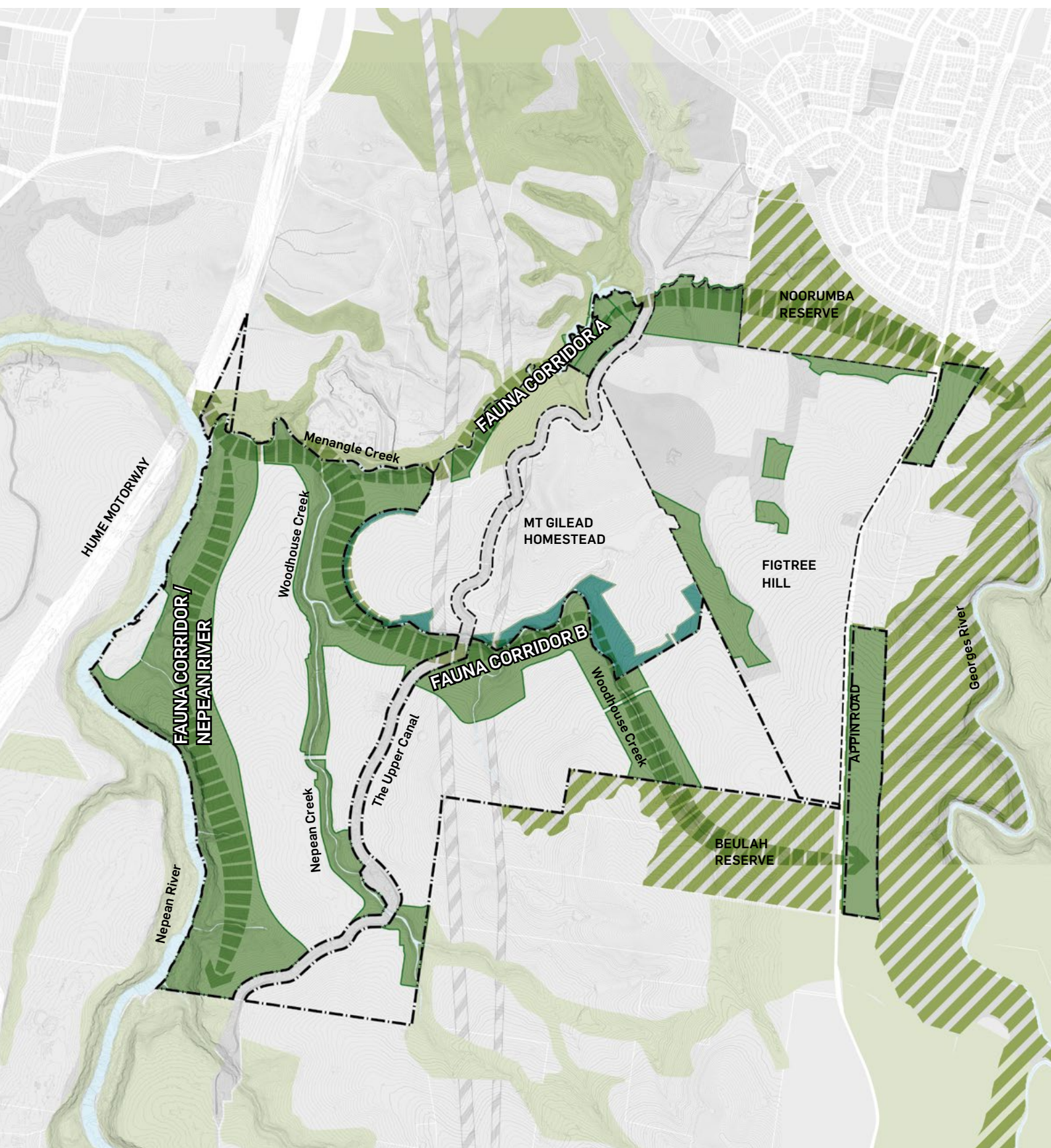


Figure 7 Ecology and Green Infrastructure



A.3 RIPARIAN CORRIDORS AND BLUE INFRASTRUCTURE



Gilead



Figtree Hill and Homestead

BLUE INFRASTRUCTURE AND RIPARIAN CORRIDORS

1st Stream Order



The first order streams includes the streams of Nepean River at the west, streams of Nepean Creek down to the south and Woodhouse Creek.

2nd Stream Order



A 20m buffer on either side of the Nepean Creek and Woodhouse Creek are required.

3rd Stream Order



Menangle Creek is classified as a 3rd order stream which runs along the northern boundary of Gilead and the Homestead Lot. .

4th Stream Order



Nepean River running along the western edge of the Site.

Riparian Zone



Riparian corridors serve as open spaces and drainage functions whilst protecting the biodiversity of the creeks.

Sydney Upper Canal



The Sydney Upper Canal provides a water supply system traversing the Site from north to south. The Canal corridor is a fenced area which is not accessible by the public. This network is not connected with the natural water system within the Site.



Indicative Sydney Upper Canal Bridge Crossing

KEY CONSIDERATIONS

- Protect and integrate the creek corridors as part of the green and blue grid.
- Retain the riparian corridor within the Site.

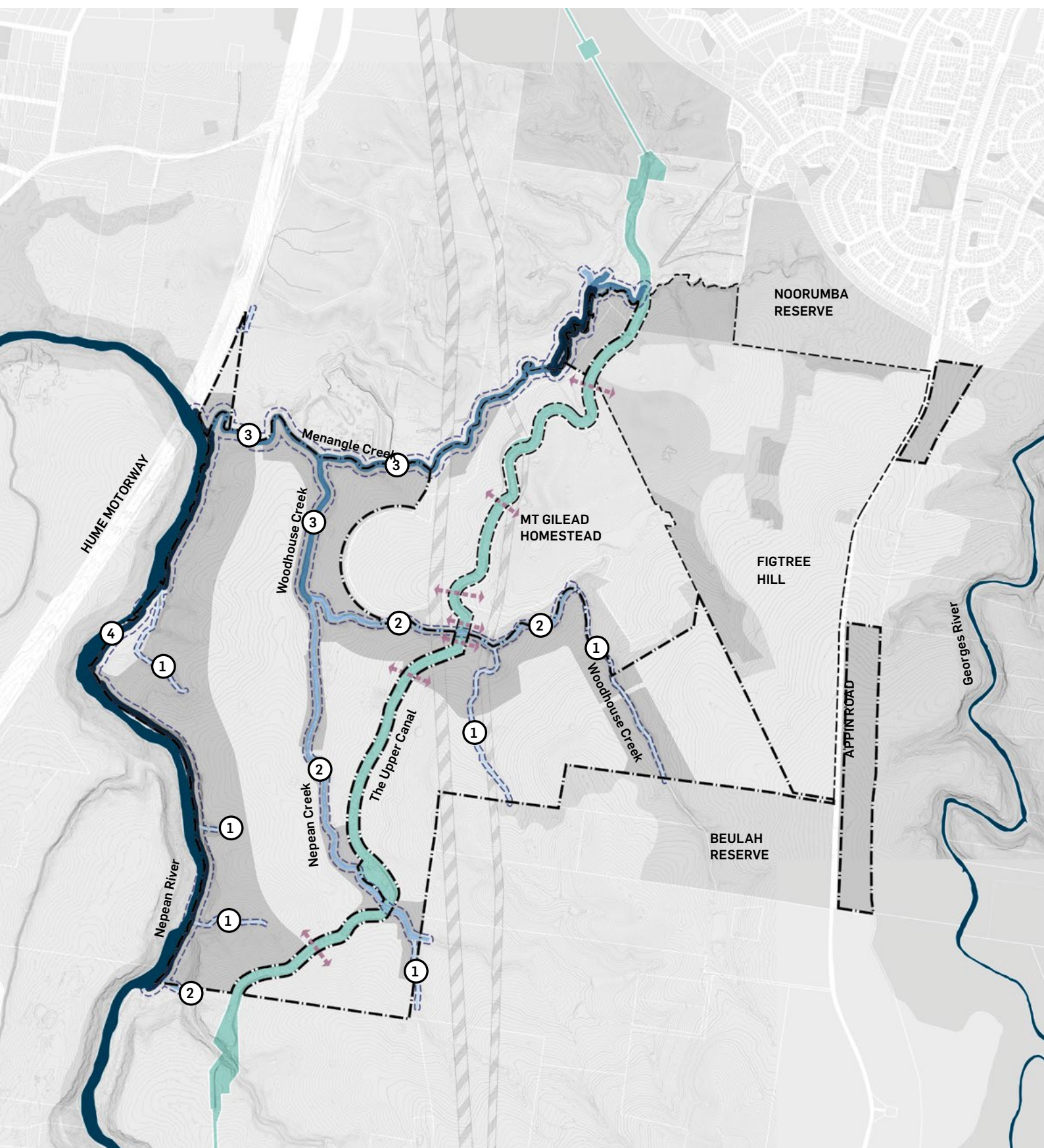


Figure 8 Riparian Corridors and Blue Infrastructure



A.4 FLOODING AND WATER CYCLE MANAGEMENT



Gilead



Figtree Hill and Homestead

FLOOD ANALYSIS

Gilead is situated between two large catchment areas which include the Hawkesbury Nepean catchment to the north-west and the George's River catchment to the south-east.

The subject site abuts the Nepean River and other small tributaries which pose a partial flood risk to some areas of the Site. Preliminary flood modelling completed by Rhelm indicated that peak flows could be contained within the drainage corridors.

It also indicates that the subject site would not be directly affected by the flood waters in the Nepean River as the flood levels would be contained within the riparian or bio bank areas.



Indicative PMF Flood Extent

Indicative Probable Maximum Flood (PMF) extent along the Menangle Creek to the north, Woodhouse Creek traversing from north-west to south-east, and the Nepean Creek running north to south towards the east of the Site.



Indicative 1% AEP Flood Extent

WATER CYCLE MANAGEMENT

Enspire has indicated that water quality treatment facilities in the form of bio-retention areas will be required with an area of approximately 3% of the catchment. These would typically be located in drainage infrastructure areas and open spaces.

The majority of water bodies will require specific riparian buffers as outlined in section A.3 of this report to ensure adequate stormwater management.



Indicative Stormwater Basin Location

Indicative location for stormwater basins based on the topography.



Indicative Stormwater Basin in Figtree Hill Precinct



Indicative Water Flow Direction

KEY CONSIDERATIONS

- Exclude developable area from the flood affected areas.
- Integrate flood management through WSUD approach and stormwater management.

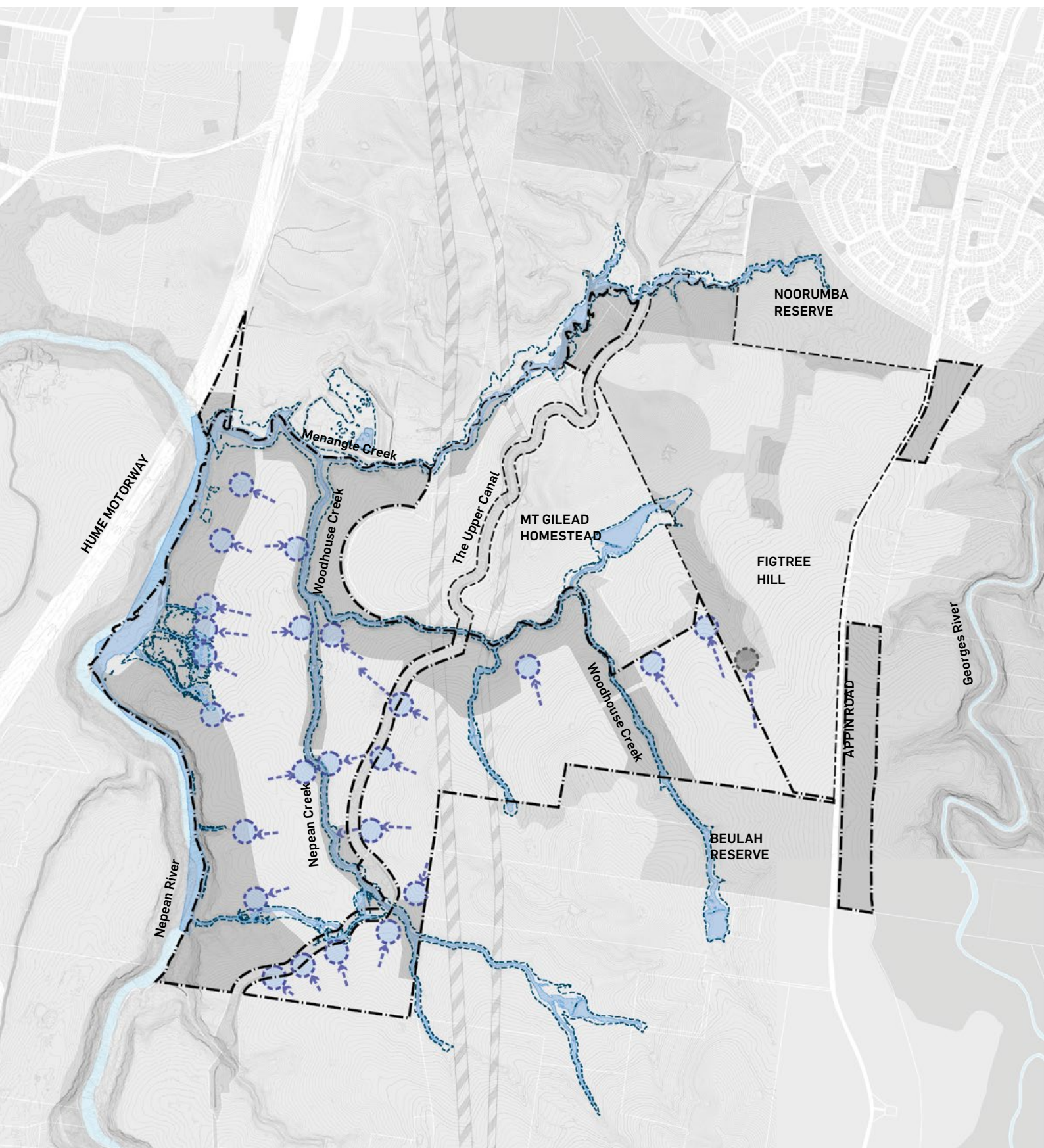


Figure 9 Flooding and Water Cycle Management



A.5 BUSHFIRE ASSESSMENT



Gilead



Figtree Hill and Homestead

BUSHFIRE ASSESSMENT



Vegetated Zone / Conservation Area



Residential Asset Protection Zone



Special Fire Protection Purpose - Asset Protection Zone

KEY CONSIDERATIONS











- Asset Protection Zone (APZ) will be determined based on the vegetation that will be retained.
- Wider APZs for Special Fire Protection purposes will be required with relevant uses such as school.
- The subdivision of new lots will not be permitted within the flame zone (BAL-FZ).
- Manage the bushfire risks through APZ.
- Perimeter access roads to be delivered where development fronts open space and other high bushfire risk zones.



Figure 10 Bushfire Assessment



A.6 LANDSCAPE CHARACTER

	Gilead
	Figtree Hill and Homestead
LANDSCAPE CHARACTER	
	Farmland/ Pasture Landscape
	Homestead Rural Landscape
	Open Woodland
	Closed Woodland
	Riparian Escarpment
	Riparian Lowland Located towards the western extremities of the Site adjacent to the Nepean River.
	Sydney Upper Canal The Upper Canal has a character of its own, with the embedded value of both environmental and heritage significance.
	Hilltop Key hill top character within the locality includes Old Mill, Figtree Hill and One Tree Hill.

KEY CONSIDERATIONS

- Enhance and protect key landscape character areas across the site.
- Provide a sensitive design response to areas of significant environmental and heritage value.
- Enhance the public domain interface with the conservation areas.

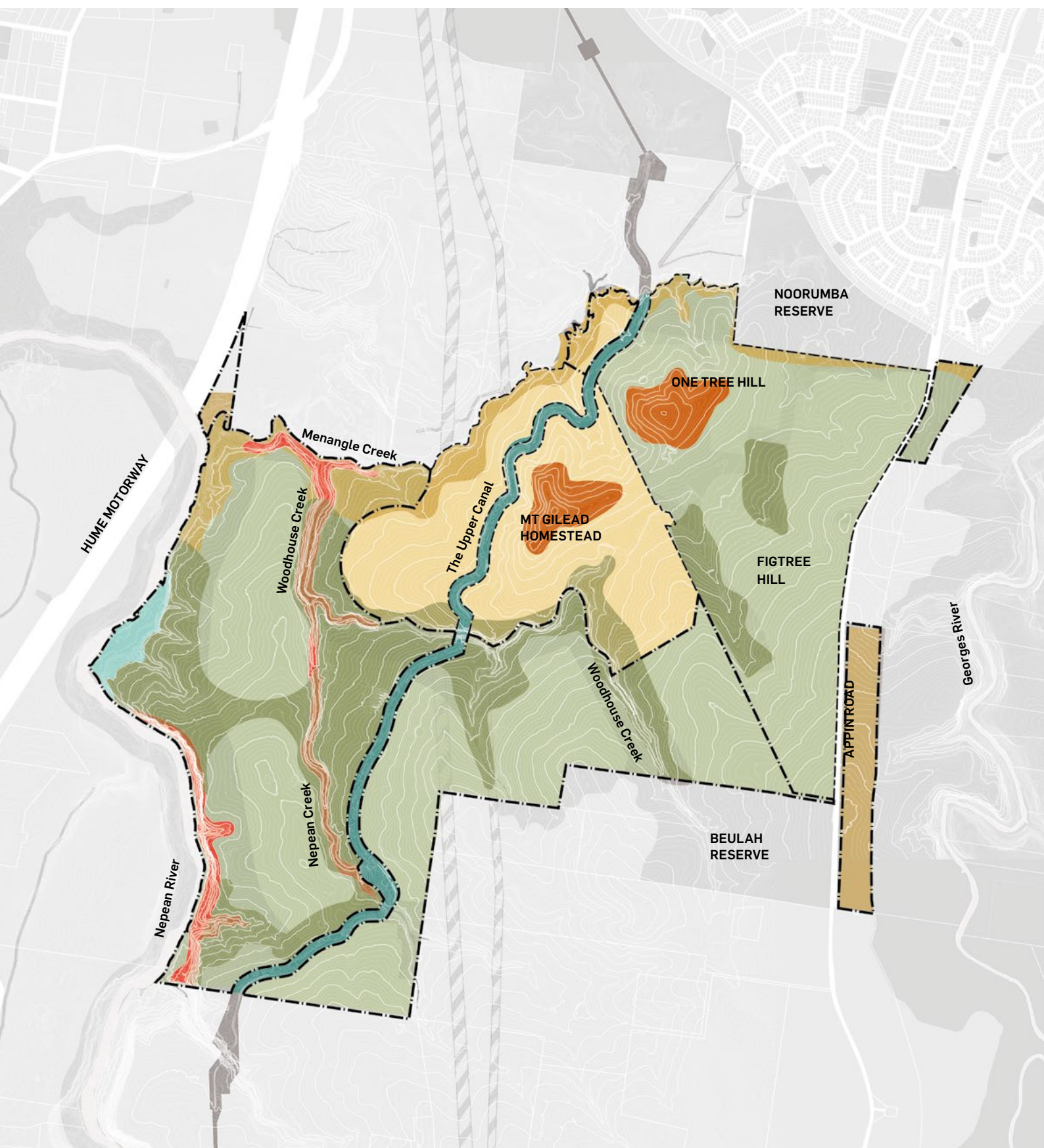


Figure 11 Existing Landscape Character



HOMESTEAD FARMLAND AND HILLTOP



Homestead Landscape



Farmland & Homestead Landscape



Farmland & Pasture Landscape



Farmland & Pasture Landscape

OPEN WOODLAND



Open Woodland



Open Woodland

CLOSED WOODLAND



Closed Woodland

RIPARIAN ESCARPMENT, RIPARIAN LOWLAND AND UPPER CANAL



Riparian Escarpment



The Upper Canal



Riparian Lowland



Riparian Lowland

A.7 ACCESS AND MOVEMENT



Gilead



Figtree Hill and Homestead

ROAD NETWORK

	Motorway The Hume Motorway runs north to south along the western edge of the Site providing regional connections .
	Arterial Road Narellan Road - Appin Road in the east provides connections to Campbelltown and Appin.
	Primary Collector Road Menangle Road is an key north- south corridor connecting Macarthur and Menangle with the potential to provide primary access to the Site.
	Approved Appin Road Upgrade
	Spring Farm Parkway - New 4 lane arterial road between Appin Road and Liz Kernohan Drive.
	Spring Farm Parkway - Interchange Ramps to Hume Highway (Indicative Location).
	Collector Road The collector loop road servicing Figtree Hill provides connections to Appin Road. There is an opportunity to provide access off this loop road into the eastern portion of the Site.
	Potential Site Connection Two new potential connections to Gilead connecting off Menangle Road in the north east and Appin Road in the south east.
	Proposed Intersection Upgrade Proposed intersection upgrade along Appin Road and along Menangle Road close to the northern corner of the Site.
	New Intersection Predominantly along the approved upgrade section of Appin Road to the east of the Site and the new Spring Farm Parkway to the north.
	Potential Appin Road Underpass Two potential underpasses for animals crossing Appin Road adjacent to the Site.

PUBLIC TRANSPORT

	T8 Macarthur Line - Electrified
	Southern Highlands Line
	Train Station

KEY CONSIDERATIONS

Establish site access from the north-west corner and link into the east via Appin Road.

- Ensure site permeability across creek corridors through sensitively located crossings/bridges.
- Provide strong east-west connectivity through a carefully aligned transport corridor.

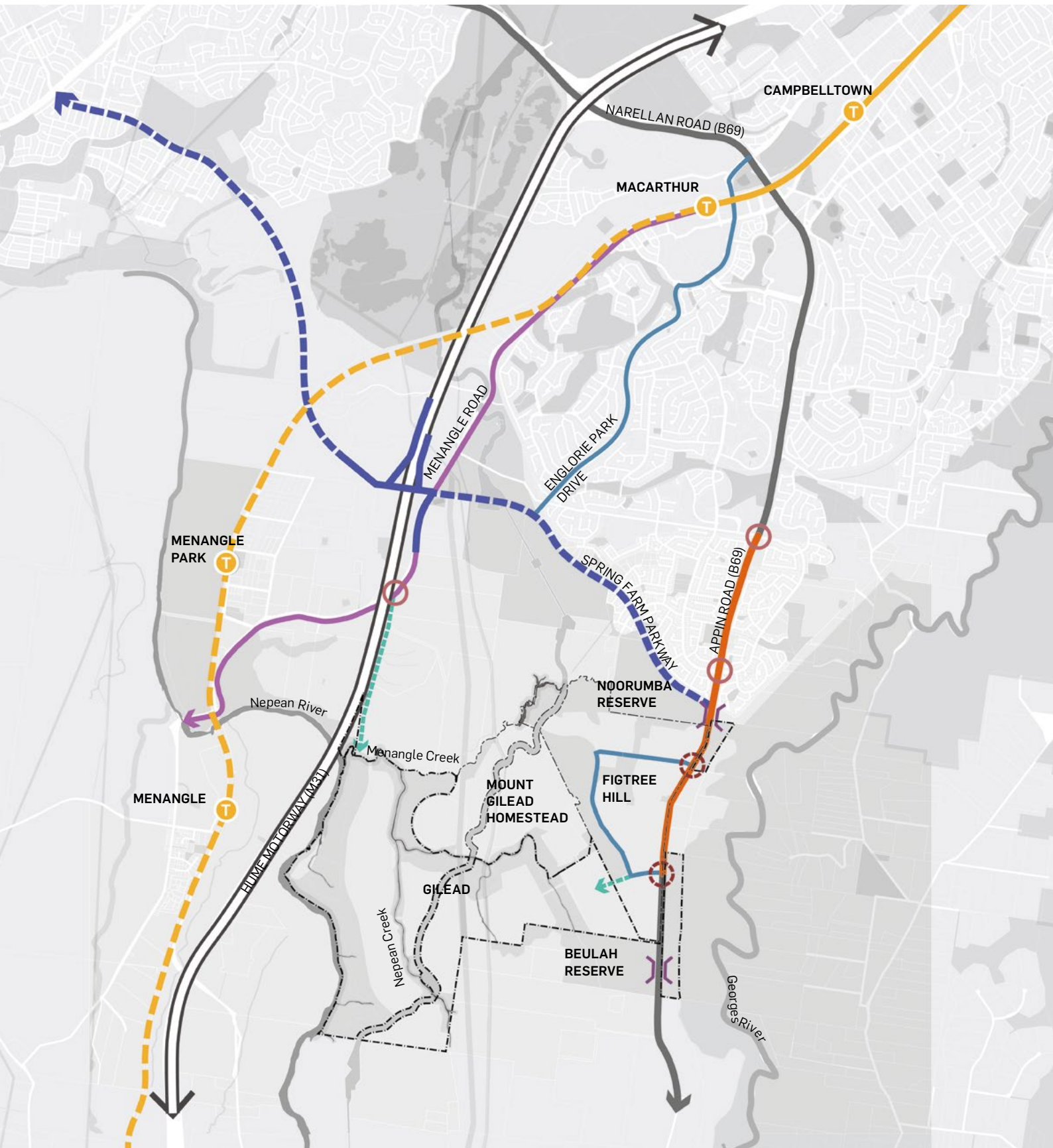


Figure 12 Site Access Analysis



A.8 INDIGENOUS HERITAGE



Gilead



Figtree Hill and Homestead

INDIGENOUS HERITAGE

Cultural Sensitive Zone



Based on the Aboriginal Cultural Heritage Assessment (GML Heritage), cultural sensitive zones have been identified within the Site accommodating ACH items with potential cultural value.

KEY CONSIDERATIONS

- Protect the indigenous heritage assets within the Site by incorporating them within open spaces or non-developable areas.
- Collaborate with the First Nations community to ensure the design and interpretation of Aboriginal cultural heritage within open space and the Site more broadly is considered and appropriate.

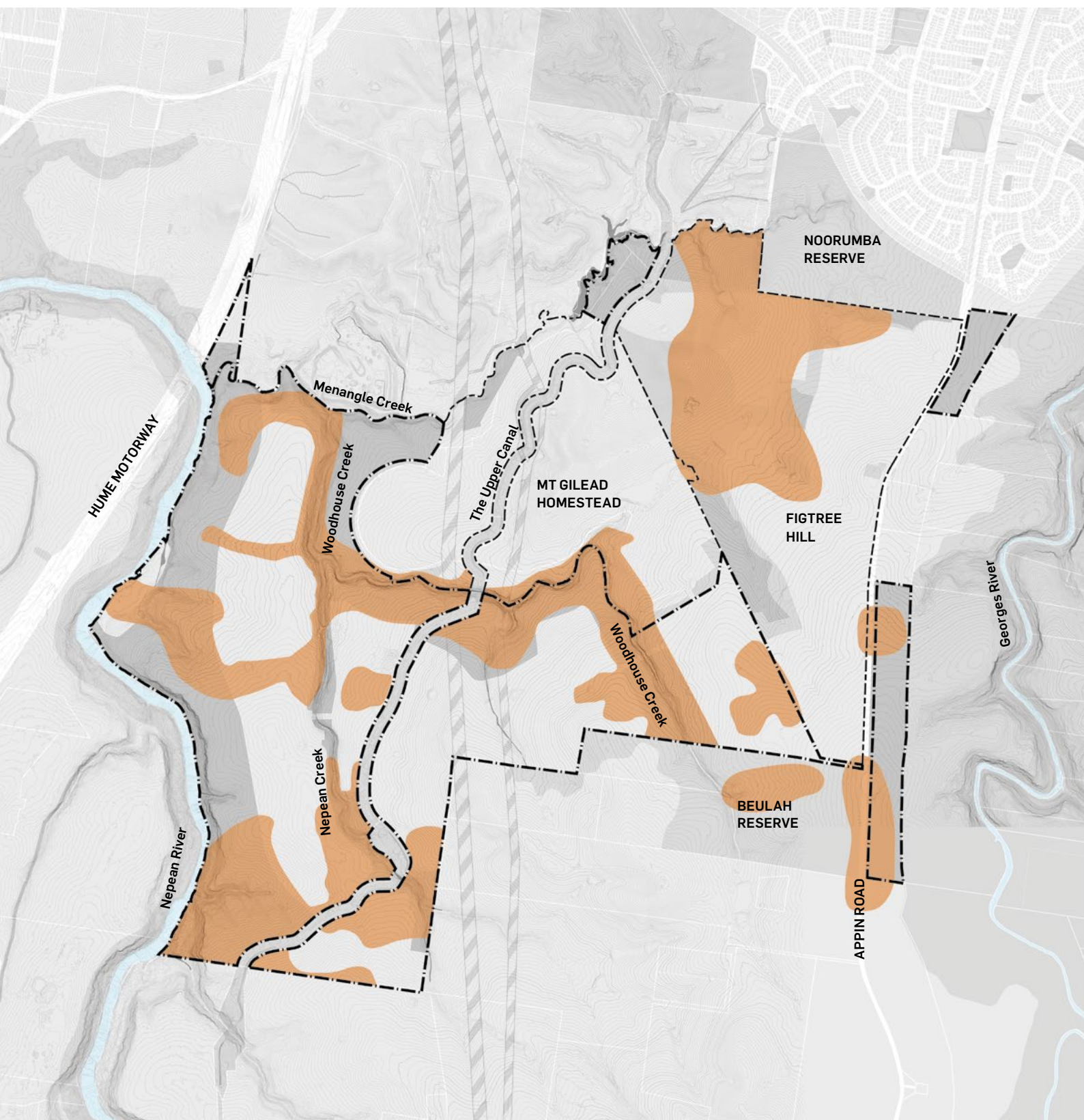







Figure 13 Indigenous Heritage Analysis



A.9 EUROPEAN HERITAGE

	Gilead
	Figtree Hill and Homestead
EUROPEAN HERITAGE	
	State Registered Heritage Curtilage
	Heritage Item - General
	Group of Heritage Items

KEY CONSIDERATIONS

- Consider the visual and physical interface between the development and the Sydney Upper Canal.
- Consider how the alignment of original lot boundaries, fence lines and other key historic landscape features, can be interpreted within the design of new development e.g. the positioning of roadways, lot curtilages, open spaces etc.

European Heritage

The European Heritage Assessment identifies the following items as containing heritage significance:

- The Upper Canal System which dissects the Site.
- Artificial lake which is partly located on the Homestead lot.
- A crossing of Woodhouse Creek at the boundary of the Homestead lot and the Site.
- A small collection of bottles that appear to date from 1860s-1880s.
- A collection of stones and quarried areas that may have been associated with the Upper Canal.
- A collection of sandstone blocks and columns.

The estate has a collection of interesting stone buildings and demonstrates the early success of water conservation methods.

More importantly, the tower mill is believed to be the last tower-mill in New South Wales, and therefore, will not only be a landmark of Gilead, but a historical landmark of Greater Macarthur and NSW.

It will also be important to consider how the alignment of original lot boundaries, fence lines and other key historic landscape features, can be interpreted within the design of new development at the Site, as the positioning of roadways, lot curtilages, open spaces etc. that mirror historic pathways and boundaries of significance can be used to help mitigate and offset negative heritage impacts and loss of original landscape features.

The visual and physical interface between the development and the Upper Canal will also be important and will need to be appropriately managed from the outset.

HERITAGE ITEM	ITEM NO
The Upper Canal	I01373
Sugarloaf Farm	I01389
Beulah	I00368
Humewood Forest	I53
Glen Lorne	I55
Mount Gilead	I58
Kilbride	I59

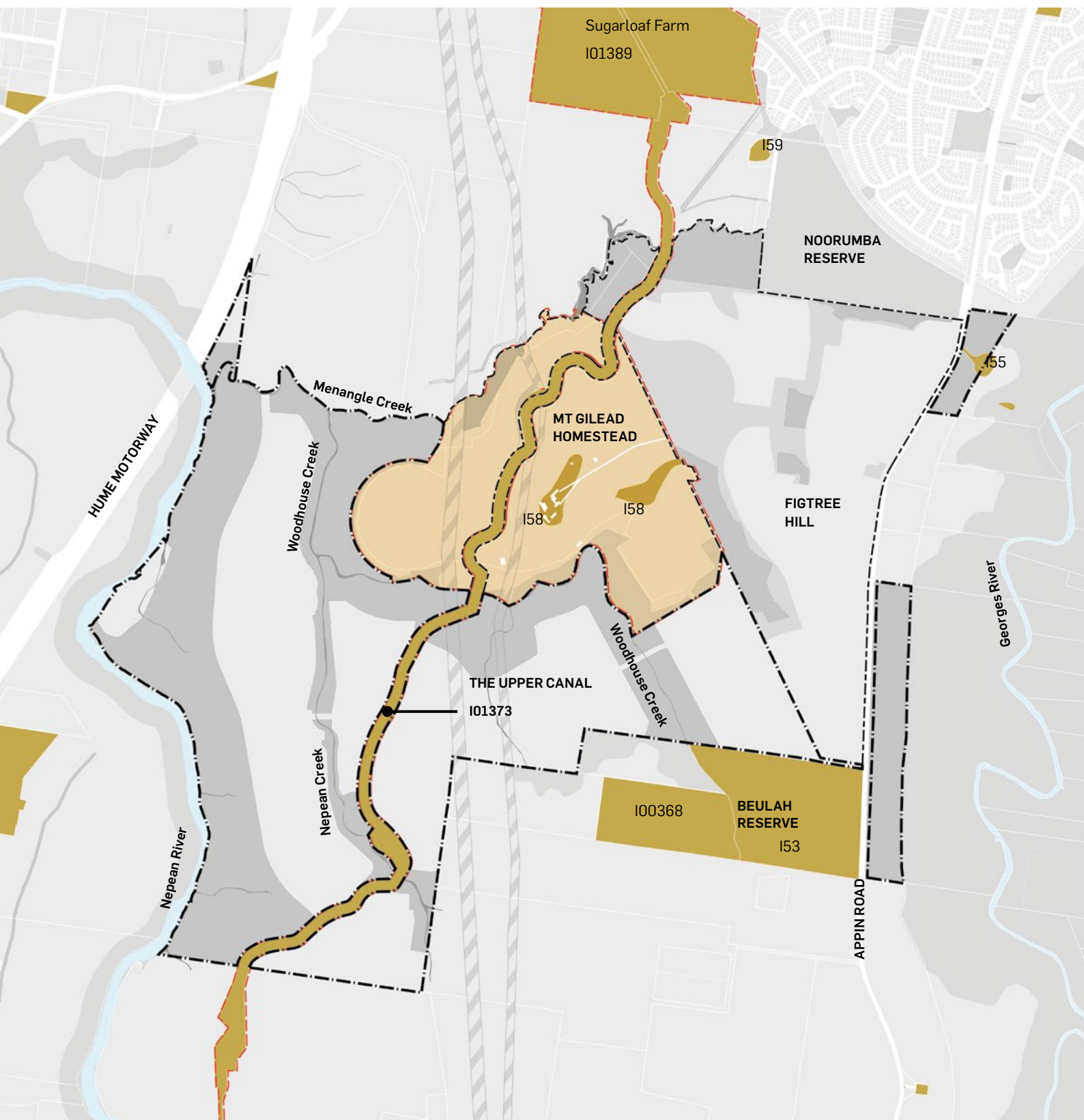






















Figure 14 European Heritage Analysis

A.10 SOCIAL INFRASTRUCTURE

	Gilead
	Figtree Hill and Homestead
PUBLIC TRANSPORT	
	T8 Macarthur Line Electrified
	Southern Highlands Line
	Train Station
EXISTING SOCIAL INFRASTRUCTURE	
	Campbelltown Hospital
	Local Retail Centres
	Local Community Centres
	Local Schools
	Higher Education Facilities
	Local active open space
	Golf Course
	Regional Open Space

POTENTIAL INFRASTRUCTURE CONTRIBUTIONS

	Proposed School
	Proposed Village Centre / Neighbourhood Centre
	Proposed Active Open Space / Recreational
	Proposed Riverside Reserve
	Conservation Area
	Proposed Riverside Reserve
	Environmental Area
	Local Open Space
	Heritage Homestead Lot

KEY CONSIDERATIONS

Gilead's location close to Macarthur and Campbelltown allows for good access to regional social and open space facilities. In addition, Figtree Hill will be providing additional infrastructure that will services the future Gilead population.

Gilead will need to provide the following social and open space infrastructure:

- One multipurpose community facility in the vicinity of the village centre.
- One primary school near the village centre.
- The Village Centre could accommodate childcare facilities, and family daycare services.
- The Village Centre could accommodate a medical centre.
- A sports field co-located with the school, as well as a number of other structured and unstructured recreation opportunities through the provision of formal parks.

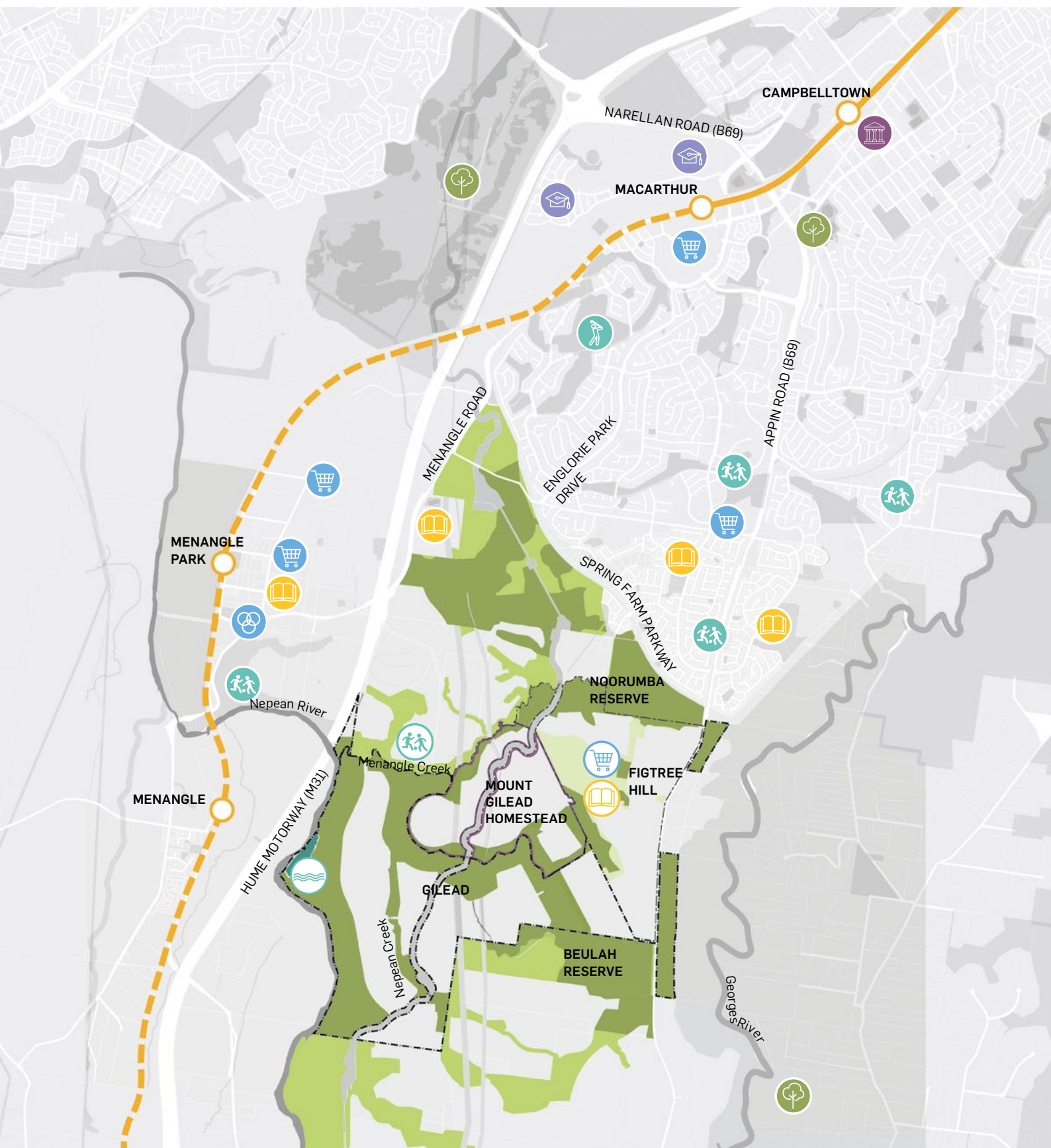


Figure 15 Social Infrastructure Analysis



A.11 INFRASTRUCTURE AND SERVICES



Gilead



Figtree Hill and Homestead

EASEMENTS

Sydney Upper Canal



The Sydney Upper Canal transects the Site. Boundary conditions are to be met and no stormwater is to enter the canal lands.

Electricity Transmission Line (LPI)



- 16m Endeavour Energy 66kV Transmission Easement
- 60m TransGrid 330kV Transmission Easement

Restrictions are imposed on the land within the easement.

Easement - Gas Pipeline & Water Main



- Varies Jemena Gas Easement
- Varies APA Group Gas Easement
- 10m Trillity Water (SWC Water Easement)

Restrictions are imposed on the land within easement.

POTENTIAL SERVICING STRATEGY



Phase 1 - Lead-In Service from Rosemeadow Reservoir connecting to Proposed Figtree Hill Reservoir



Approximate Pipeline Route between Rosemeadow Reservoir and Proposed North Gilead Reservoir



Phase 2 - Approximate Trunk Main Route to Gilead



Phase 1 - Gravity Trunk Main Connection to SP 1206



Phase 2 - Approximate Pipeline Route to Bow Bowling Carrier

Indicative Sewer Pumping Station will be located at the north-west corner of the Site.



Potential Endeavour Energy Substation

KEY CONSIDERATIONS

- Utility infrastructure will be easily accessible to service the future population.
- Avoid and / or minimise any road crossing across the Gas Pipeline and the Transmission Line easements.
- Avoid earthworks over the pipeline.
- Potential substation required to service the site, preferably adjacent to the existing 66kV easement or within a park.

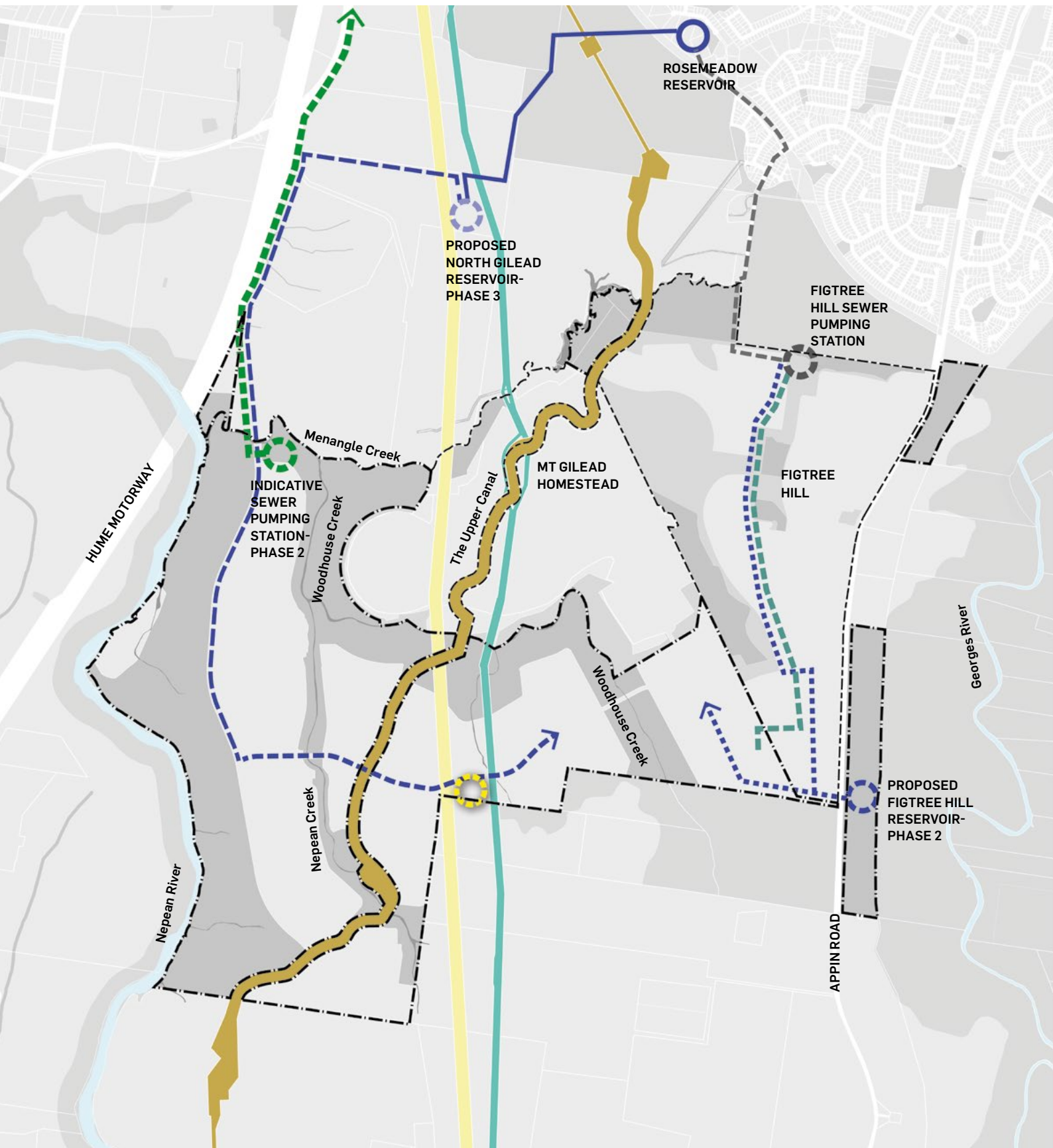


Figure 16 Infrastructure and Services







PART B

GILEAD VISION AND STRUCTURE PLAN

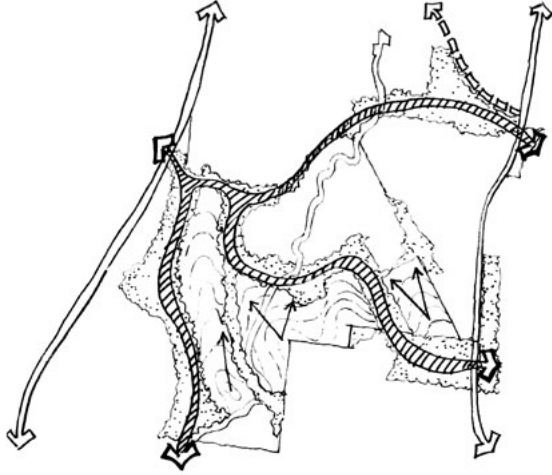
B.1 GUIDING PRINCIPLES

Six Guiding Principles were identified for the Site which bring together the key planning directions and place analysis.

This includes:

- Celebrate the Natural Assets.
- Seamless Integration with the Blue Grid.
- Celebrating the Cultural Landscape.
- A Connected-community.
- Local Identity and Housing Offer.
- Activating Places for People.

1

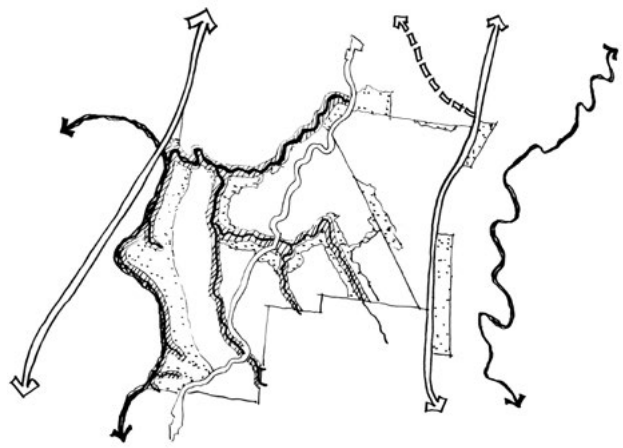


CELEBRATING THE NATURAL ASSETS

Embrace and celebrate the natural assets provided by the interwoven creek lines, tributaries and unique landscape offerings to enrich the leisure and recreational opportunities at Gilead.

Leverage the undulating topography characteristics to provide visual connections within the Site and to key features such as the Upper Canal, Figtree Hill, Mount Gilead and The Homestead Lot.

2

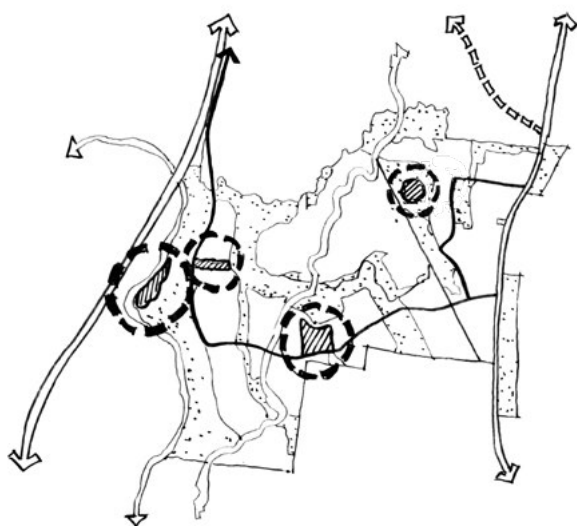


SEAMLESS INTEGRATION WITH THE BLUE GRID

Blurring the edges of a carefully managed blue network to provide residents and visitors usable park space and the ability to connect and engage with water.

Reinforcing the ephemeral nature of these site features and the richness along such interfaces enhances the distinctiveness of the place, whilst promoting a healthier, liveable and sustainable environments for future communities.

3

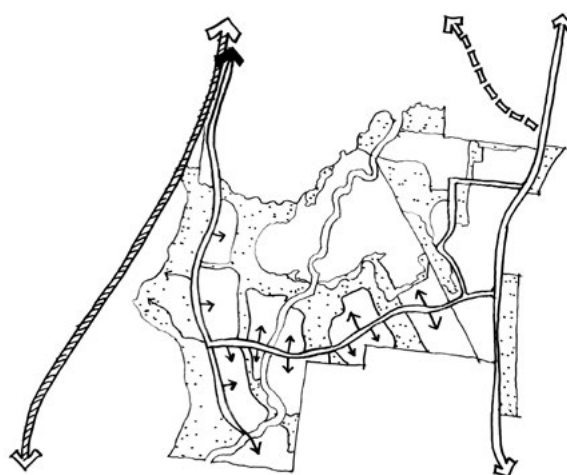


CELEBRATING THE CULTURAL LANDSCAPE

Gilead has long established itself as a place of bounty and recreational pursuits for First Nations people and settlers.

With a new community to call this place home, there is an opportunity to work with traditional owners to unlock the local heritage and leverage a narrative through the rich history of the Site and celebration of the cultural landscape.

4



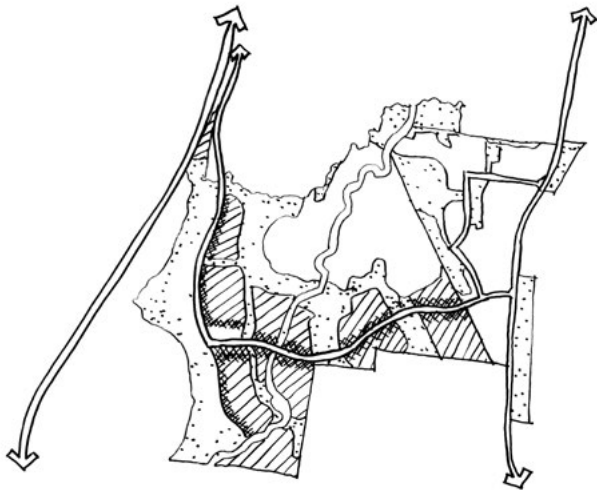
A CONNECTED COMMUNITY

A connected community lies at the heart of Gilead.

Community services and facilities are anchored along key public transport corridors to allow for ease of access and encourage more sustainable modes of travel.

There will be an integrated series of streets and active transport networks to support healthy neighbourhoods and connecting residents to the abundance of open space corridors.

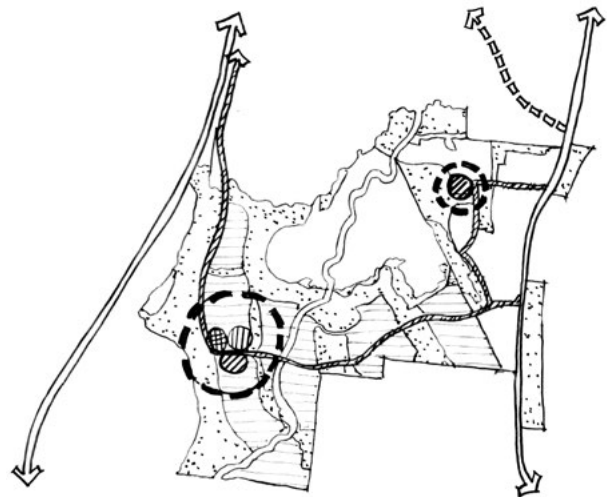
5



LOCAL IDENTITY AND HOUSING OFFER

Gilead will create a community that focuses on people, lifestyles and functionality. There will be a mix of housing typologies for all ages and wages that are close to the village centre precinct, key active transport routes as well as open space amenity to support a diverse community.

6



ACTIVATING PLACES FOR PEOPLE

There will be a strong sense of activation and vibrancy that is generated through the arrangement of built form and public spaces. There will be a concentration of elements to create critical mass and a lively experience to allow people to connect with each other and feel a part of an engaged community.

Identifying and locating key activity nodes along integrated open space networks will provide a rich programme of spaces and places for people.



GILEAD VISION

A world of wonder awaits at Gilead.

Inspired by the beauty and wisdom of country, Gilead is surrounded by protected natural bushland, framing wide open green spaces, with plenty of places to explore. With parks designed for adventure, and streets designed for connection – this is a place to put down roots and build your life. And with a commitment to the future, sustainable living comes naturally here.



Gilead is a unique and welcoming place, offering a new way of living. Connected to the region's most stunning beaches, foodie hubs, education institutions and outdoor adventures – you can build an incredible life with endless possibilities here.

A place to put down roots, to feel a sense of belonging and create new friendships – Gilead is a place you'll be proud to call home.








B.3 INDICATIVE GILEAD (PART) PRECINCT STRUCTURE PLAN






LEGEND

-  Gilead
-  Figtree Hill and Homestead








LAND USE

-  Urban Area
-  Medium Density Urban Area
-  Village Centre
-  Proposed School
-  Utility and Service


OPEN SPACE & PUBLIC DOMAIN

-  Conservation Area
-  Indicative Open Space
-  Proposed Riverside Reserve
-  Sydney Upper Canal
-  Water body

STREET NETWORK

-  Motorway
-  Arterial Road
-  Proposed Arterial Road
-  Approved Secondary Collector Road
-  Proposed Secondary Collector Road
-  Indicative Potential Transport Corridor
-  Proposed Appin Road Underpass

OTHER

-  Transmission and Gas Easement Line

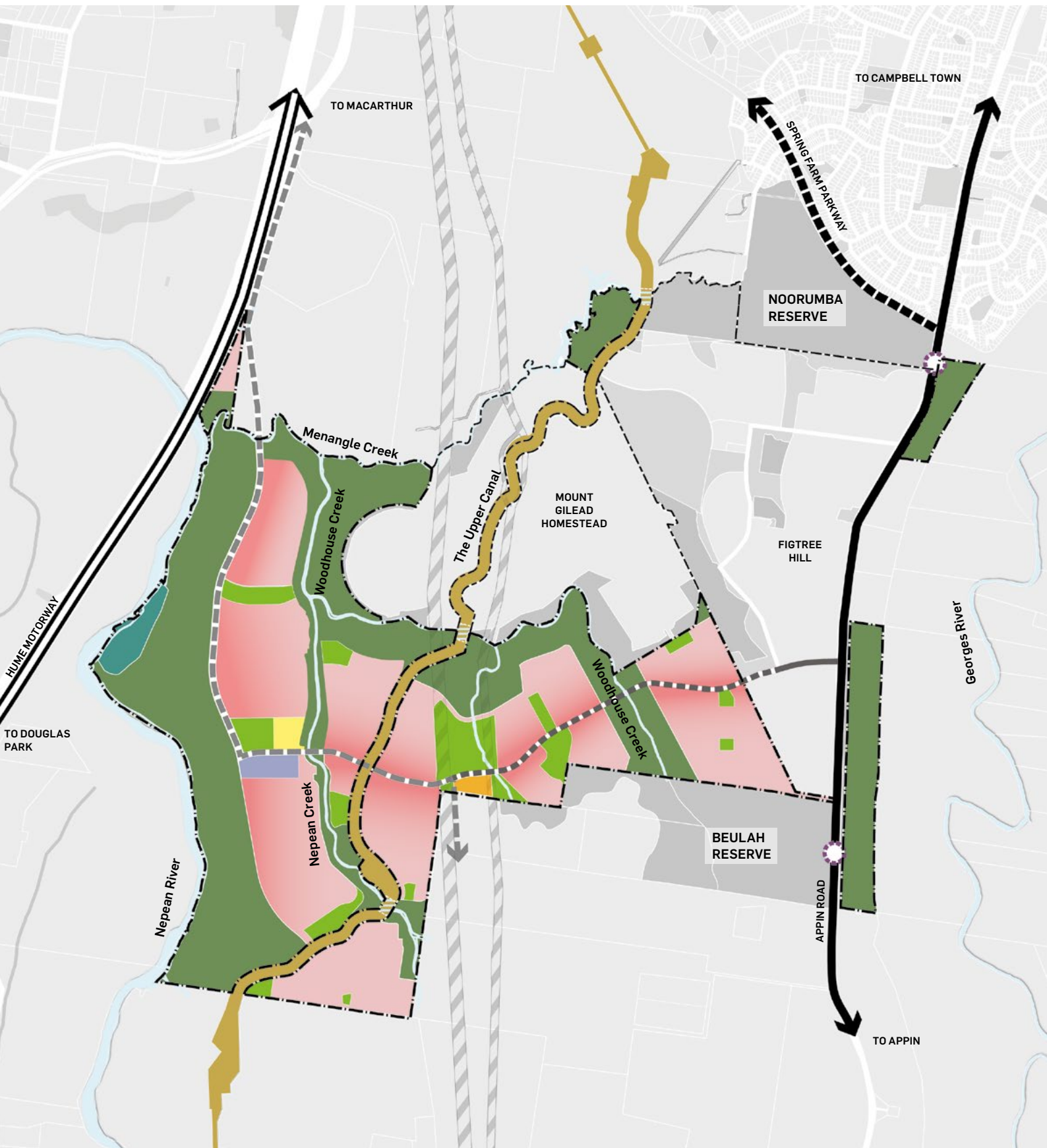


Figure 17 Draft Gilead (part) Precinct Structure Plan



B.4 LAND USE COMPOSITION

Development Analysis and Assumptions

The following tables identify the development assumptions and the land use and yield calculations of the Structure Plan.

Table 1 Indicative Yield Schedule

LAND USE	NET LAND USE AREA (HA)	NET LAND USE AREA	NET NET DEVELOPABLE AREA (HA)	NON-RESI GFA (SQM)	DWELLING MIX
DEVELOPABLE LAND	206.2	41.7%	105.9	8,160	100%
Village Centre	3.3	0.7%	2.5	8,160	5%
Medium Density Urban Area	29.8	6.0%	15.5		10%
Urban Area	169.0	34.1%	87.9		85%
Proposed School	2.3	0.5%			
Utility and Services	1.8	0.4%			
NON-DEVELOPABLE LAND	288.8	58.3%			
Conservation Area	233.1	47.1%			
Open Space	30.0	6.0%			
Proposed Riverside Reserve	6.4	1.3%			
Main Road	19.3	3.9%			
TOTAL SITE AREA	495	100		8,160	

Table 2 Development Assumptions

URBAN AREA & MEDIUM DENSITY URBAN AREA RATIO

85%	Urban Area
15%	Medium Density Urban Area

VILLAGE CENTRE

75%	Village Centre Lot Efficiency
80	Units/ha Village Centre (3 storeys resi above GF retail)
0.33:1	Non-Residential FSR - Village Centre

INDICATIVE RESIDENTIAL LOT SIZE

400	sqm average lot size within Urban Area
225	sqm average lot size within Medium Density Urban Area

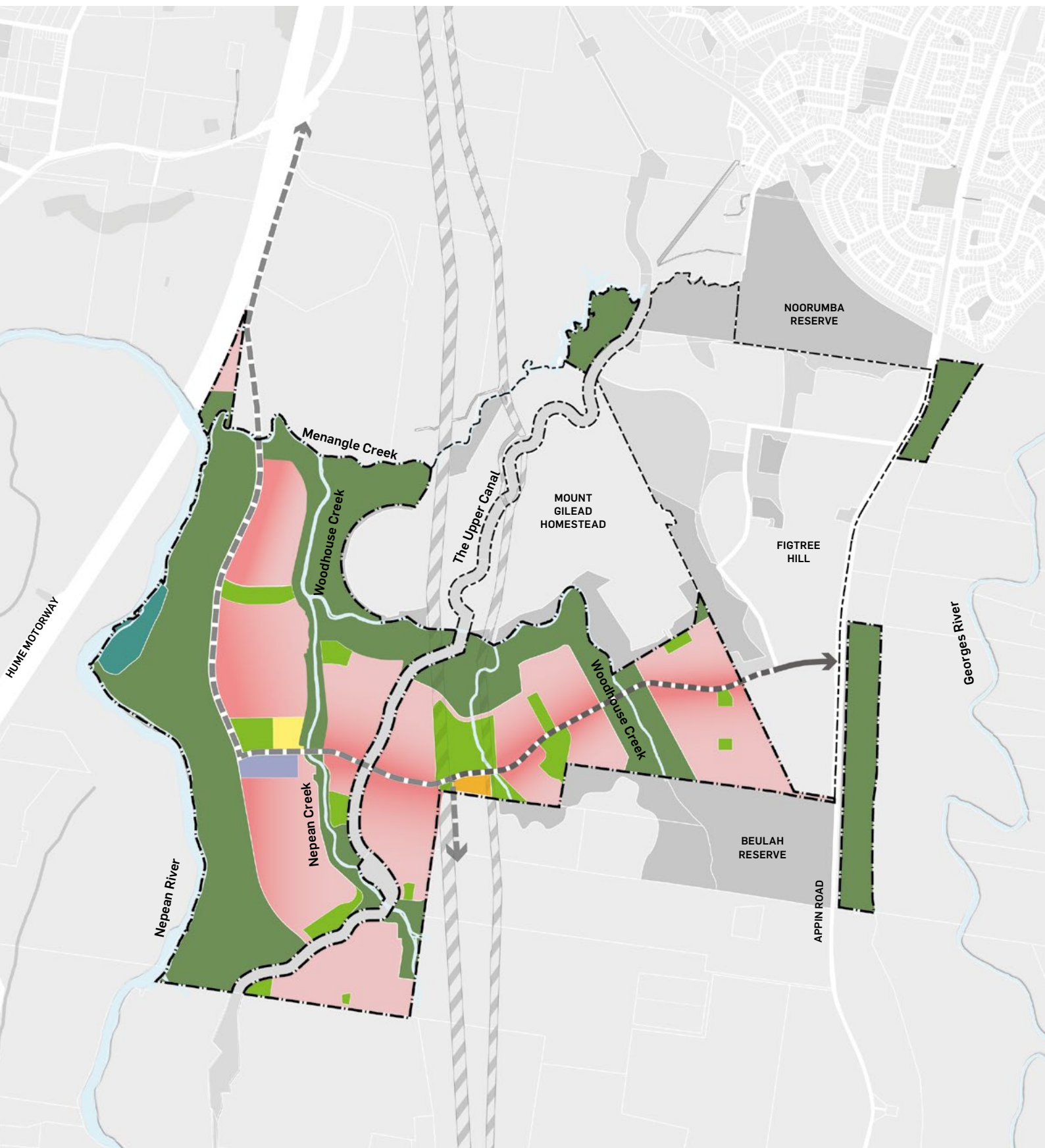


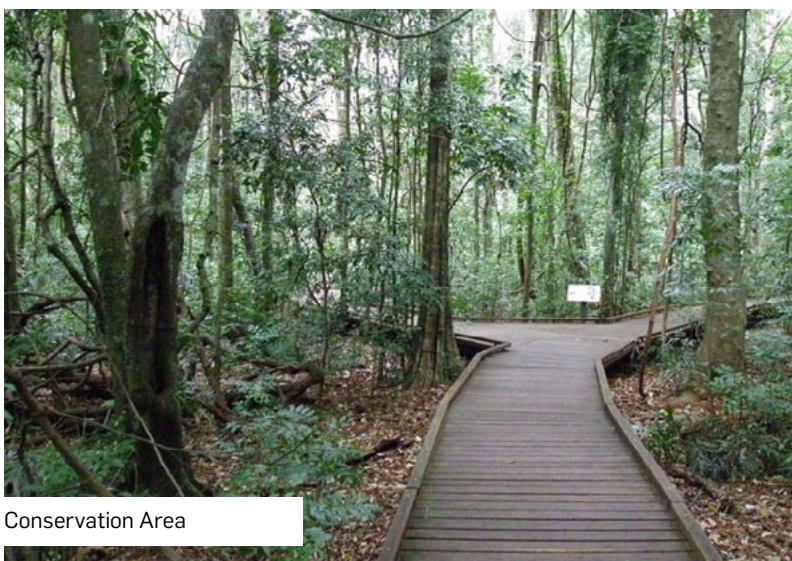
Figure 18 Indicative Land Use Composition



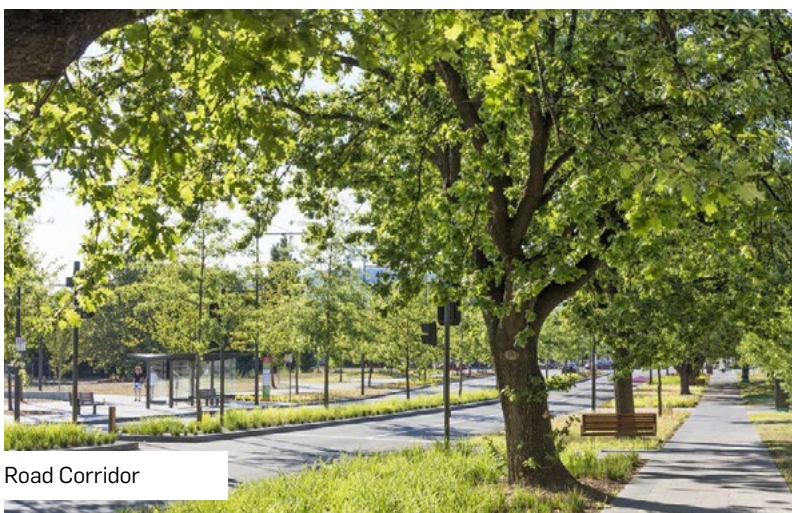
LAND USE PRECEDENCE



Residential in Urban Area



Conservation Area



Road Corridor



Inclusive Adventure Playground



WSUD Integrated Open Space



Medium Density Residential in Urban Area



Village Centre and Mixed Use Residential



Sporting Field



Community Facilities



School

B.5 LAYERED STRATEGIES

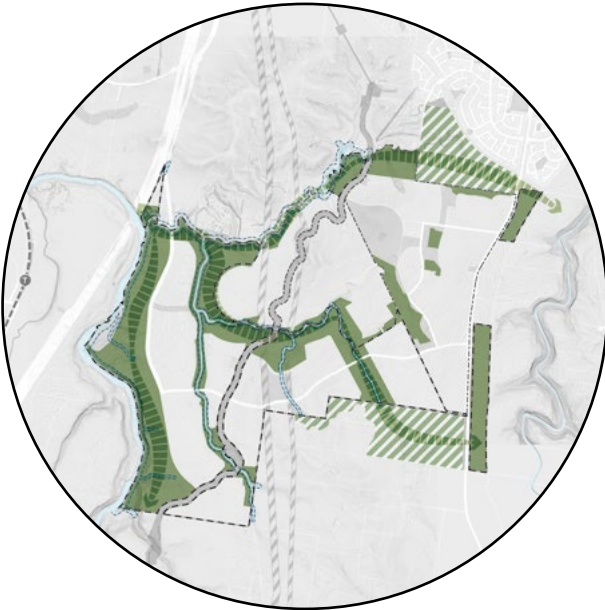
Six layered strategies embedded in the vision and structure plan illustrate the detailed design outcomes for the future transformation of Gilead.

The strategies include:

- Strategy 1 - Ecology and Green Infrastructure
- Strategy 2 - Water Cycle Management
- Strategy 3 - Open Space and Public Domain
- Strategy 4 - Access and Movement
- Strategy 5 - Housing Mix
- Strategy 6 - Social Activation



STRATEGY 1 **ECOLOGY & GREEN INFRASTRUCTURE**

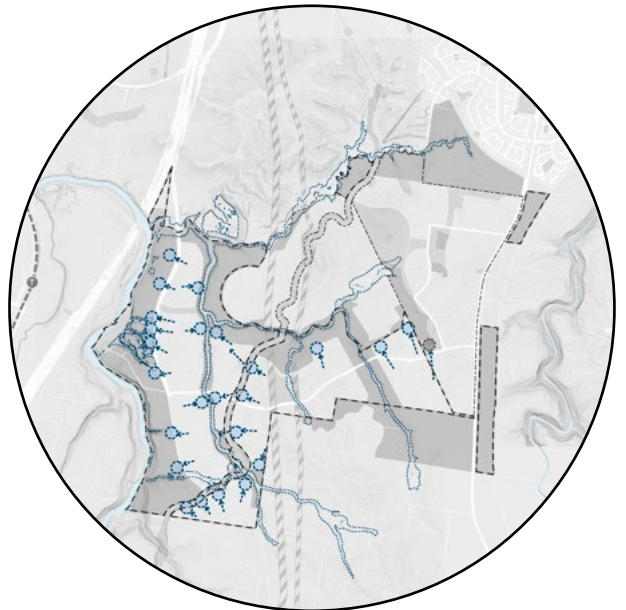


Protect and enhance the creek lines, tributaries and areas of ecological significance across the Site to form the green and blue infrastructure.

Capitalise on the topographical features of the Site for visual and open space corridors. Retention of the existing upper canal with appropriate landscape buffers to protect the local habitat and ecosystems.



STRATEGY 2 **WATER CYCLE MANAGEMENT**



Provide an integrated approach to water cycle management through Water Sensitive Urban Design (WSUD) to manage existing and future flood risks.

Co-locating detention basins within open spaces to enhance landscapes for health and well-being amongst local residents.



STRATEGY 3 OPEN SPACE & PUBLIC DOMAIN

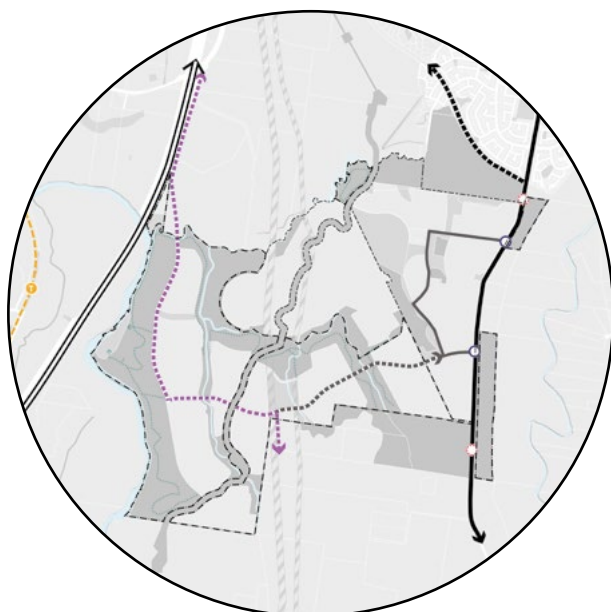


Provide three major recreational opportunities across the Site which include the 'Proposed Riverside Reserve', 'Explorers Ranges' and the Linear Park.

Irregular edges along the open space corridors will allow for smaller activity nodes catering for a variety of activities.



STRATEGY 4 ACCESS AND MOVEMENT



Provide a well-connected and legible street network that prioritises public and active transports within the Site.



STRATEGY 5 HOUSING MIX



Create a vibrant community with varied housing types in close proximity to everyday amenities and services.

A diversity in housing types ensures the future development is flexible and adaptive to future market trends.



STRATEGY 6 SOCIAL ACTIVATION



The Village Centre will become the core hub and the primary focal point for commerce and community interaction within Gilead.

A series of other activation cores such as the Proposed Riverside Reserve and other major open space amenities will provide an array of lifestyle and recreational opportunities for local residents to engage with.

STRATEGY 1

ECOLOGY AND GREEN INFRASTRUCTURE



Celebrate and protect the natural landscape and ecosystems.

Protect and enhance the creek lines, tributaries and areas of ecological significance across the Site to form the green and blue infrastructure.

Capitalise on the topographical features of the Site for visual and open space corridors. Retention of the existing upper canal with appropriate landscape buffers to protect the local habitat and ecosystems.

The key outcomes includes:



Gilead



Figtree Hill and Homestead

NATURAL ASSETS



Creeks

Retain Menangle Creek, Woodhouse Creek, Nepean Creek and its tributaries.



Indicative Riparian Corridor

Establish the Vegetated Riparian Zone along the creeks.



Fauna Corridors

Habitat protection corridors for native fauna.



Conservation Area

Green and open spaces network accommodating riparian and conservation corridors.



Conservation Area - Surrounding

TOPOGRAPHY



1m contour



Visual Connections

Provide visual connections along open space and drainage corridors, whilst aligning streets to provide further visual connections to key landscape amenities.

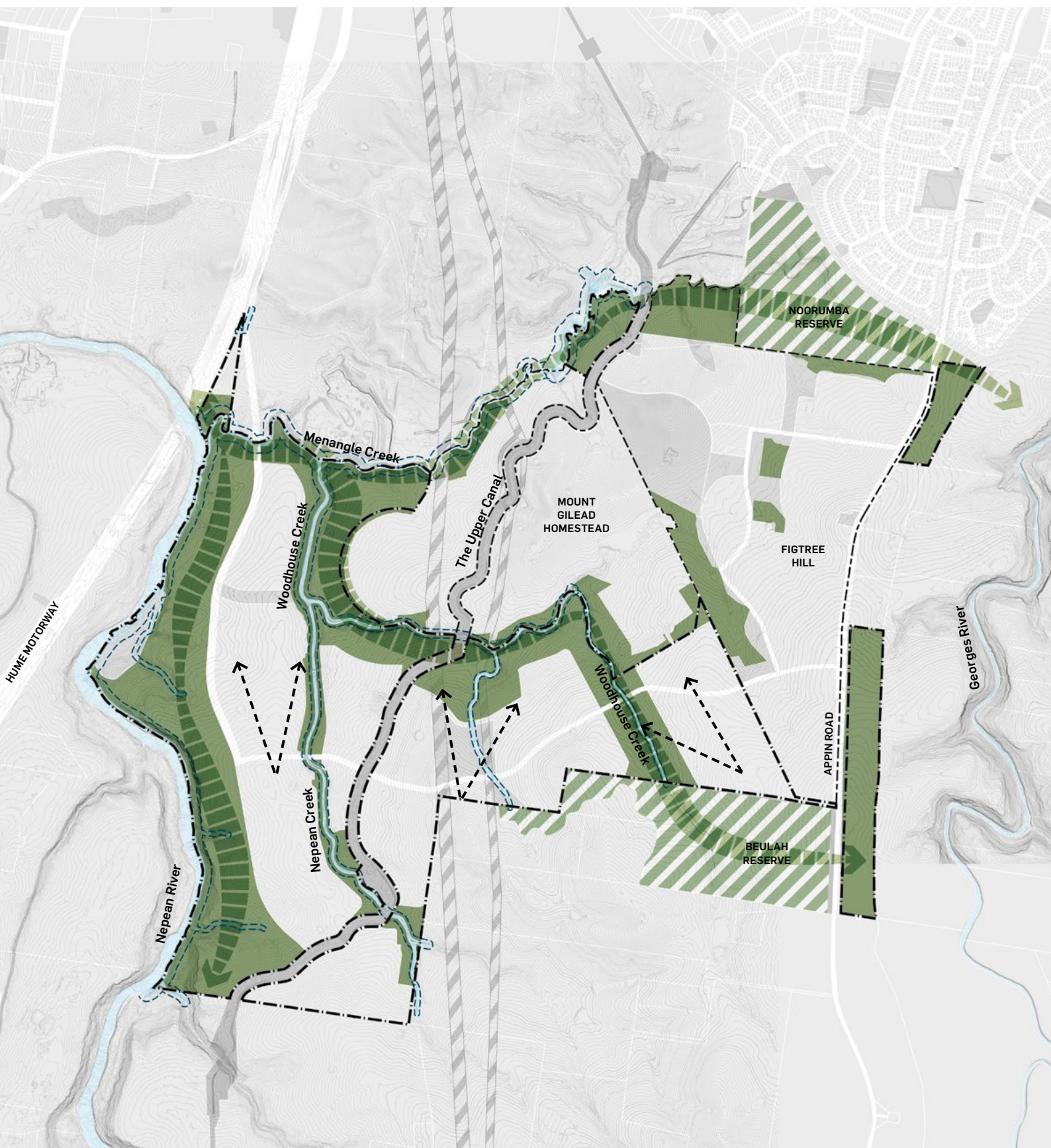


Figure 19 Ecology and Green Infrastructure Strategy



STRATEGY 2

WATER CYCLE MANAGEMENT



Provide an integrated response to water cycle management.

Work with the natural landscape and existing blue grids to provide a Water Sensitive Urban Design (WSUD) approach to flood mitigation and protection of existing creeks. Integration of blue grid corridors within the Site to provide opportunities to for local residents to engage with water.

The key outcomes includes:



Gilead



Figtree Hill and Homestead

WATER CYCLE MANAGEMENT



Creeks

Retain Menangle Creek, Woodhouse Creek, Nepean Creek and its tributaries.



Indicative Stormwater Basins

Indicative stormwater retention basins along the natural low land corridor and Riparian Corridor.



Indicative Stormwater Basin in Figtree Hill



Indicative PMF Flood Extent



Drainage Flow

Predominant flow of water following the natural contours of the landscape.

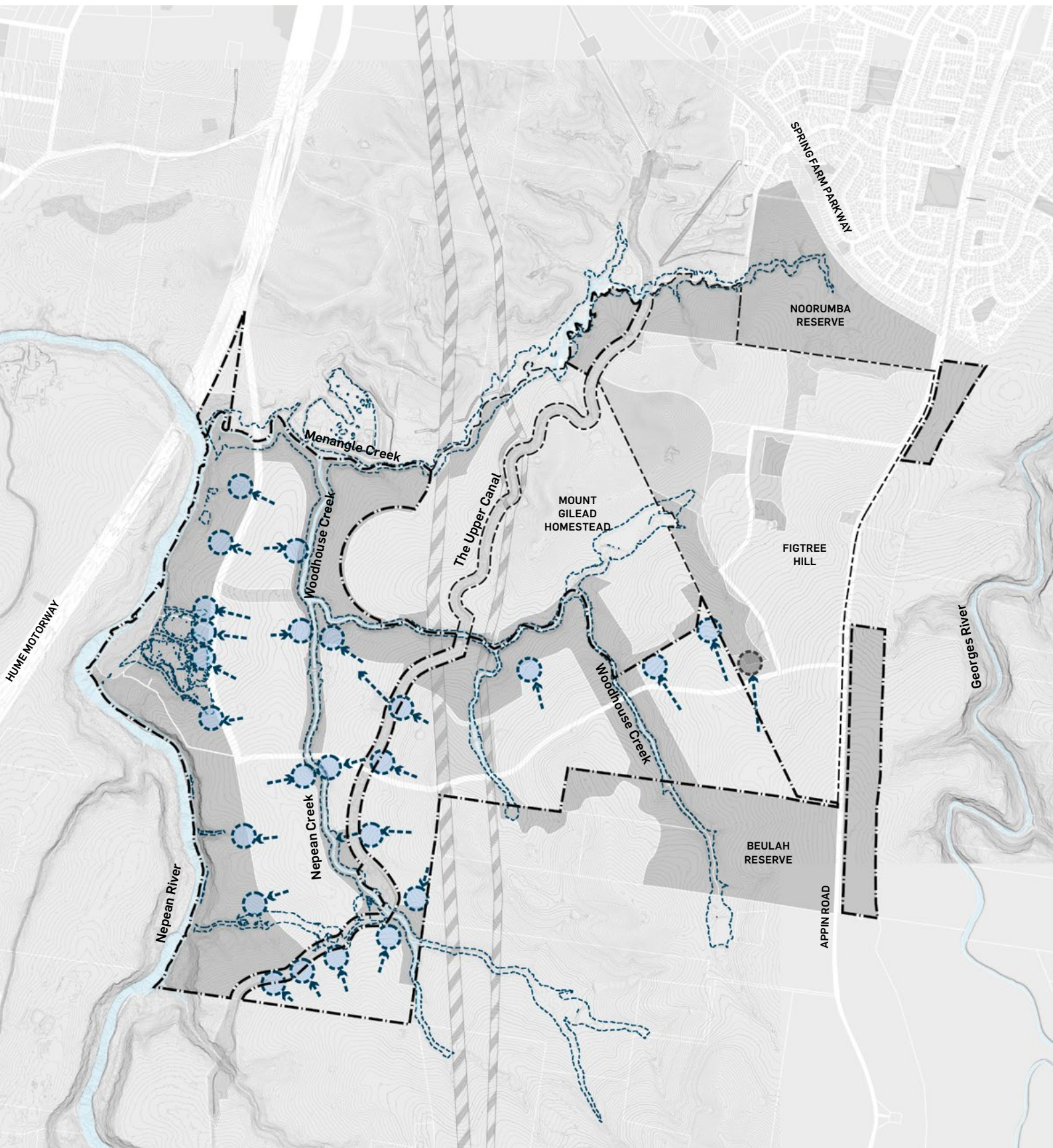


Figure 20 Water Cycle Management Strategy



STRATEGY 3

OPEN SPACE AND PUBLIC DOMAIN



Provide key green open space networks.

A series of interconnected and easily accessible open spaces providing the local community with a diversity of outdoor recreational opportunities.

The key outcomes includes:



Gilead



Figtree Hill and Homestead

OPEN SPACE AND PUBLIC DOMAIN



A. Proposed Riverside Reserve

As part of the conservation area and koala corridor, Riverside Reserve is adjoining the Nepean River providing local residents the opportunity to engage with water and the blue grid with walking trails, seating and wayfinding signages.



B. Proposed Explorer Ranges Park

A series of interconnected high value amenity areas for local residents offering healthy lifestyle opportunities and the ability to connect with the natural surroundings of Gilead.



C. Proposed Adventure Linear Park

Key amenity area providing green connections between the conservation corridors that flank the eastern and western edges of this open space.



Indicative Local Open Space

A series of open spaces / parks serving local communities with different functions provision.



400m Catchment

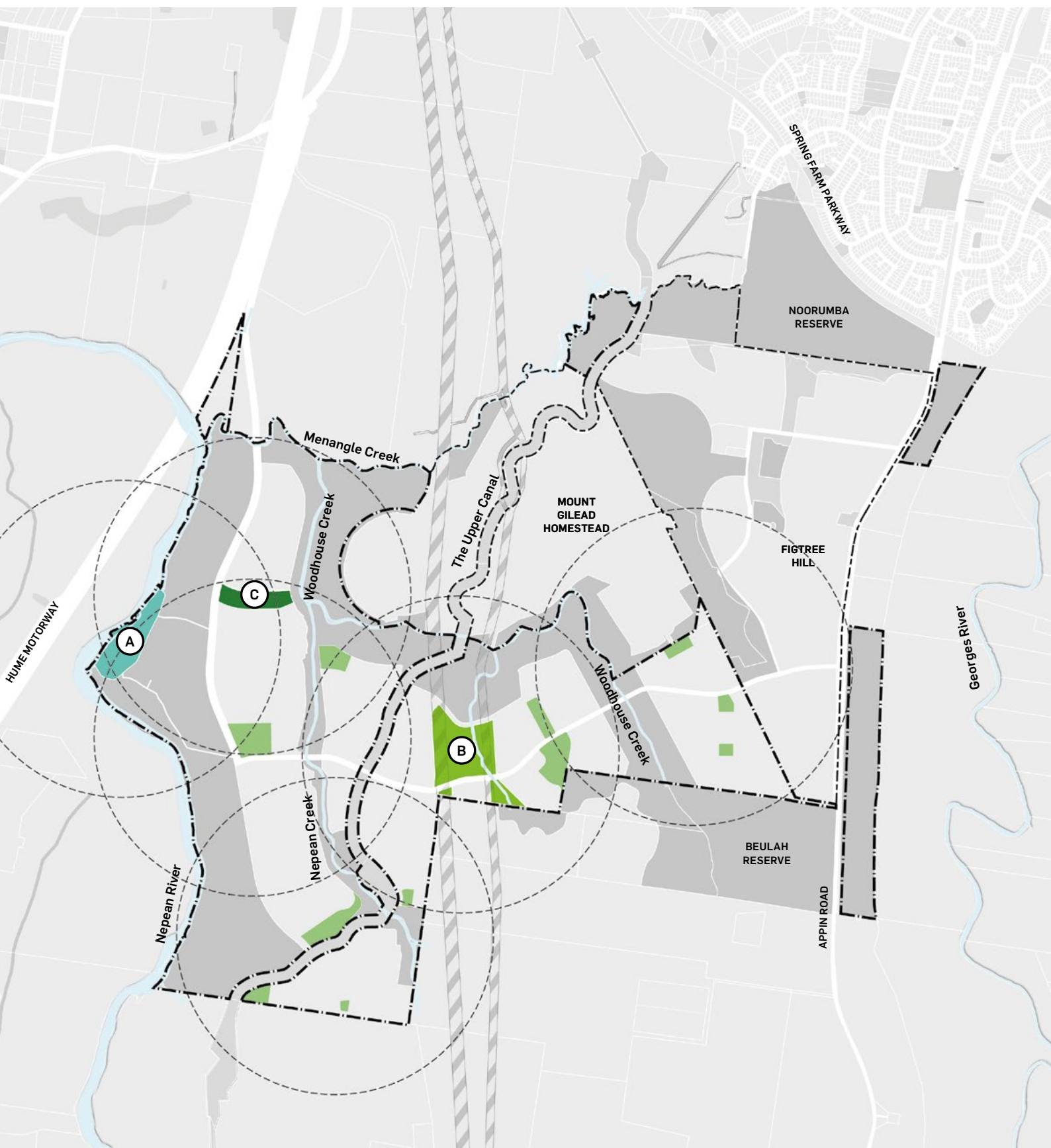
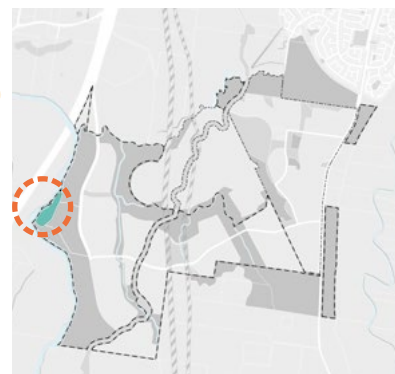


Figure 21 Open Space and Public Domain Strategy

A. PROPOSED RIVERSIDE RESERVE



1. Main Bushland Trail with Signage



3. Beach Trail (1 km loop)



2. New Planting - Bushland Regeneration



4. Boardwalk



Figure 22 Riverside Reserve - Illustrative Concept

B. EXPLORER RANGES / GILEAD BIKE PARK



1. Bike tracks of various difficulties



2. Bike jump track



3. Bike skills track (bike playground)



4. Shelter and public toilets



5. Walking paths with extended views



6. Asphalt pump track

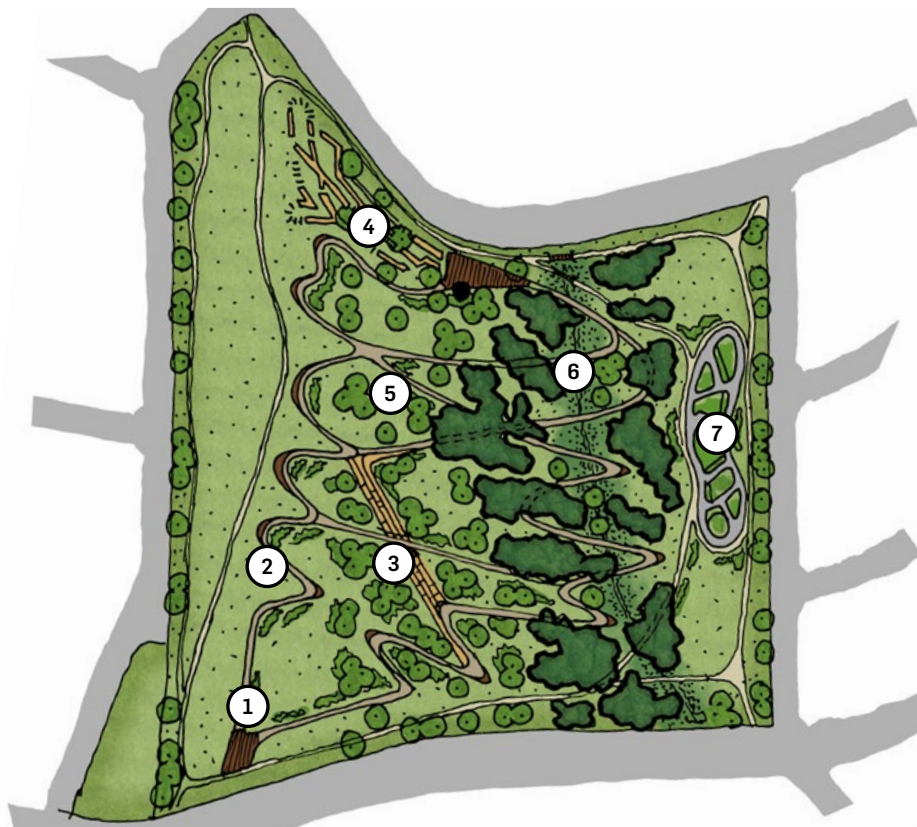


Figure 23 Explorer Ranges - Illustrative Concept

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C. ADVENTURE LINEAR PARK



1. Picnic areas next to existing trees



2. Public toilet



3. Inclusive Adventure playground



4. Planting combined with Play area



5. Open lawn with new tree planting



6. Multi-mode court

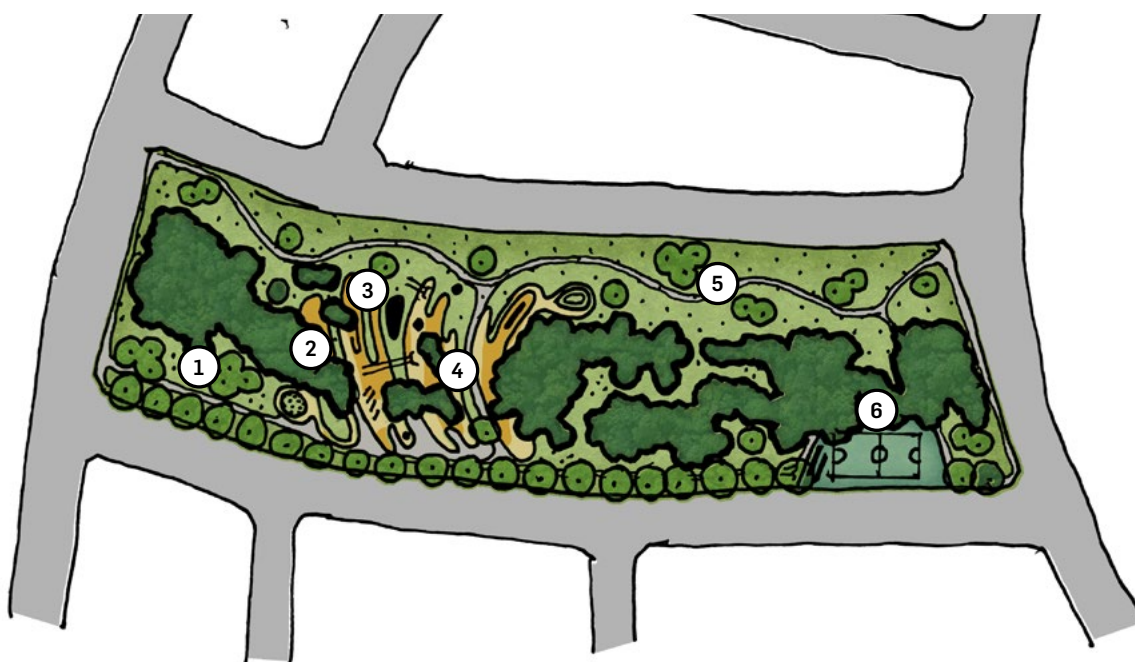


Figure 24 Adventure Linear Park - Illustrative Concept

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STRATEGY 4 ACCESS AND MOVEMENT



Seamless connections to key destinations.

A convenient, legible and safe, active transport prioritised street network is envisaged in Gilead. Connections between Figtree Hill and Gilead along with other local destinations in surrounding and regional areas will be enhanced.

The key outcomes of this strategy include:



Gilead



Figtree Hill and Homestead

STREET NETWORK

Establish a legible, permeable inter-connected and integrated street network with different characters and functions to balance movement and place outcomes including:



Motorway:

Hume Motorway runs along the western side of the Site connecting Macarthur to the north and Douglas Park to the south.



Arterial Road:

Appin Road as a major transport corridor runs along the eastern boundary of the Site.



Proposed Arterial Road:

Proposed Spring Farm Parkway extends to the west connecting to the Menangle area.



Approved Secondary Collector Road - 20m:

Approved connection from points along Appin Road providing internal circulation within Figtree Hill.



Proposed Secondary Collector Road :

Proposed major connection from the eastern edge of the Site running west and then up north along the conservation area and out towards the Hume Motorway and Menangle Road.



Indicative Potential Transport Corridor:

Provide vehicular and other movement connection to the south of the site as required by the "Greater Macarthur 2040" interim plan.



Proposed Nature Walking Trail:

Pedestrian walking trails within the conservation areas.

OTHER INFRASTRUCTURE CONTRIBUTIONS



Proposed Appin Road Underpass

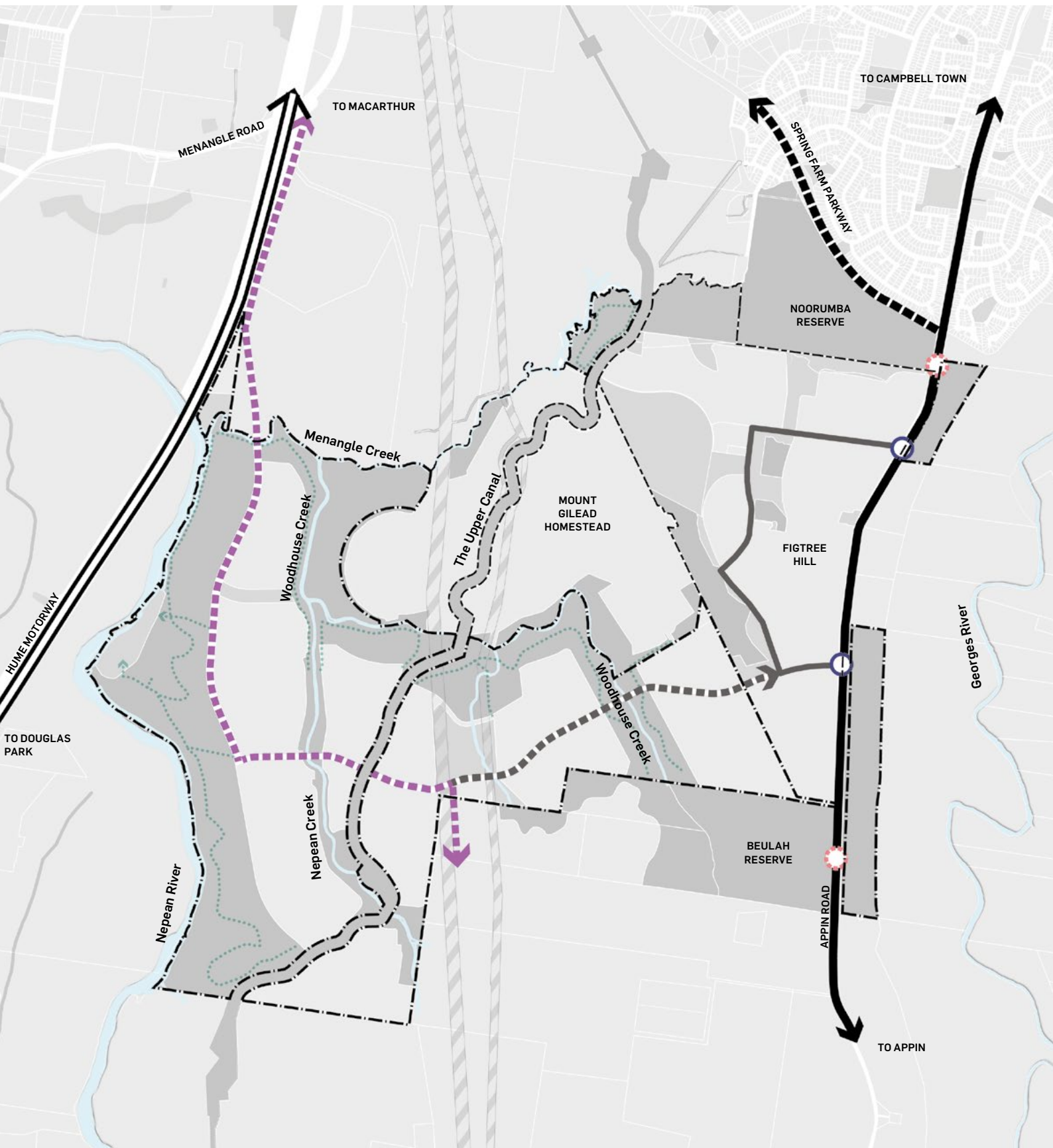
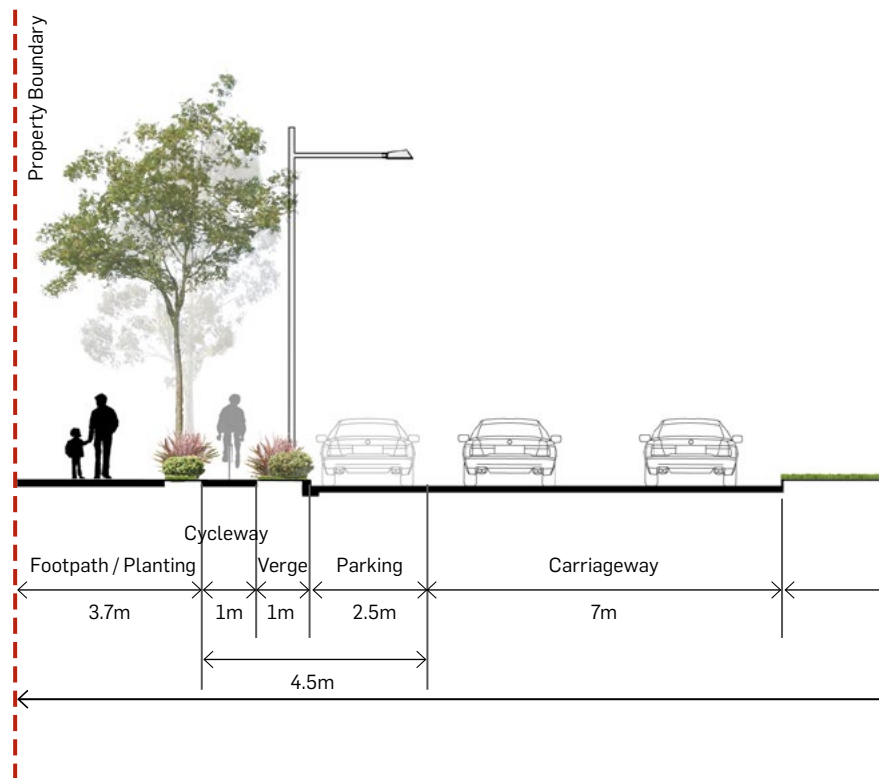


Figure 25 Access and Movement Strategy

TYPICAL STREET SECTIONS / INDICATIVE POTENTIAL TRANSPORT CORRIDOR



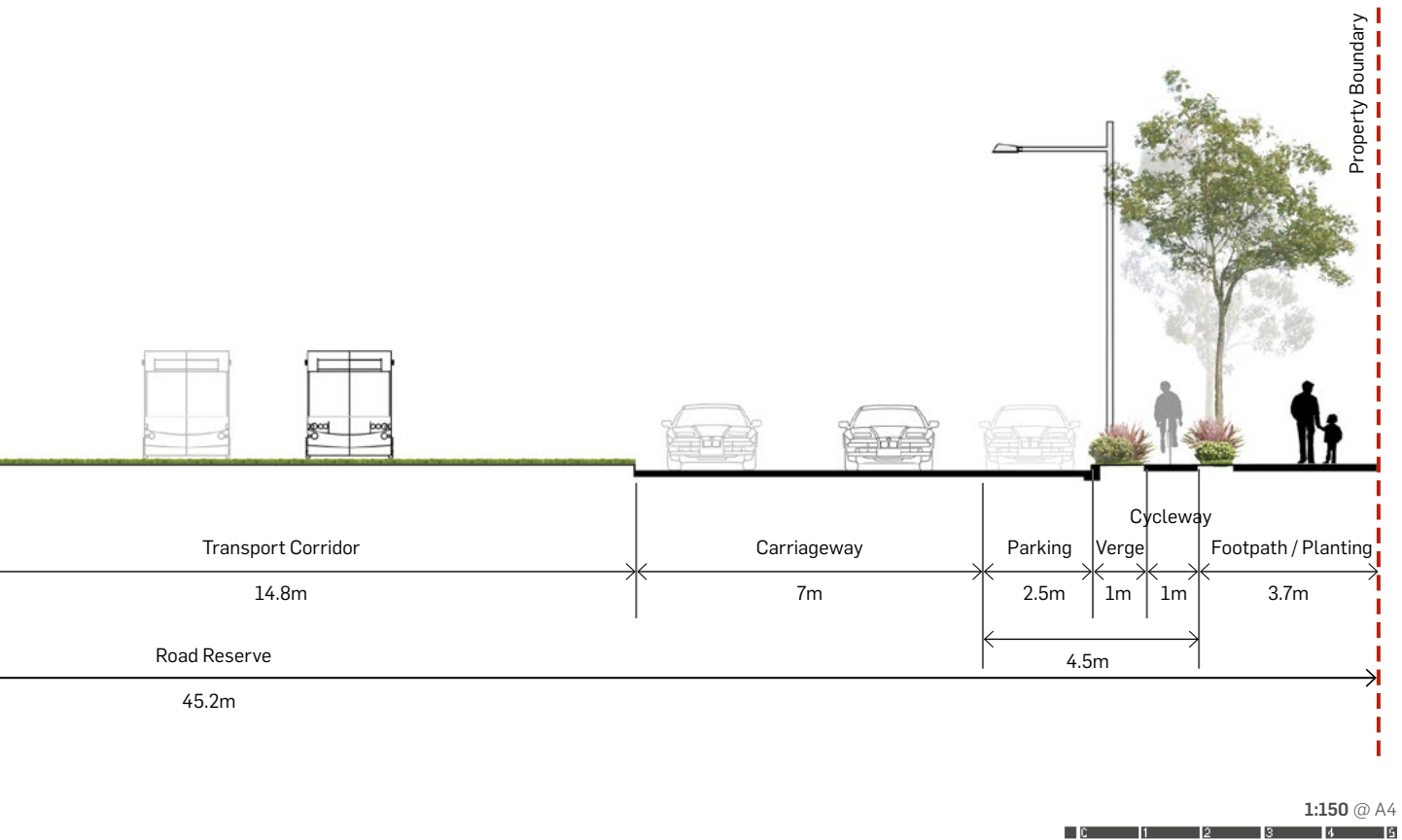
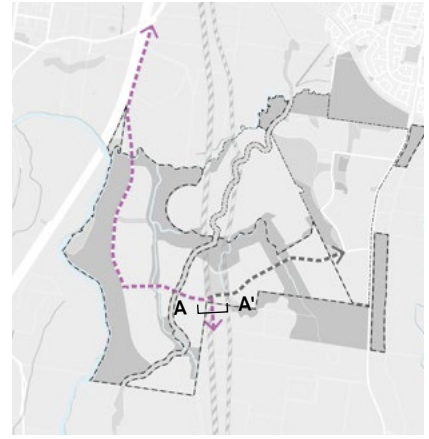


Figure 26 Indicative Typical Street Section A-A' - Potential Transport Corridor

TYPICAL STREET SECTIONS / SECONDARY COLLECTOR ROAD

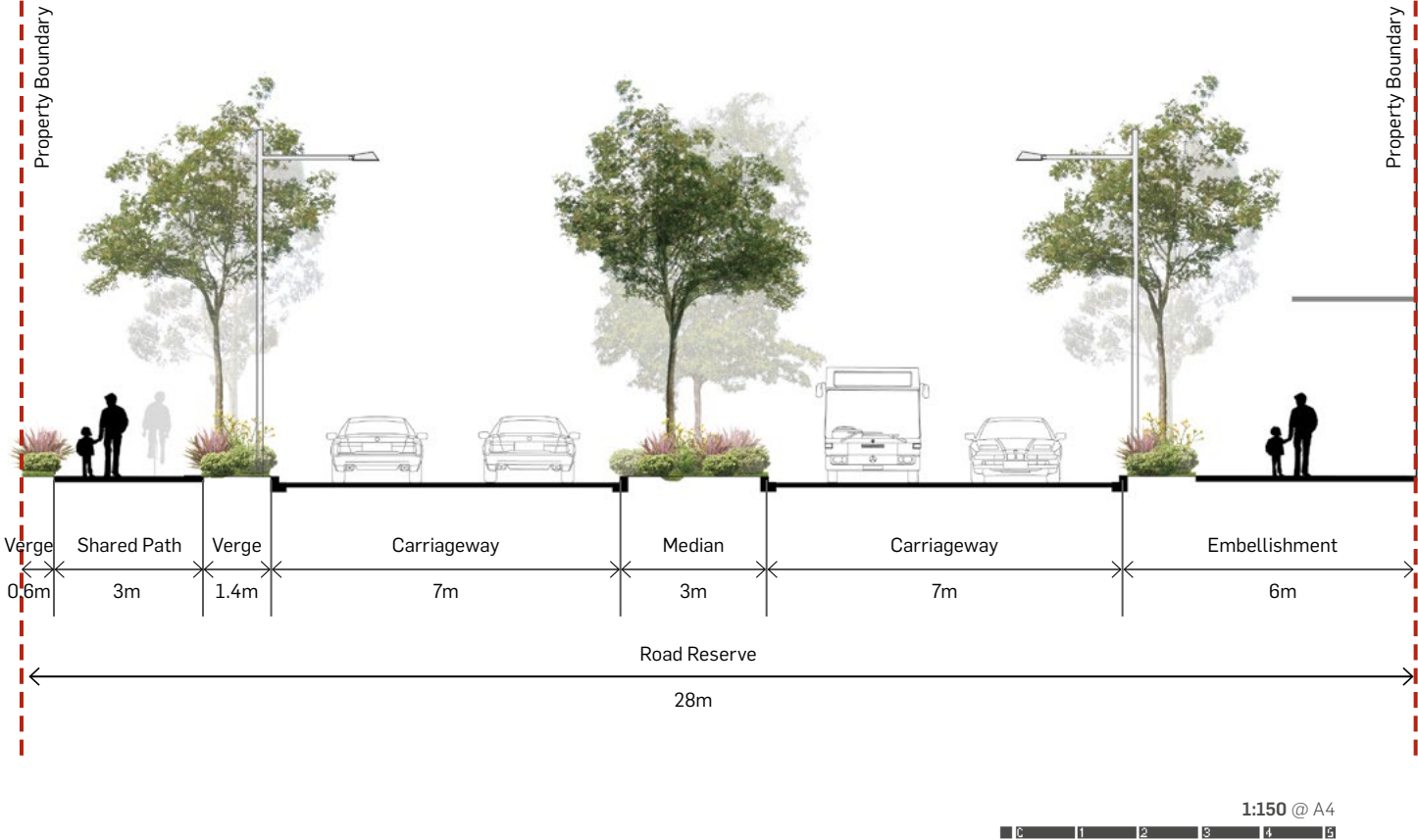


Figure 27 Indicative Typical Street Section B-B' - Proposed Secondary Collector (Adjacent to Village Centre, Proposed Sporting Field and School)

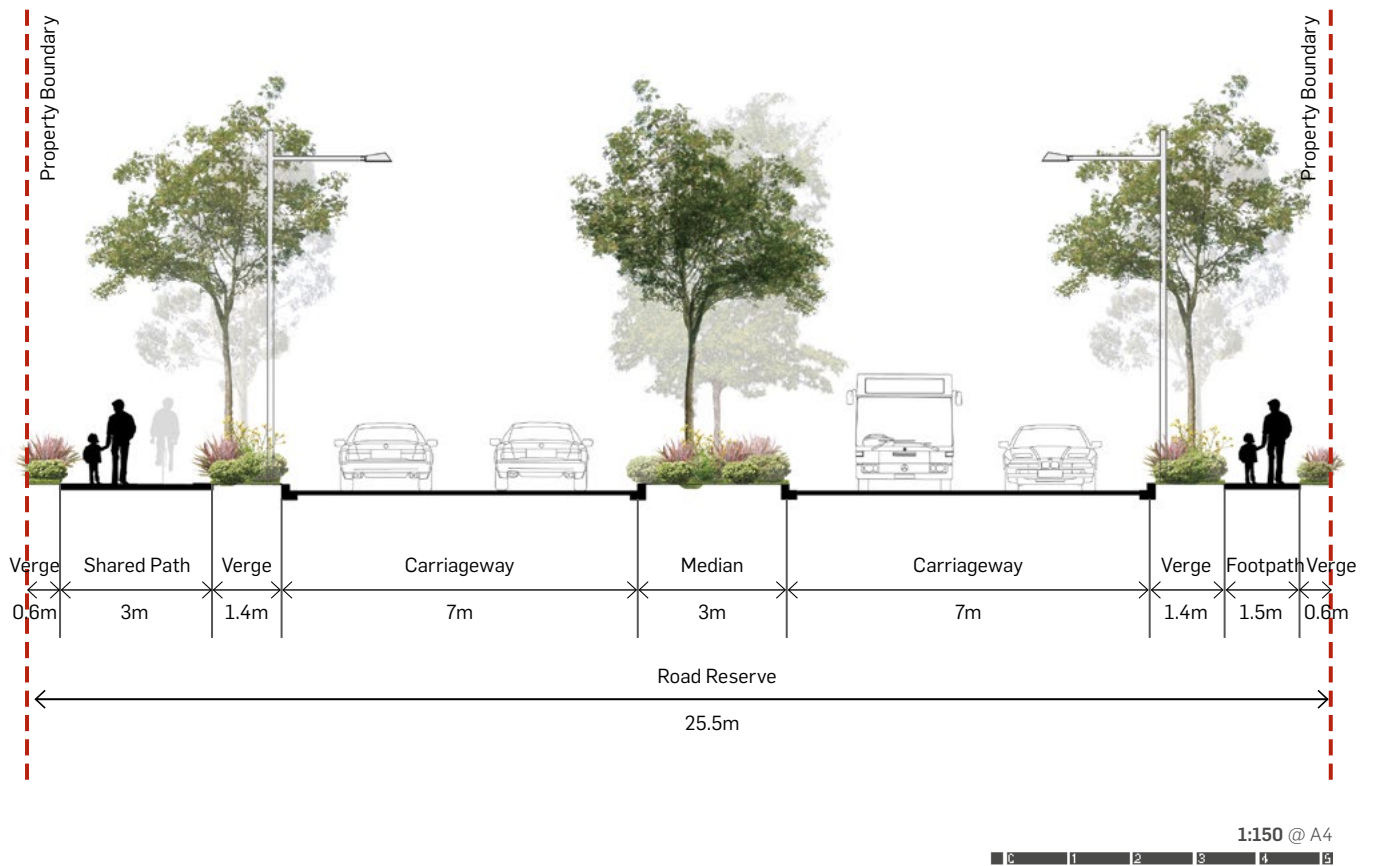
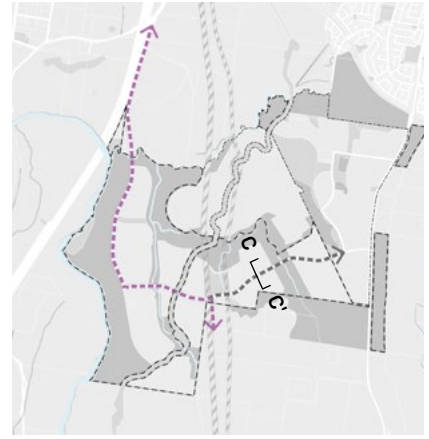


Figure 28 Indicative Typical Street Section C-C' - Proposed Secondary Collector (Adjacent to Residential)

STRATEGY 5 HOUSING MIX



Varied housing offer close to key services and amenities.

Dwelling diversity is an essential strategy to create a diverse community and promote housing affordability.

Varied housing typology and density with close proximity to public transport services, community facilities and major open spaces is demonstrated in the master plan.

The following diagram illustrates the housing typology distribution within the Site followed by character image for each type. Key outcomes include:



Gilead



Figtree Hill and Homestead

RESIDENTIAL LOTS

Medium Density Urban Area (average 225 sqm)



Front and rear loaded terrace homes / attached dwellings/ town house/ semi-detached housing, along the major transport corridors and close to key amenities including village centre, sporting field, school and major open spaces.



Urban Area (average 400 sqm)

Predominant housing typology within the Site.

MIXED USE RESIDENTIAL



Local Centre

3 storeys mixed use residential with ground floor retail.

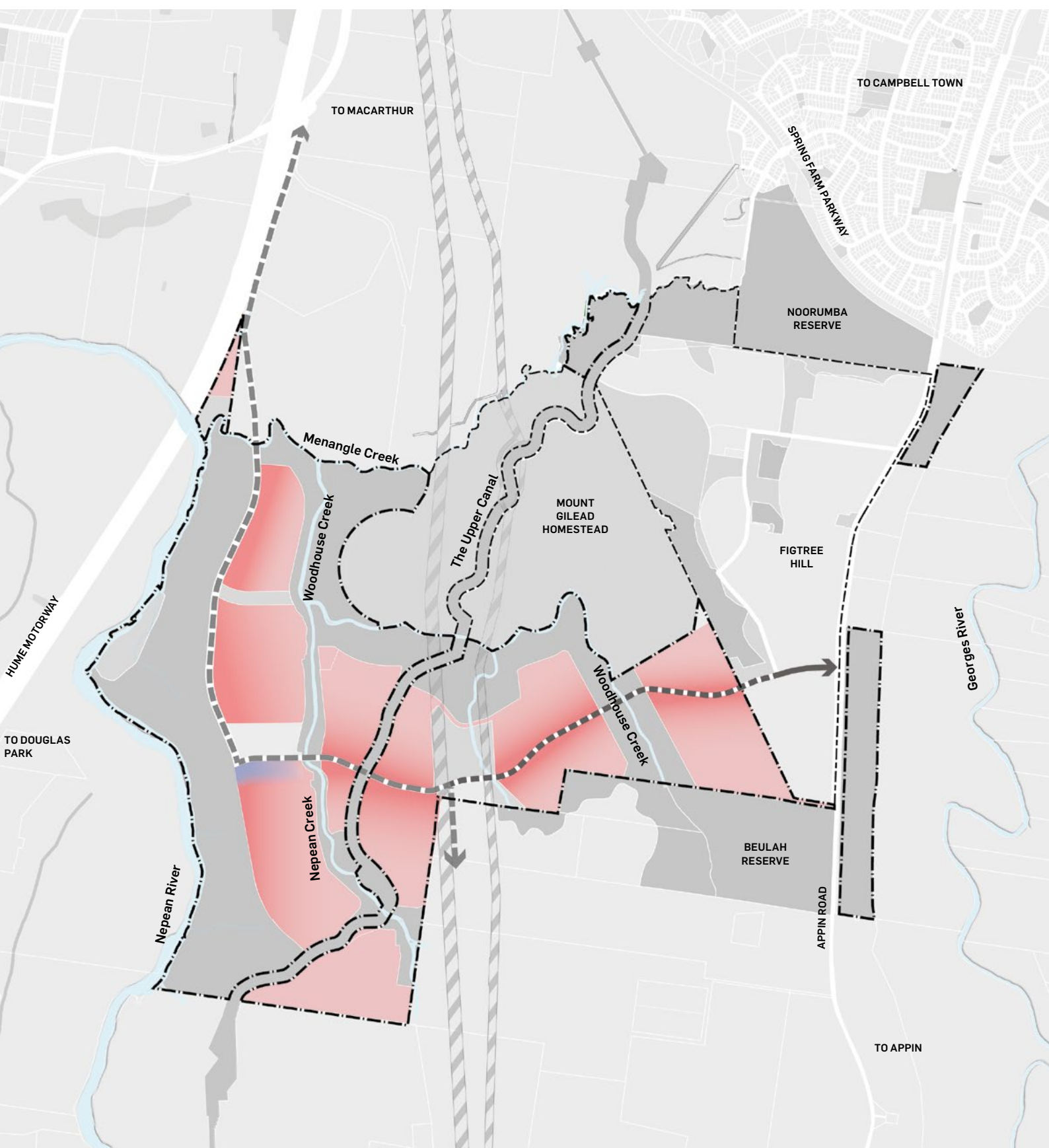


Figure 29 Housing Mix Strategy

HOUSING TYPOLOGY

The following pages illustrate the image precedents, density and average lot size assumption for each housing typology.

VILLAGE CENTRE / SHOP TOP HOUSING

80	DW./HA (3 STOREYS RESI ABOVE RETAIL)
0.35:1	NON-RESIDENTIAL FSR



Rouse Hill Town Centre, NSW



North Kellyville, NSW

MEDIUM DENSITY URBAN AREA

Average 225 sqm / lot



URBAN AREA

Average 400 sqm / lot



STRATEGY 6 SOCIAL ACTIVATION

A well integrated village hub providing an intensity of activity within Gilead whilst catering for a range of community needs and lifestyles.

Convenience retail, service and community facilities coupled with high performance open space and public domain network enhance the quality of daily life and promote place activation.

The Village Centre is the core of Gilead and is integral to the network providing community services and amenity for local residents and visitors.



Gilead



Figtree Hill and Homestead

SOCIAL ACTIVATION



Village Centre

Proposed village centre provides ground floor retail / commercial uses i.e. groceries, small supermarket, restaurants, medical centres, and childcare including upper level residential.



Proposed School

Proposed school strategically located within the western portion of the Site to serve the future population growth in close proximity to the sporting field and village centre.



Active Sports Precinct

Primary active open space within the Site for sport activities and events adjacent to the proposed new school.



Active Node



400m Catchment

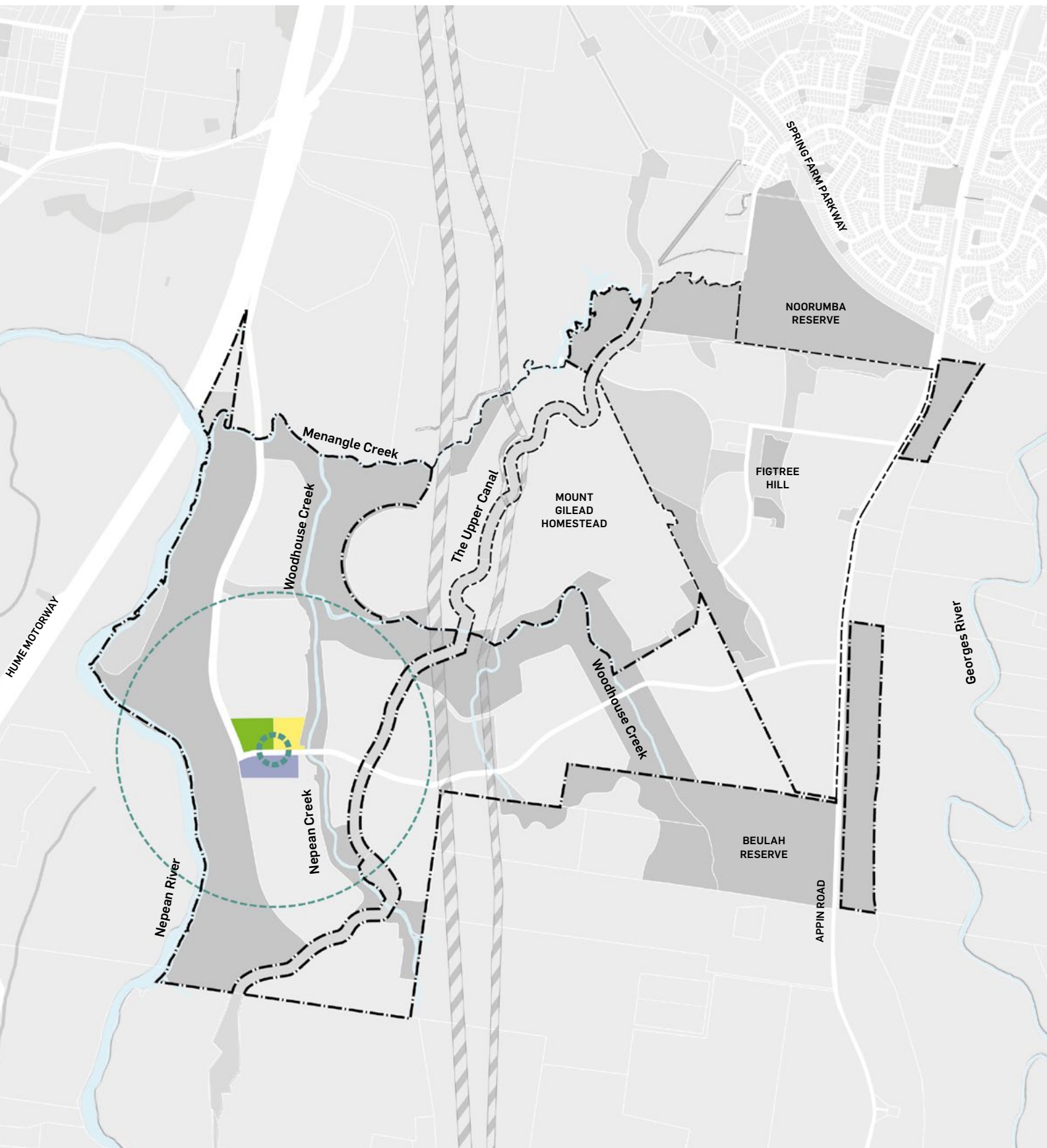


Figure 30 Social Activation Strategy



VILLAGE CENTRE INDICATIVE CONCEPT

The following pages illustrate the indicative design concept and image precedents of Gilead Village Centre based on the design principles.

Village Centre Design Principles

- Create permeable, convenient and safe local connections.
- Create attractive streets and public domain with activated frontages.
- Provide a variety of spaces for all age groups.

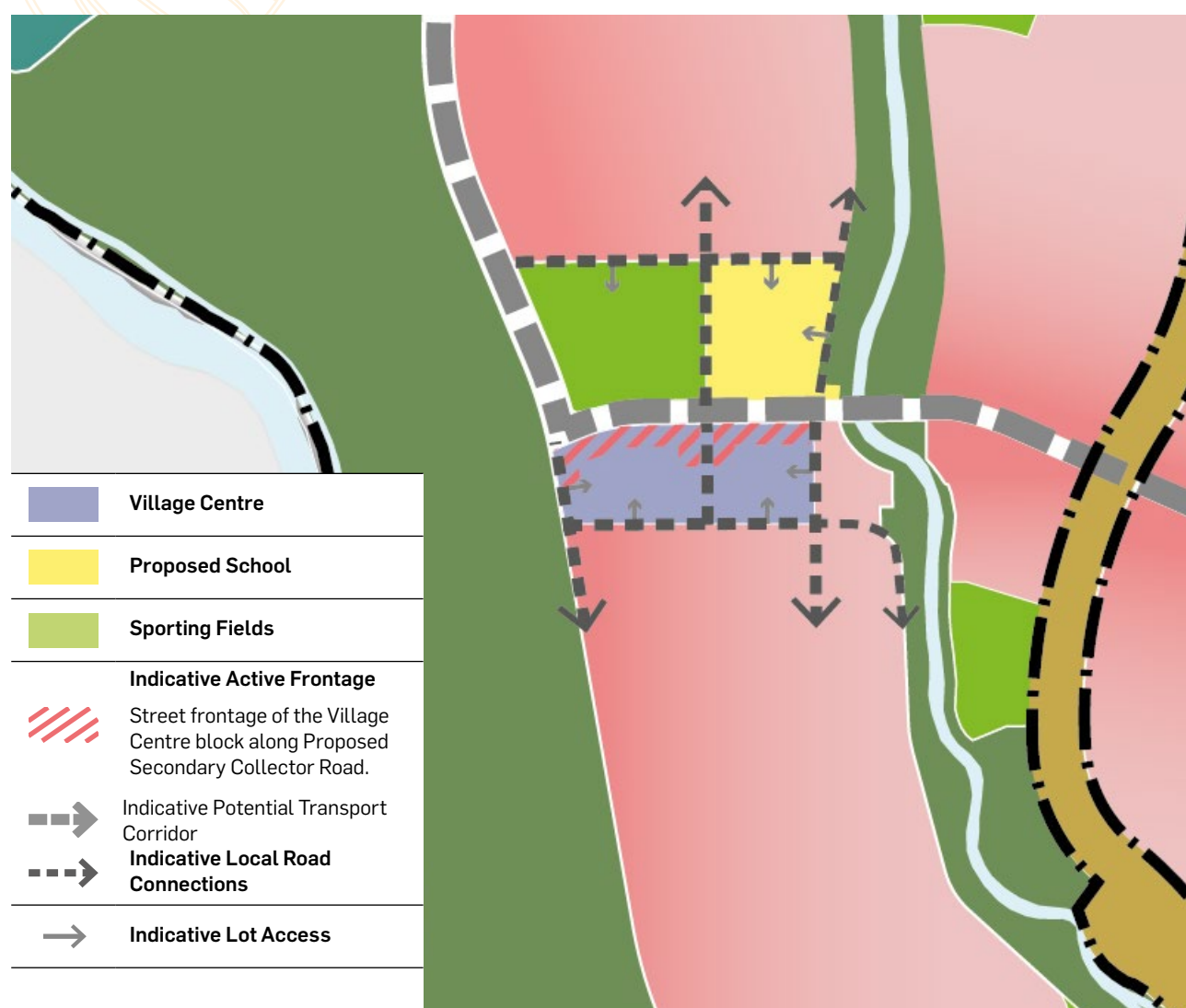


Figure 31 Indicative Village Centre Concept





Town Square



School



Sporting Fields



Retail High Street



Parks



Community Centre



Vibrant F&B Forecourts



PART C

PROPOSED LEP AMENDMENT

The following section provides the proposed LEP Amendment for Gilead.

This includes:

- Land Application Map.
- Land Zoning Map.
- Height of Building Map; and
- Urban Release Area Map.

C.1 LAND APPLICATION MAP

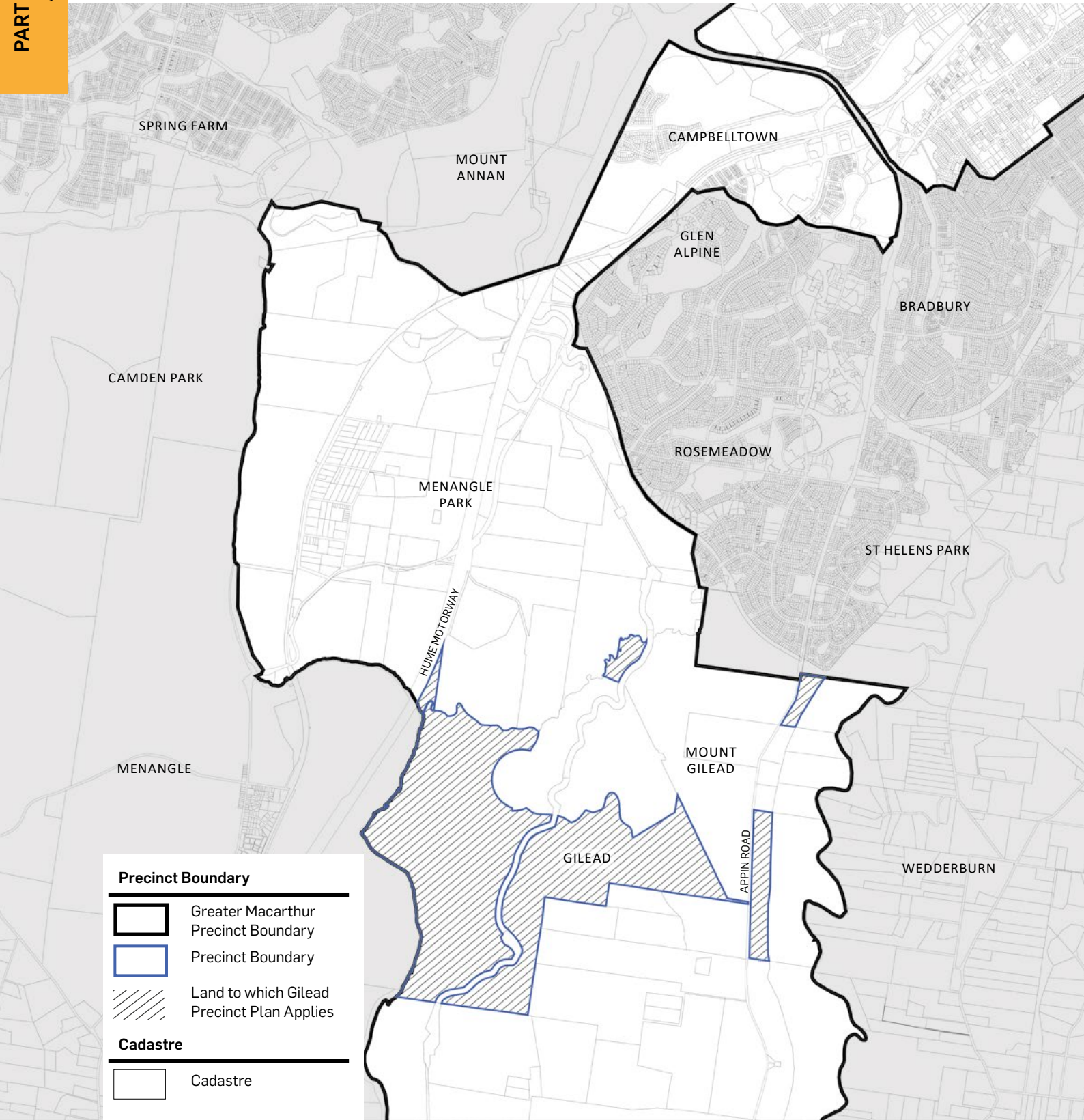


Figure 32 Land Application Map



C.2 LAND ZONING

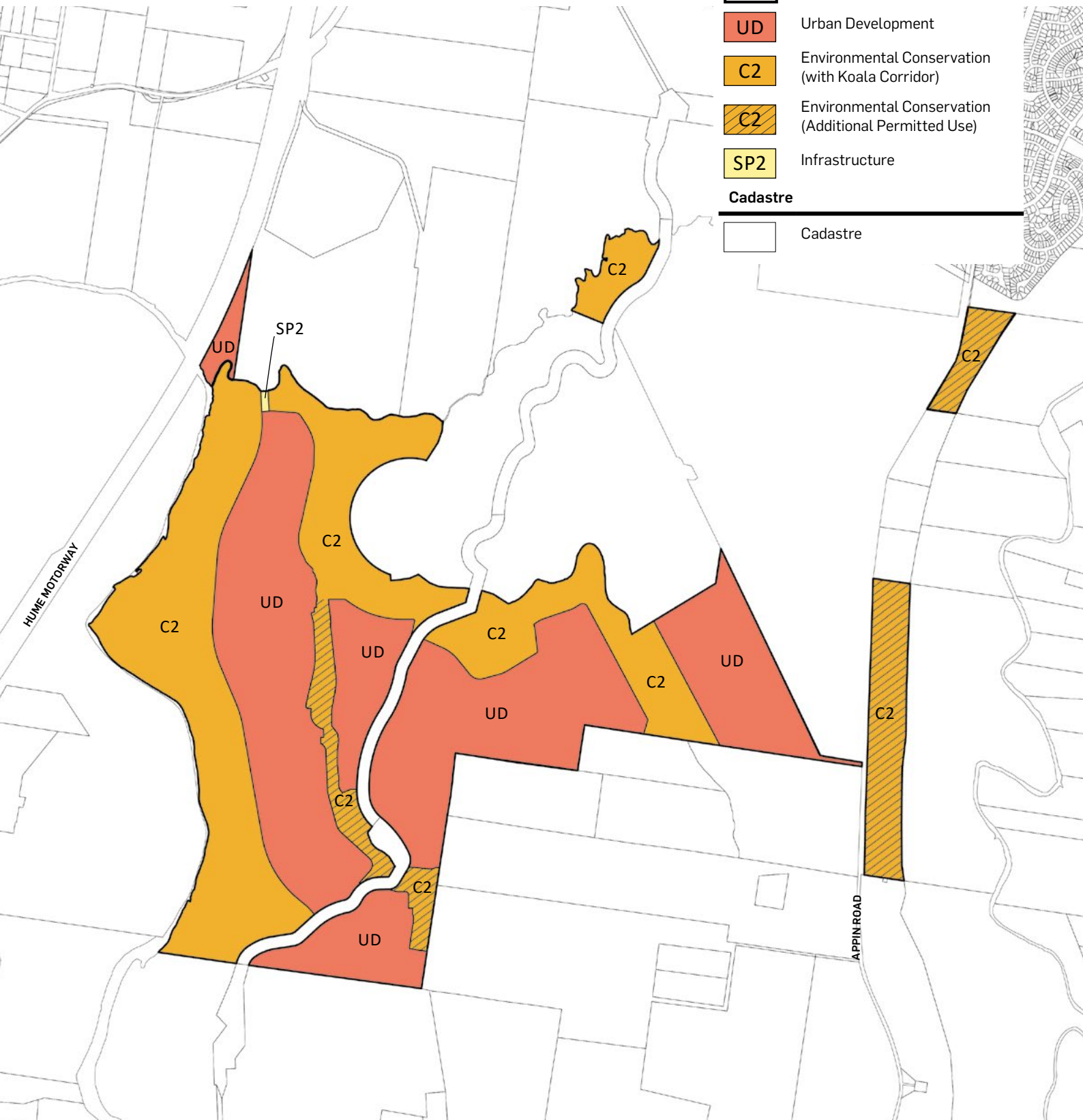


Figure 33 Land Zoning Map



C.3 HEIGHT OF BUILDING

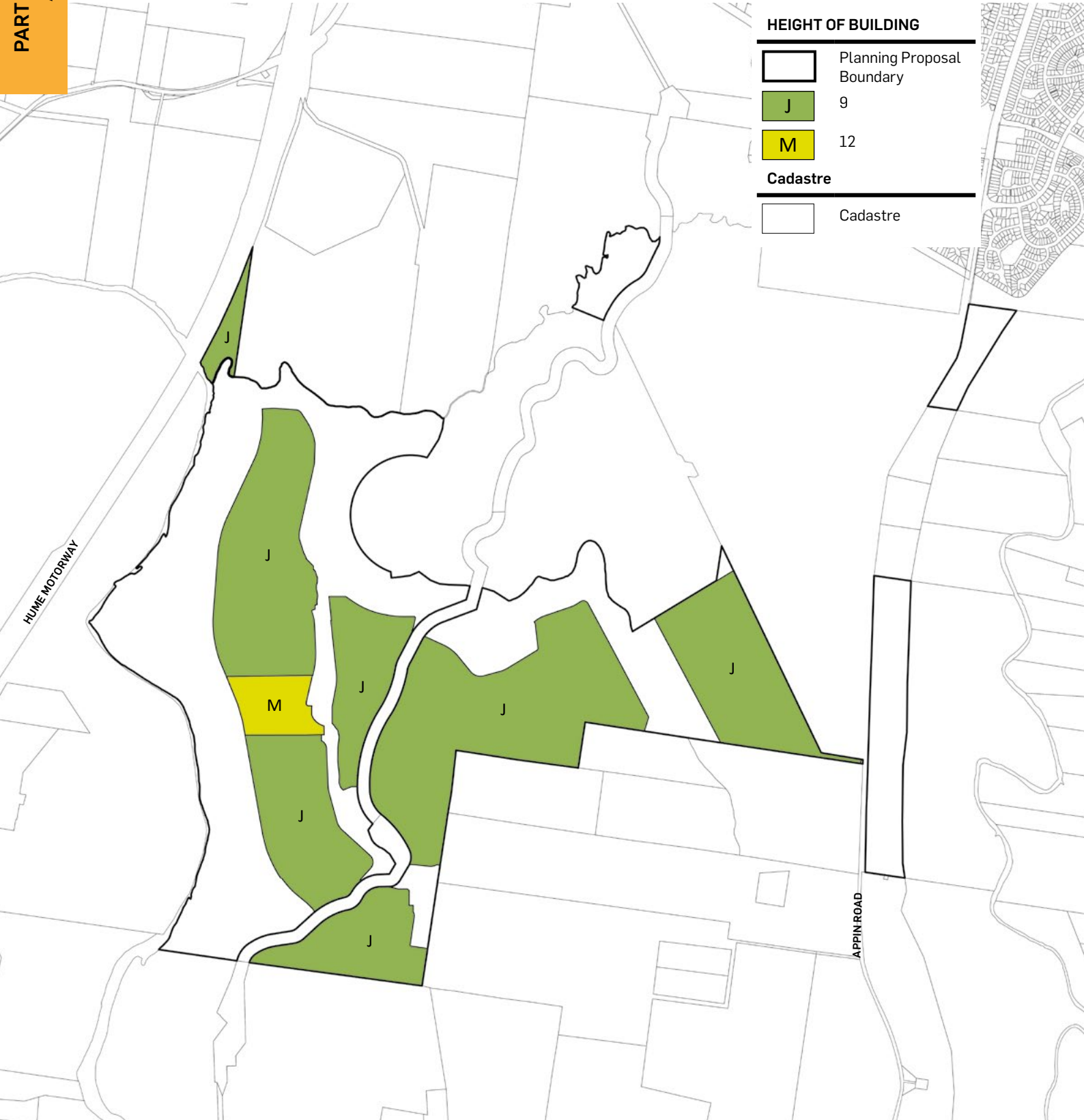


Figure 34 Height of Building Map

C.4 URBAN RELEASE AREA

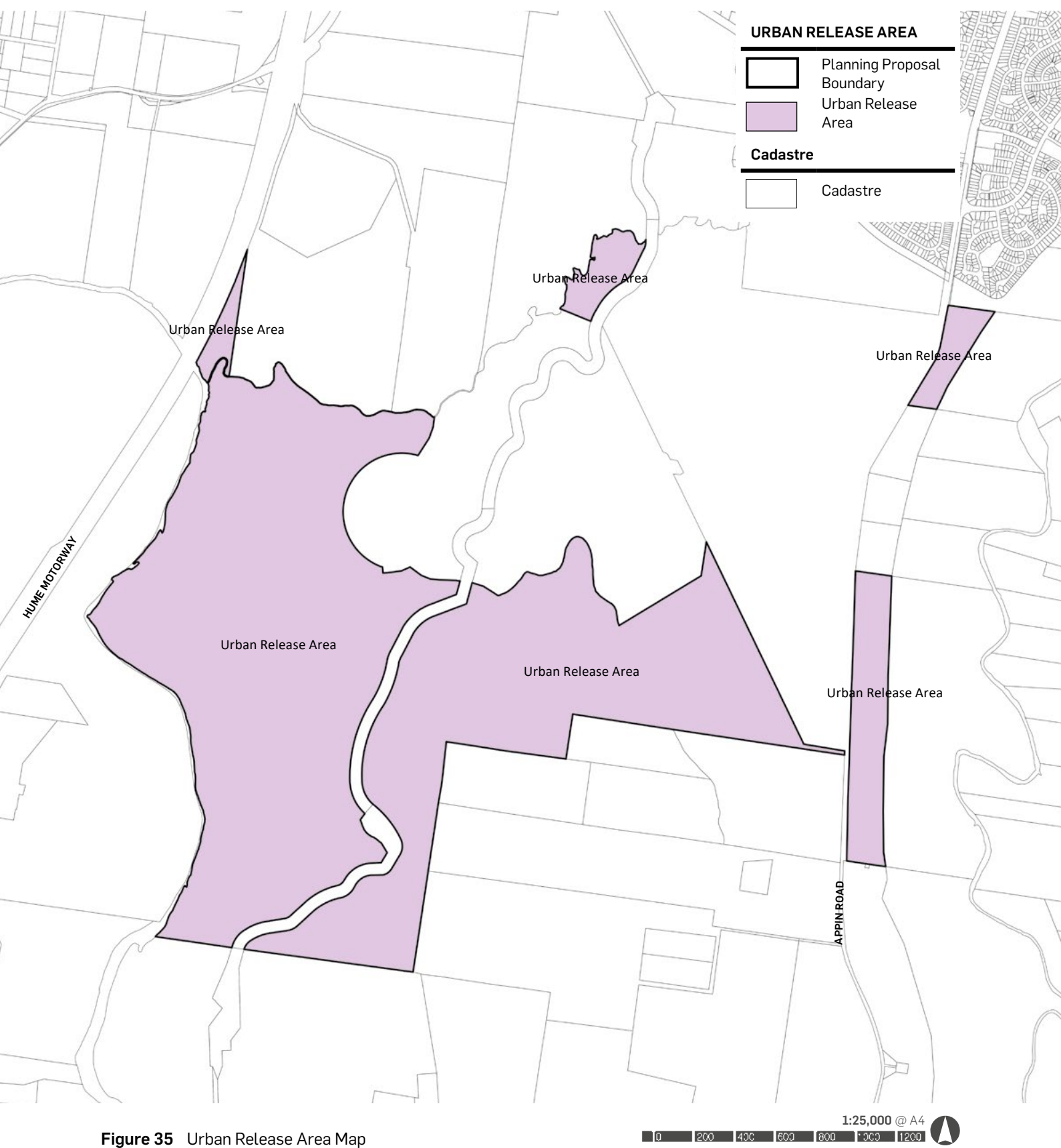


Figure 35 Urban Release Area Map

C.5 CLAUSE APPLICATION MAP

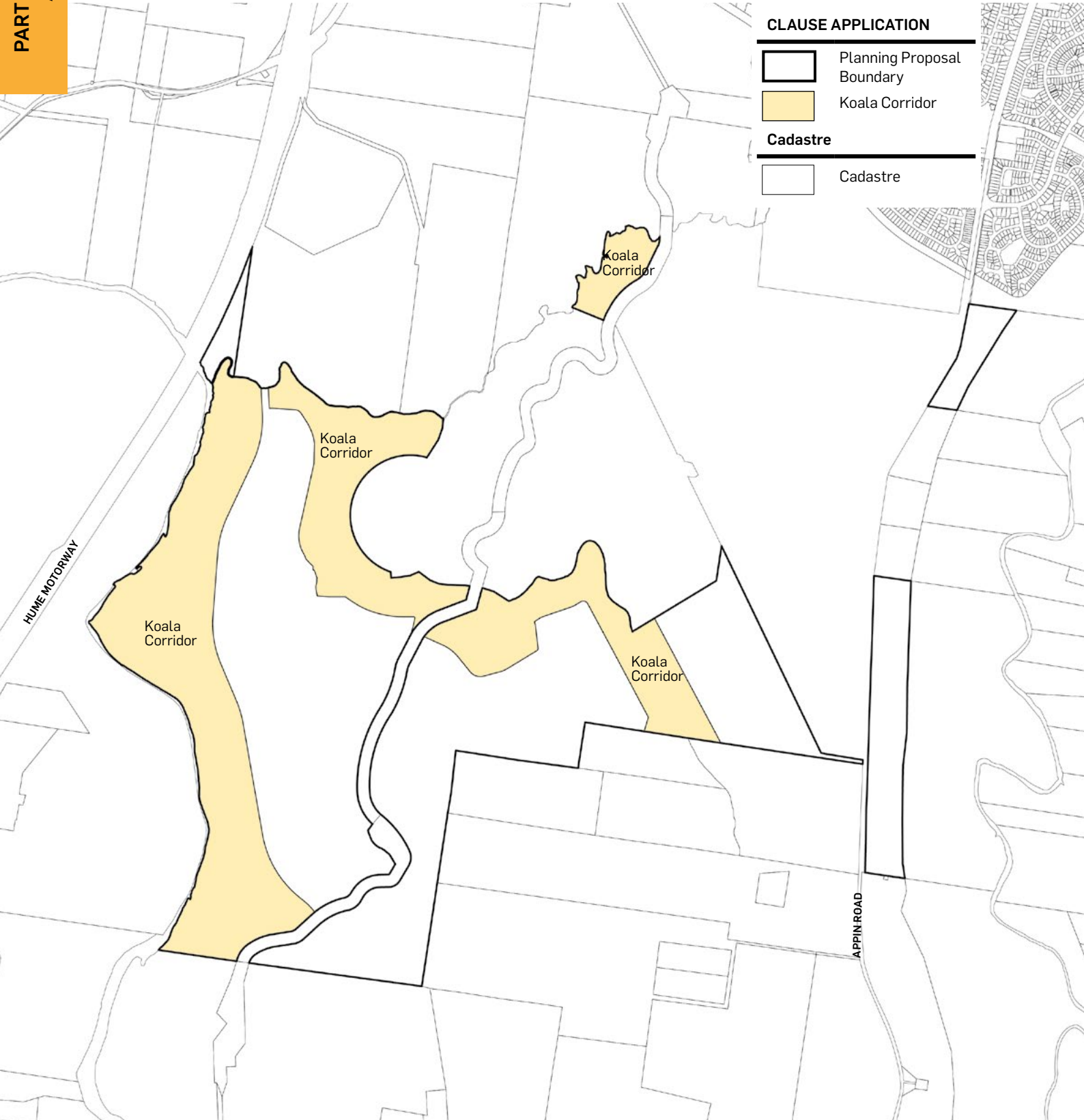
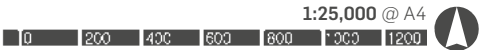


Figure 36 Clause Application Map



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