NORTH APPIN (PART) PRECINCT

URBAN DESIGN REPORT

Prepared for INGHAM PROPERTY

Jul 2023

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Contributors:

ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the traditional owners of the land on which we work and on which our site is located, the Dharawal people, and pay our respects to elders past, present and emerging. We thank them for their continuing care of Country and the skies, waterways, lands and spirits of which Country is comprised. We acknowledge the cultural significance of the Appin region to Aboriginal people and are committed to embedding this cultural significance in our work in meaningful and respectful ways.

EXECUTIVE SUMMARY

Urbis has been engaged by Ingham Property Group (IPG) to prepare an Urban Design Report in support of a Planning Proposal to rezone their landholding within the North Appin Precinct to support urban development, environmental conservation and infrastructure provision. As part of the Urban Design Report, a Draft Structure Plan has been prepared to inform further detailed design and future development.

Subject Site

The 300.8ha IPG landholding (subject site) is located at 345 Appin Road, Appin and is legally described as Lot 105, DP1188670. It is bound by Appin Road to the east, Ousedale Creek to the west and south, and privately owned rural and agricultural land to the north. It is situated 14km south of Campbelltown-Macarthur metropolitan centre, and 1.5 km north of the existing Appin Township. The site straddles the local government areas (LGA) of Wollondilly Shire and Campbelltown, with the majority of the site within Wollondilly LGA.

Strategic Context

The subject site is strategically located within the North Appin Precinct, which is one of 12 precincts within the Greater Macarthur Growth Area (GMGA). The GMGA plays an essential role in the delivery of Greater Cities Commission's strategic vision set out in The Greater Sydney Region Plan – Metropolis of Three Cities. In November 2018, the Department of Planning and Environment (DPE) released Greater Macarthur 2040: An interim plan for the Greater Macarthur Growth Area and in November 2022, the Greater Macarthur 2040 Structure Plan was finalised. Together, these documents depict the strategic planning framework for the Growth Area and will ultimately guide precinct planning.

The NSW Government has announced three critical planning precincts within GMGA, two of which have been assessed under the Technical Assurance Panel (TAP) process by DPE and are now the subject of Planning Proposal applications,

- Gilead (Stage 2), located within the Gilead Precinct to the north, is a 876ha site envisaged to accommodate up to 3,300 new homes, a school, a small town centre, public open space and environmental conservation land, and land dedicated to several koala corridors.
- Appin (part) Precinct, located within the Appin Precinct to the south-west of the subject site, is a 1,284ha site envisaged to deliver more than 12,000 new homes, including affordable housing, regional open space, local centres, and help secure new koala corridors.

North Appin is the third critical planning precinct, and therefore provides the strategic planning impetus for the IPG Planning Proposal and the Draft Structure Plan set out in this report. The North Appin Precinct is envisaged to deliver of up to 5,000 new dwellings (or 15,000 new residents) supported by a local centre, transport connections and open space.

IPG's landholding occupies the majority of the North Appin Precinct and is referred to in this report as the North Appin (part) Precinct. Specifically, it is envisaged to deliver approximately 3,000 new homes as well as securing and implementing a koala corridor along Ousedale Creek to provide connectivity to the Georges River Koala Reserve.

Co-ordinated delivery of transport, utility and social infrastructure across the three precincts will be critical to successfully achieving the intent of the Greater Macarthur Plan 2040 and GMGA Structure Plan.

Starting with Country

The subject site is on the traditional lands of the Dharawal people, within the bounds of the Dharawal Local Aboriginal Land Council.

The Appin region is historically significant for Aboriginal people, with its waterways associated with Ousedale Creek and the Nepean River, soil landscapes underlain by Hawkesbury sandstone and its unique topography containing a series of ridgelines and creek flats. A culturally sensitive movement corridor, as identified in the GMGA 'Starting with Country Map' traverses north-south across the site. Fundamental to the proposed Draft Structure Plan is the adoption of a landscape-led design approach that recognises these key elements and balances the site's cultural heritage assets and strategic positioning within the Greater Macarthur Growth Area. This is reflected in the vision, design principles and Draft Structure Plan strategies outlined in this report.

Site Context

The subject site is currently zoned RU2 Rural Landscape, reflecting its historical use as the largest broiler chicken operation in the southern hemisphere which was later converted into cattle breeding operation in 2018. It features cleared pastoral land that falls east towards the Nepean River, offering extensive views of the broader region and the Blue Mountains in the distance. The western and southern edges of the site are heavily vegetated, comprising Cumberland Plain Woodland and riparian corridors associated with Ousedale Creek and its tributaries.

A series of technical studies have been undertaken and have informed the Draft Structure Plan. In summary, the

urban analysis has identified that the site is generally unencumbered by significant environmental constraints and is well positioned to enhance and contribute to the surrounding urban context as follows:

- **Topography:** The site's topography generally falls from the east to the west, generally at a central north-south ridgeline with steep westerly slopes. This provides the opportunity for the location of key roads, landscape features and open spaces with outlook towards the Blue Mountains.
- **Biodiversity:** The site is bordered to the west and south by land identified in the Cumberland Plain Conservation Plan (CPCP) as 'Avoided Land'. These areas are to be retained, protected and secured via future rezoning to C2 Environmental Conservation. There are several riparian corridors associated with Ousedale Creek throughout the site. Those contained within the CPCP land will be protected via the C2 zone whilst the balance are generally to be integrated as part of the open space network and water cycle management system of the site.
- **Bushfire:** Areas of the site, predominantly to the west and south along heavily vegetated areas have been identified as bushfire prone land. Asset protection zones (APZs) are to be established accordingly.
- **Flooding:** The site generally lies outside the mainstream flood extents of the Nepean River. The eastern portion of the site experiences some overland flow, as shown by the 1% AEP flood map. A site specific flood study has been undertaken for the subject site. There are opportunities for the flood prone areas to be incorporated in the open space and water cycle network.
- **Movement:** There is currently limited access to the site, with only one entrance from Appin Road. Accordingly, an additional access point will be required from Appin Road. It is further noted that the GMGA Structure Plan indicates a Transit Corridor, that traverses north-south through the site. A Proposed Road along this alignment is also proposed in the GMGA Structure Plan and the Draft Structure Plan includes this north-south transit corridor in general alignment with the GMGA Structure Plan
- **Demand Analysis:** A series of demand studies for housing, retail, open space and recreation space and social infrastructure have been undertaken and have informed the key community elements to be provided to support residential development on the subject site.
- **Infrastructure and Utilities:** The site is bisected by a number of large utility easements, including a 66kV/330kV electrical easement, water easement containing a 1,200mm trunk water main and a gas easement containing the Eastern Gas Pipeline. The availability of existing enabling infrastructure therefore provides an opportunity for prompt delivery. It has been identified that there will be a requirement for a new water reservoir and zone substation within the (part) Precinct.

Vision

The Draft Structure Plan reflects IPG's vision to create a leading residential community that is embraced by its incoming residents and is celebrated widely for:

- Its acknowledgement of and respect for its natural assets being at the headwaters of gorge country, but which also provides for a distinctive sense of place.
- Its urban form and public domain that has genuine ties to the site's cultural history.
- Its walkable neighbourhoods with pedestrian and cycle-friendly streets that are separated from regional traffic and arterial roads.
- Its respectful design response to the existing Appin township which in turn contributes to the maintenance of its own unique character.

This vision will guide the creation of a holistic, healthy and connected community supported by access and utility infrastructure, economic investment and a range of suitable local services.

Draft Structure Plan

The Planning Proposal seeks to rezone the subject site a combination of UD Urban Development, SP2 Infrastructure and C2 Environmental Conservation zones. The Draft Structure Plan has been prepared to inform the future development of the Urban Development Zone and seeks to provide for the following:

- Approximately 56ha of CPCP protected land, including riparian and koala corridors.
- Approximately 3,000 new homes, across a range of low to medium densities that respond to proximity to public transport, open space and the unique environmental characteristics of the site.
- A hierarchy of streets which integrate with the proposed Transit Corridor.
- A local centre, offering retail together with community facilities and a medical centre.
- A primary school, with co-located sporting fields.
- Two site access points – a southern access point utilising the re-aligned Brian Road, and a northern entry providing more suitable access to the local centre and internal road network.

- Parks, open space linkages and active recreation (sporting fields), as required.
- New utility infrastructure, including a new water reservoir and zone substation.

The design of the Draft Structure Plan has been informed by:

- Our appreciation of Country;
- Constraints and opportunities analysis based on the site analysis described above;
- A series of design principles embodying Dharawal Country elements including Move with Country, Non-human Kin Country, Water Country, Deep Country, Sky Country and Wind Country; and
- Housing, open space / recreation, retail, and social infrastructure demand analysis.

To guide future development, a series of key strategies around land use, landscape, built form, movement and place have been developed and which demonstrate alignment with Greater Macarthur 2040 Vision. These are detailed in Section 7.2 and provide the basis for objectives and controls for any future site specific DCP.

An indicative Staging Plan has also been prepared which demonstrates the potential sequencing of development for the site.

Proposed Planning Controls

Preliminary maps have been produced which translate the intent of the Draft Structure Plan within the statutory mapping framework of the proposed amendment to State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (WPC SEPP).

Conclusion

As demonstrated above, and as further detailed throughout this Urban Design Report, the rezoning proposal provides an optimal opportunity to deliver a sustainable, walkable community that will contribute to the realisation of the Greater Macarthur 2040 Plan. The subject site is strategically located as part of three critical release areas within the GMGA; it is suitable for urban development together with securing and protecting significant Cumberland Plain vegetation and koala corridors; and has early access to enabling infrastructure.

The Draft Structure Plan embodies key connecting with Country principles, considers the site's constraints and opportunities and provides a robust framework for future development through a series of design principles and key strategies.

These are reflected in the Draft Structure Plan, which sets out to deliver:

- Protection of approximately 56ha of CPCP land and Ousedale Creek Koala Corridor,
- A local centre comprising a primary school, retail facilities and a community centre;
- Key enabling infrastructure including a new water reservoir, zone substation and Greater Macarthur Transit Corridor;
- A new community of walkable and cycleable neighbourhoods, free from regional and arterial traffic.
- Approximately 3,000 dwellings offering a diversity of housing choice in response to the housing affordability and shortage crisis; and
- Two sporting fields, and a series of local parks offering gathering and recreational spaces.

Accordingly, favourable consideration of this Urban Design Report and Draft Structure Plan is sought as part of a recommendation for the Planning Proposal to be endorsed for gateway determination by DPE.

CONTENTS

1.0
INTRODUCTION

1.1 Background

Urbis has been engaged by Ingham Property Group (IPG) in relation to their land holding at North Appin, which forms part of the Greater Macarthur Growth Area.

Greater Macarthur Growth Area plays an essential role in the delivery of Greater Cities Commission's strategic vision set out in *The Greater Sydney Region Plan – Metropolis of Three Cities*. *Greater Macarthur 2040: An interim plan for the Greater Macarthur Growth Area* was released by the Department of Planning and Environment (DPE) in November 2018 and in November 2022, the Greater Macarthur 2040 Structure Plan was finalised. Together, these documents depict the strategic planning framework for the Growth Area and will ultimately guide precinct planning.

North Appin Precinct has been identified as one of the southernmost land release areas and is envisaged to deliver around 5,000 new homes, a local centre and a north-south Transit Corridor.

A majority of land in the North Appin Precinct is owned by IPG. The NSW Government has identified the North Appin (part) Precinct for the delivery of approximately 3,000 new homes and the securing and implementation of a koala corridor along Ousedale Creek.

Following the release of the Draft Structure Plan, and as the majority landowner within the North Appin Precinct, IPG has submitted a Planning Proposal for their site to contribute to the delivery of homes, jobs and transport infrastructure as envisaged in the Greater Macarthur 2040 Plan .

1.2 Purpose of the Report

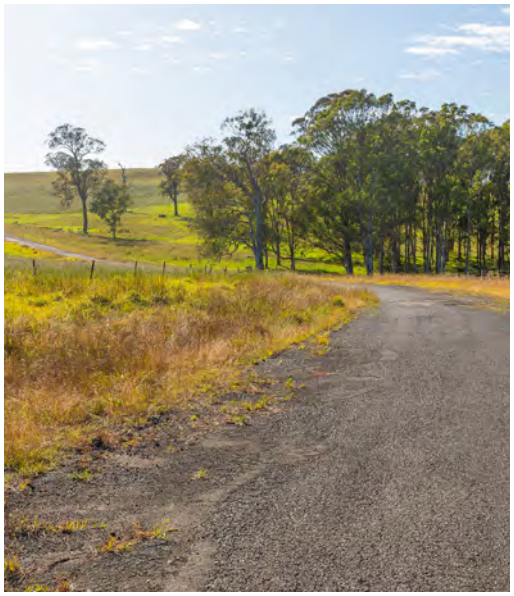
This Urban Design Report has been prepared in support of a Planning Proposal to rezone the IPG landholding to support urban development, environmental conservation and infrastructure provision.

It sets out the urban context for the proposal and includes a Draft Structure Plan that underpins the rezoning proposal of the North Appin (Part) Precinct.

It includes:

- Connecting with Country approach
- Investigation of the strategic framework currently in place and identifies the strategic merits of the rezoning;
- Investigation of the physical urban context and identifies key opportunities and constraints. This has been informed by the technical studies prepared by others;
- A vision and key principles that have informed the preparation of a Draft Structure Plan,
- A Draft Structure Plan with a series of strategies that demonstrate how the proposal:
  - Connects with Country
  - Responds to the surrounding context; and
  - Seeks to deliver housing, jobs and infrastructure; and
- Proposed planning control maps associated with the proposed amendments to the Western City Parkland SEPP, which are further detailed in the Planning Proposal.


Ousedale
Creek



1.3 Subject Site

The 300.8ha Subject Site is located at 345 Appin Road, Appin and is legally described as Lot 105, DP1188670.

It is situated 14km south of Campbelltown-Macarthur metropolitan centre, within the North Appin Precinct, of the Greater Macarthur Growth Area. The existing Appin Township is 1.5 kilometres south of the site.

The majority of the site is located within the Wollondilly LGA, and a small northern portion is located within Campbelltown LGA.

The subject site is bounded by:

- **Appin Road to the east**, a main road connector that follows the ridge line used over millennia by Aboriginal people as a main path of travel. The site has over 1km of frontage along Appin Road.
- **Ousedale Creek to the west,** a tributary of the Nepean River and the site of Cumberland plain woodland that support native fauna including koala habitat areas;
- **Rural and agricultural land to the north,** beyond which is land currently subject to the Gilead Stage 2 rezoning.
- **Ousedale Creek and the Macarthur Motorcycle Club to the south**. Along Appin Road to the immediate southeast is the existing Appin township.

The boundary along the west is heavily vegetated. The vegetation is comprised of Cumberland Plain Woodland which aligns with the streams and creeks that converge along the site's western boundary and that feed into the Nepean River. The remainder of the site is largely unencumbered by Cumberland Plain Woodland.

The site was historically used as the largest broiler chicken operation in the southern hemisphere and was later converted into cattle breeding operation in 2018. It features cleared pastoral land and is zoned as RU2 Rural Landscape. The site slopes down from the east towards Nepean River as the site extends to the west, offering extensive views of the broader region and the Blue Mountains in the distance.

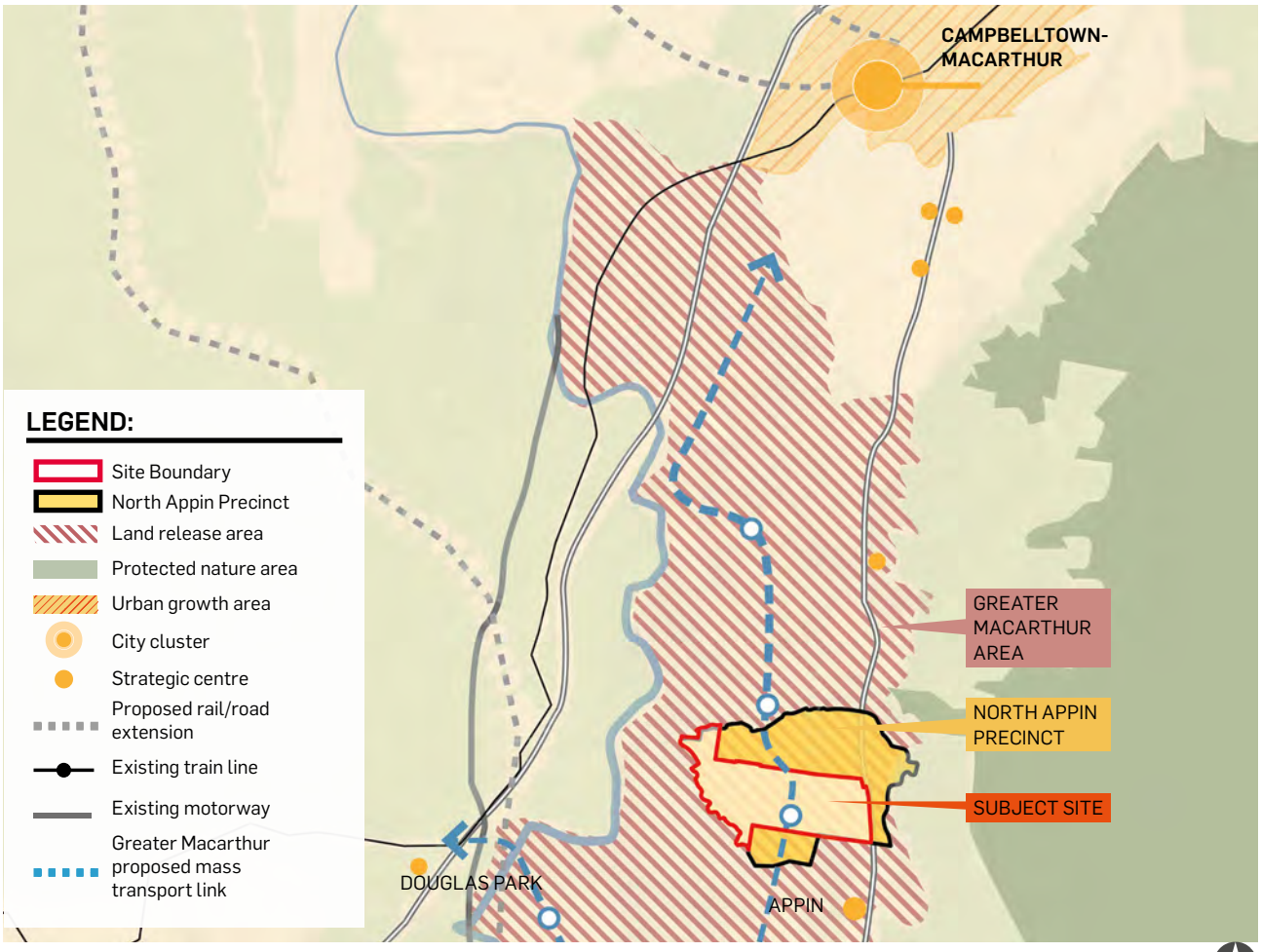


Figure 1 Subject Site within Region

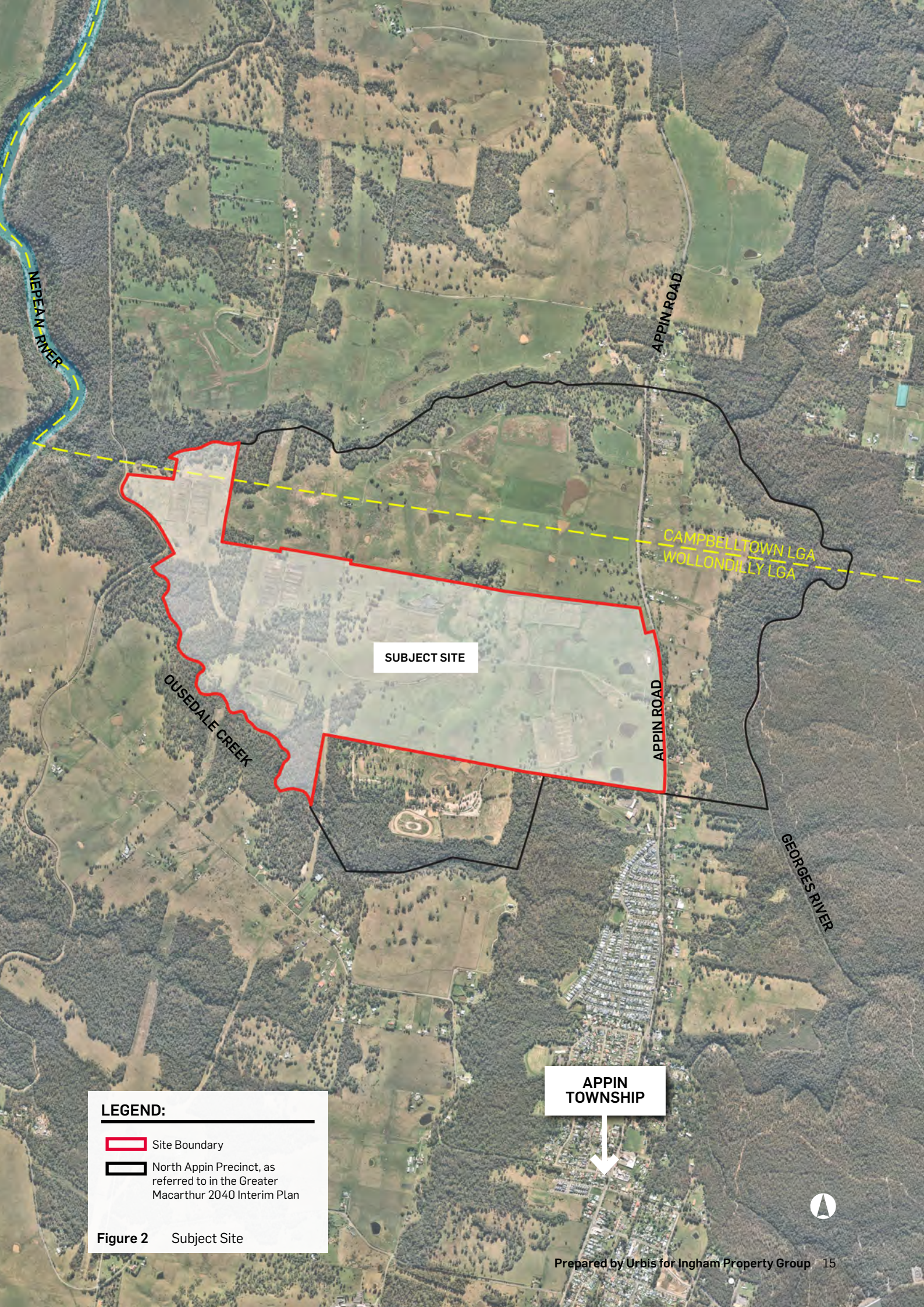


Figure 2 Subject Site

2.0
CONNECTING WITH COUNTRY

2.1 Connecting with Country

Appin is in Dharawal Country. It is bordered to the west by Gundungurra Country and to the north by Darug Country. Dharawal Country covers the area from Botany Bay to the Shoalhaven River, inland to Camden. The wider area around Appin is now known as the Cumberland Plain. The Nepean and Georges Rivers provide permanent water sources in the region.

Prior to the impact of British colonists in the 1800s Dharawal Country in the area of Appin contained rich ecological diversity in the form of creeks, swamps, ridges, grasslands and open forests.

Dharawal people continue to be recognised as the Traditional Custodians.

The original vegetation of many areas in Dharawal Country is the Cumberland Woodland. The Cumberland Woodland covers many areas of Western Sydney and is a unique Woodland not found anywhere else in Australia.

Country provided water, food and shelter for Dharawal people - the streams and swamplands were home to fish and eels, the forests to possums, lizards, kangaroos, wallabies and birds while sustaining a diverse range of plants for roots, berries and seeds.

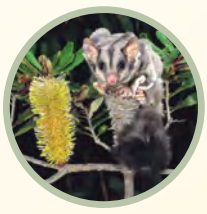
The waterways in Dharawal Country in the 'Cowpastures' area have been a central feature of the story of the place both pre and post British colonisation. The large waterways in the area include the Nepean, Cataract and Georges River, and smaller creeks include Second Ponds Creek, Eastern Creek, South Creek and Kemps Creek. Creeks close to Campbelltown include Bow Bowing Creek, Leumeah Creek, Fishers Ghost Creek and Birunji Creek.

The elements of Dharawal Country could be summarised as:

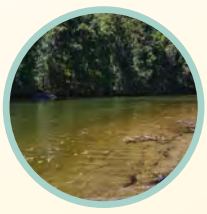
- **Move with Country:** Enduring custodianship of Country through knowledge sharing and record keeping through story, song, dance and art.
- **Non-Human Kin Country:** Country is comprised of our kin: the animals and plants. We celebrate the connection of all living things and the intricate responsibilities within this web of connections.
- **Water Country:** Water is the connective tissue, the circulatory system, the confluences and paths within and between Country. The meeting of salt and fresh water.
- **Deep Country:** The most Ancient of connections and one that we honour for the many gifts it shares, the tools we create and the ochres we use to paint.
- **Sky Country:** This is place of spirits and the ancestors. It holds knowledge of navigation, the seasons, time and Songlines. It allows engagement with our ancestors and spiritual beings.
- **Wind Country:** Wind carries the messages of the seasons, the songs and words of our ancestors across Country. The landscape and light vibrates to a rhythm; the trees, the grass, and the clouds racing across the sky.

Elements of Dharawal Country

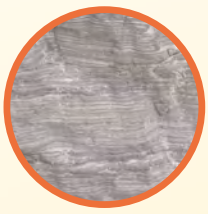
Move with Country



Non-Human Kin Country



Water Country



Deep Country

Sky Country

Wind Country

2.2 Connecting with Country Principles

"Country as made up of a series of interconnected elements that come together to form the environmental, cultural and social system of a place. To design with Country is to design with the elements of Country."

- Yerrabingin

Caring for country guides all design interventions. Preservation, restoration and remembering – not replicating the natural landscape and allowing that knowledge to inform future occupation.

The vision has been driven by the Connecting with Country Framework, in particular the connection between local cultural heritage factors and the natural environment requirements. This document sets out key placemaking principles and it illustrates a Draft Structure Plan concept for the North Appin (part) precinct that embodies the aims and objectives of the Greater Macarthur 2040 Interim Plan.

Fundamental to the proposed Draft Structure Plan concept is the adoption of a country-led design approach that balances the site's cultural heritage assets and strategic positioning within the Greater Macarthur Growth Area.

As a part of the design process, Aboriginal community groups were engaged and site visits were conducted. During the site visit, attendees walked across key locations including the ridgeline and low lying area at the base of the precinct, pausing the take in and discuss elements of Country along the way.

Three Connecting with Country key themes were identified below as a part of the engagement, and they will be embedded into the design principles.

Connecting with Country Key Themes

Wildlife Community

North Appin is home to a diverse wildlife community that must be acknowledged and protected.

Ecosystem services and non human kin inclusion is also important in the broader contextual connections to the site.

Cultural Knowledges

Embedding cultural way of knowing and doing across the masterplan to create a thriving and welcoming environment for all.

The building and landscape should read as one as blend into the surrounding environment and context.

Place of Opportunity

Consider ongoing educational and social enterprise opportunities within site through signage, wayfinding, and communal activations.

Create spaces and places for residents to enjoy and engage with Country.

Source: Yerrabingin

Design Principles

THE LAND

Special places - gullies, vegetation, riparian

THE HILLS

Ridgelines and views

REGIONS

Road connections and context

PEOPLE

Villages with a loop road

APPIN

Proximity and staging character with connections

3.0
PLANNING CONTEXT

3.1 Greater Macarthur 2040

The Greater Macarthur 2040 : An Interim Plan for the Greater Macarthur Growth Area (Greater Macarthur Plan) provides a framework for the future of the Greater Macarthur Growth Area (GMGA) and the development of land release areas from Menangle Park to Appin. It intends to build on the critical role of the Campbelltown-Macarthur Metropolitan Cluster, by providing new jobs and homes for the residents of southwest Sydney.

The GMGA is divided into 12 precincts, which are being progressively rezoned to accommodate future urban development (such as new housing, employment, transport and social infrastructure) and, for the land release areas in the southern areas of the GMGA, ensure protection of Cumberland Plain vegetation and koala habitat.

Greater Macarthur 2040 Structure Plan (Source: DPE) The GMGA Structure Plan, which was finalised in November 2022, indicates how the area is envisaged to evolve and identifies urban capable land, various centres, employment lands, open space, flood affected land and land subject to the Cumberland Plain Conservation Plan.

North Appin is one of the 12 precincts established within the GMGA. The subject site forms one of the three critical planning precincts, together with Stage 2 Gilead to the north and Appin (part) Precinct to the south, for which Planning Proposals are to be finalised by DPE.

North Appin Precinct is allocated to deliver 5,000 new dwellings (or 15,000 new residents) supported by a local centre, transport connections and open space.

Figure 4 Precincts within the GMGA (Source: DPE)

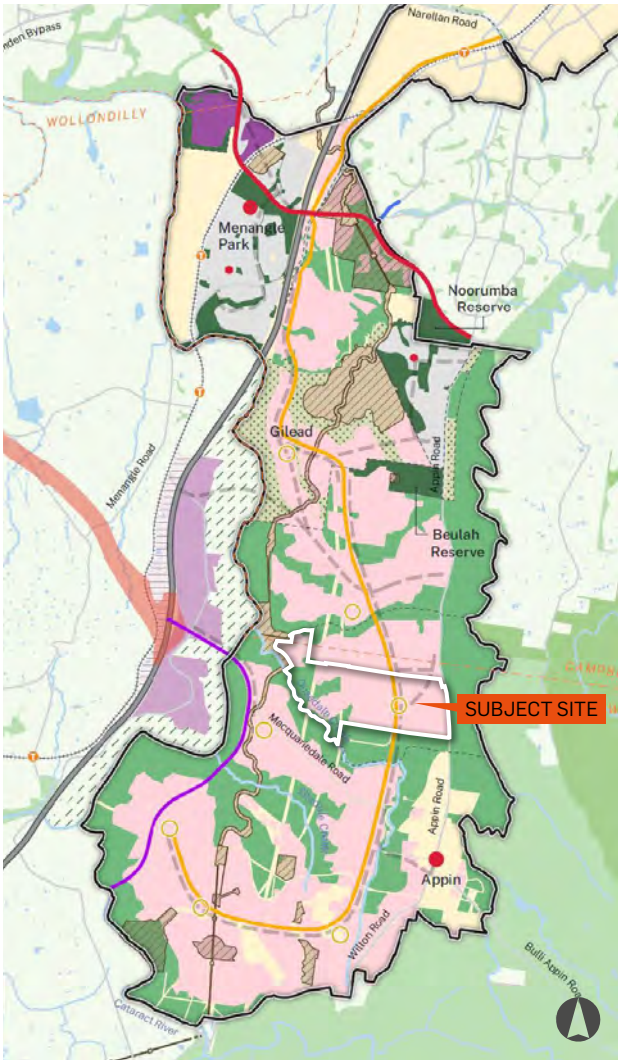


Figure 3 Greater Macarthur 2040 Structure Plan (Source: DPE)

3.2 Local Planning Context

3.2.1 Local Strategic Planning Statement

The Wollondilly Local Strategic Planning Statement Wollondilly 2040, adopted March 2020 (Wollondilly LSPS) and the Campbelltown Strategic Planning Statement A 20 Year Land Use Vision for the City of Campbelltown to 2040 (Campbelltown LSPS), adopted March 2020, set out the strategic vision for the respective local government areas. Consistently, both Local Strategic Planning Statements recognise the significance of the Greater Macarthur Growth Area as a regional location for significant future housing growth. The Campbelltown LSPS acknowledges that 'substantial' residential growth within the Greater Macarthur Growth Area will occur over the next 20 years.

The Wollondilly LSPS places an emphasis on the need to ensure infrastructure delivery arrangements are in place prior to the advancement of development in the Greater Macarthur Growth Area.

3.2.2 Local Environmental Plans (LEP)

The subject site sits across both Wollondilly LGA and Campbelltown LGA. The Wollondilly LEP 2011 (WLEP 2011) provides the current controls for the most part of the site, and Campbelltown LEP 2015 (CLEP 2015) provides controls for the small northwest portion of the site.

Following planning controls are applicable:

Elements	WLEP 2011	CLEP 2015
Zoning	RU2 Rural Landscape	RU2 Rural Landscape
Minimum Lot Size	40ha	40ha
Height of Building	N/A	N/A
Heritage	N/A	N/A
Water Protection: Natural Resources	The site is mapped as "sensitive land" on the Natural Resources	N/A
Terrestrial Biodiversity	N/A	The site is mapped as containing "Biodiversity – significant vegetation"

The current zoning will not be able to deliver the prescribed vision set out by Greater Macarthur 2040, hence it is the intention of this Planning Proposal to rezone the site under the WPC SEPP.

3.3 Relevant Planning Proposals

As noted previously, the NSW Government has announced three critical planning precincts within GMGA, two of which are being assessed for rezoning:

- Gilead (Stage 2), located within the Gilead Precinct to the north, is a 876ha site envisaged to accommodate up to 3,300 new homes, a school, a small town centre, public open space and environmental conservation land, and land dedicated to several koala corridors.
- Appin (part) Precinct, located within the Appin Precinct to the south-west of the subject site, is a 1,284ha site envisaged to deliver more than 12,000 new homes, including affordable housing, regional open space, local centres, and help secure new koala corridors.

North Appin is the third critical planning precinct between Gilead (Stage 2) and Appin (part) Precinct , and therefore provides the strategic planning impetus for the IPG Planning Proposal and the Draft Structure Plan set out in this report.

Co-ordinated delivery of transport, utility and social infrastructure across the three precincts will be critical to successfully achieving the intent of the Greater Macarthur Plan and GMGA Structure Plan.

3.4 National Housing Accord 2022

The Accord encourages collaboration among government agencies, investors, and the residential development and construction sector to invest and deliver up to 20,000 additional new affordable dwellings. It also advocates expedited zoning, planning and land release in well located areas to enable housing supply to be more responsive to demand.

The subject site, as a major landholding that is relatively unencumbered by environmental constraints and well located in terms of infrastructure, will have the opportunity to support the delivery of the vision of the Accord, and provide much needed high-quality and affordable housing for the region.

4.0
SITE ANALYSIS

4.1 Aboriginal Heritage

"In the Growth Area, the Aboriginal community continues to care for the waterways, bushland, native vegetation, and history of the area as they have for generations. This includes movement corridors and knowledge sharing about the Appin Massacre. Where previous approaches to development have changed landforms through cut and fill, starting with Country ensures respectful consideration of land use while creating opportunities to preserve cultural heritage and create much needed housing."

- Source: Guide to the Greater Macarthur Growth Area November 2022

Urbis has conducted initial assessments of the subject site with regards to Aboriginal Heritage. The site is on the traditional lands of the Dharawal people, within the bounds of the Dharawal Local Aboriginal Land Council.

The Appin region is historically significant for Aboriginal people. The locality contains a number of waterways and tributaries. The soil landscapes are varied but generally deep and the underlying geology is Hawkesbury sandstone, with the topography containing a series of ridgelines and creek flats. There are four extant sites registered on the Aboriginal Heritage Information Management System (AHIMS) to the west and south of the site, associated with Ousedale Creek and they are indicative of Aboriginal habitation. The hydrology, soils, topography, and surrounding context render the region of high Aboriginal archaeological potential and cultural significance.

As is indicated in Figure 5, a culturally sensitive movement corridor traverses north-south across the site, and to the south-west (Identified as No.7) is the 1816 Appin massacre site on the banks of the Cataract River resulting in the death of 14 Aboriginal people.

Key Insights

- The site presents an opportunity to engage with the heritage of Appin in new and meaningful ways and in full collaboration with the local Aboriginal community. Engagement with Aboriginal community throughout the development process and identify opportunities for community facilities will also contribute to remembering and healing from Appin Massacre;
- Intangible and tangible Aboriginal cultural heritage could be embedded in design and delivery of services;
- Minimise cut and fill;
- Promote cultural knowledge sharing through public art, signage, language and naming in the built environment; and
- Encourage local native vegetation and provide opportunities for re-vegetation.

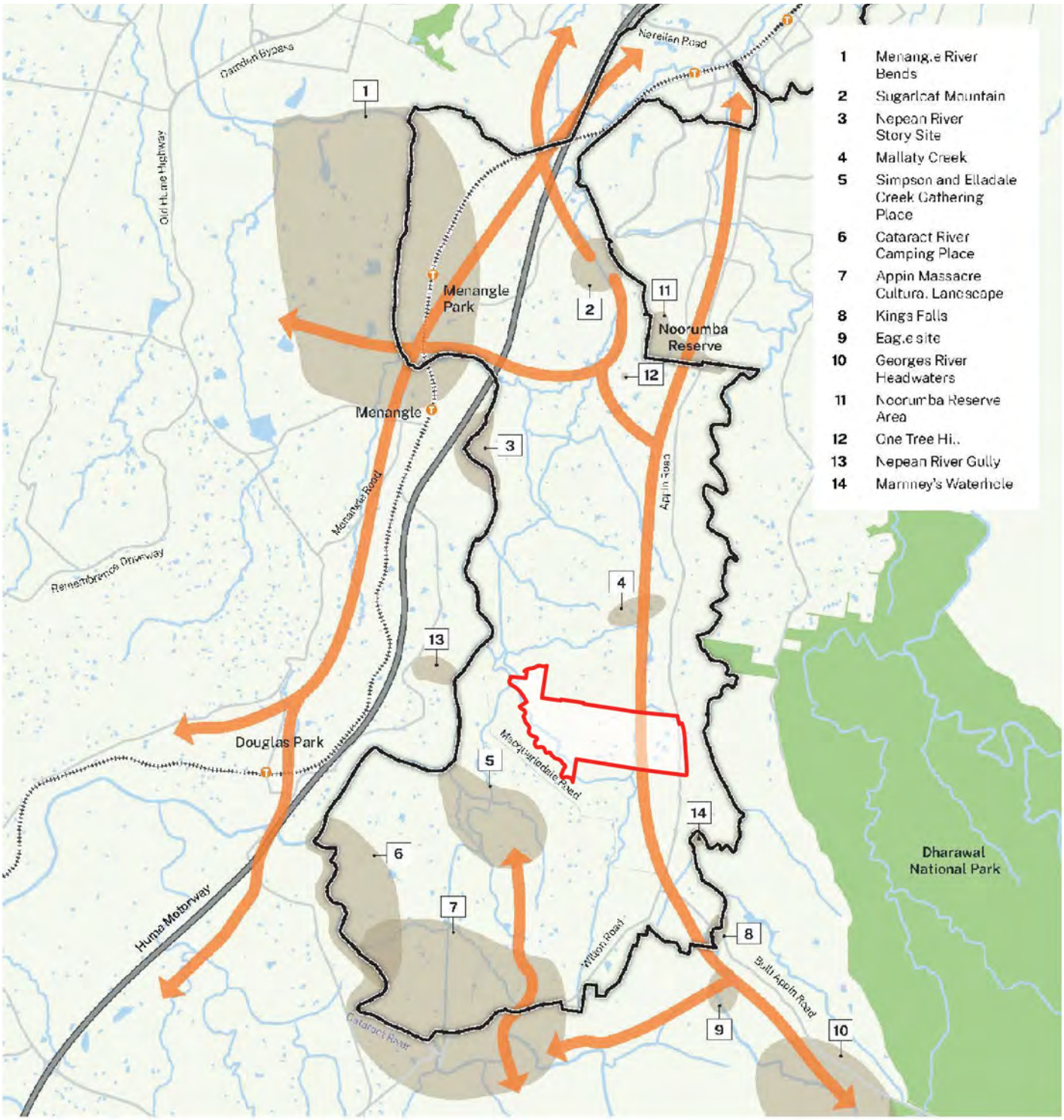


Figure 5 Starting with Country Map, *Guide to Greater Macarthur Growth Area* (Source: DPE and GHD)

4.2 Non-Aboriginal Heritage

According to Urbis' heritage assessments, there are no heritage items or heritage conservation areas identified within the subject site. Historically, the site formed part of two land grants to John Oxley and Alexander Riley in 1817. John Oxley was a surveyor and explorer while Riley was a merchant and pastoralist. The site has exclusively been utilised for agricultural pursuits and has potential to contain evidence of this use. A sandstone block has been identified at the site which may be of historic significance.

Beyond the western boundary of the site is a State Heritage Register (SHR) item, Listing No. 01373 (LEP No. I16), the Upper Canal System is of historic significance and is associated with Edward Moriarty and the 1880s Sydney Water Supply and Upper Nepean Scheme. Consideration has been given to this item and opportunities exist to increase public engagement through access and education.

Key Insights

- Improved public access to these heritage assets could offer an opportunity for place-making and connect people with the history of the precinct.

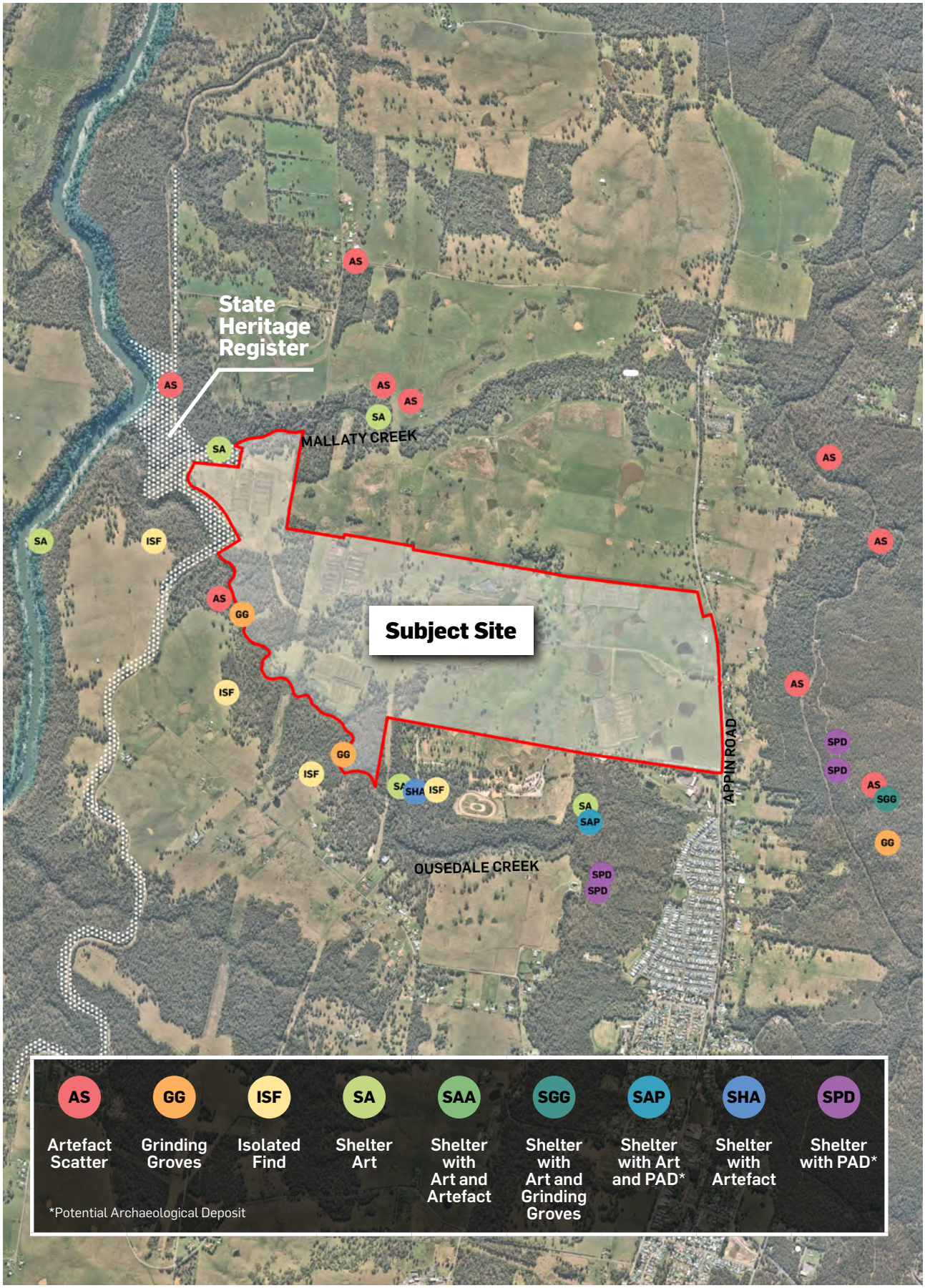


Figure 6 Heritage Items

4.3 Topography & Slope

Existing Land Form

The site has undulating topography with relatively level areas along the eastern edge, which then slope down towards the Nepean River as the site extends west. It is characterised by:

- A total change in elevation of approximately 100m from RL 230 on Appin Road to RL 130 within the Ousedale Creek Corridor.
- A central north-south ridgeline, with land falling steeply to the west and a prominent east-west spur that also falls to the west.
- Terraced land form with the eastern half being higher than the western half (as defined by the central ridgeline)
- Ousedale Creek and its tributaries embed multiple depression corridors at the western portion of the site.

Key Insights

- There are opportunities to maintain existing ridgelines, high points and associated outlooks to ensure North Appin (part) Precinct remains a recognisable place.
- Work with the existing land form to minimise cut and fill in future developments.

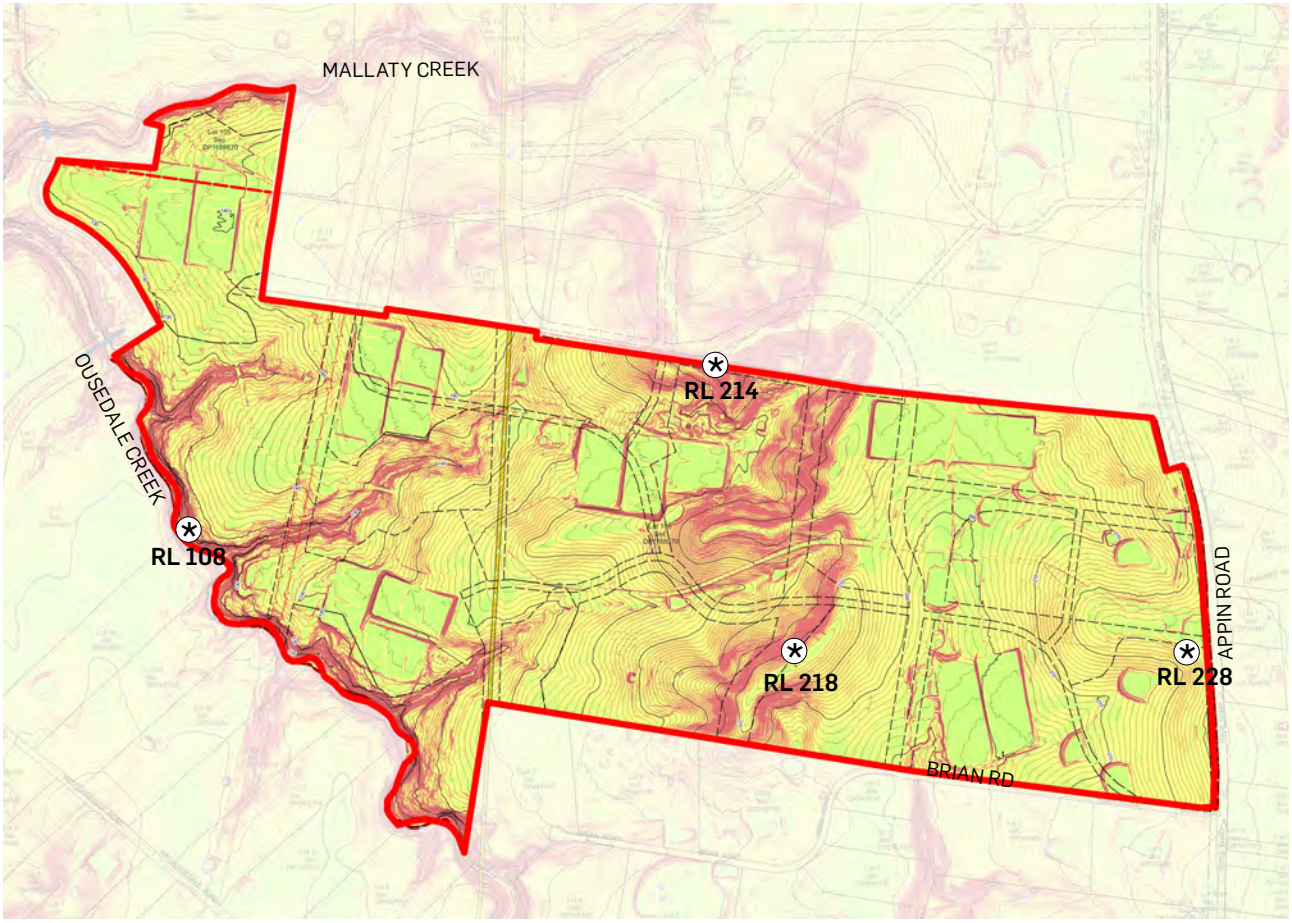


Figure 7 Slope Map (Adapted from Craig and Rhodes)

4.4 Existing Blue Network

J. Wyndham Prince has undertaken an assessment of riparian corridors.

The site is within the catchment of Ousedale Creek, which runs along the western and southern site boundary.

- Ousedale Creek is a Strahler 4 Stream (Source: LPI) and it is a tributary of Nepean River.
- Multiple waterways extend into the subject site as tributaries from Ousedale Creek.

Key Insights

- A number of the riparian corridors are contained within the CPCP and will be protected through C2 Environmental Protection Zoning.
- A number of lower order streams may be relinquished, re-routed and / or re-purposed for stormwater management, they are demonstrated in below diagram, and
- There are opportunities for riparian corridors to accommodate low impact recreational activities such as walking and cycling trails.

RIPARIAN ZONES

- Site Boundary
- Retained Waterways
- Proposed for Removal
- Proposed for Realignment

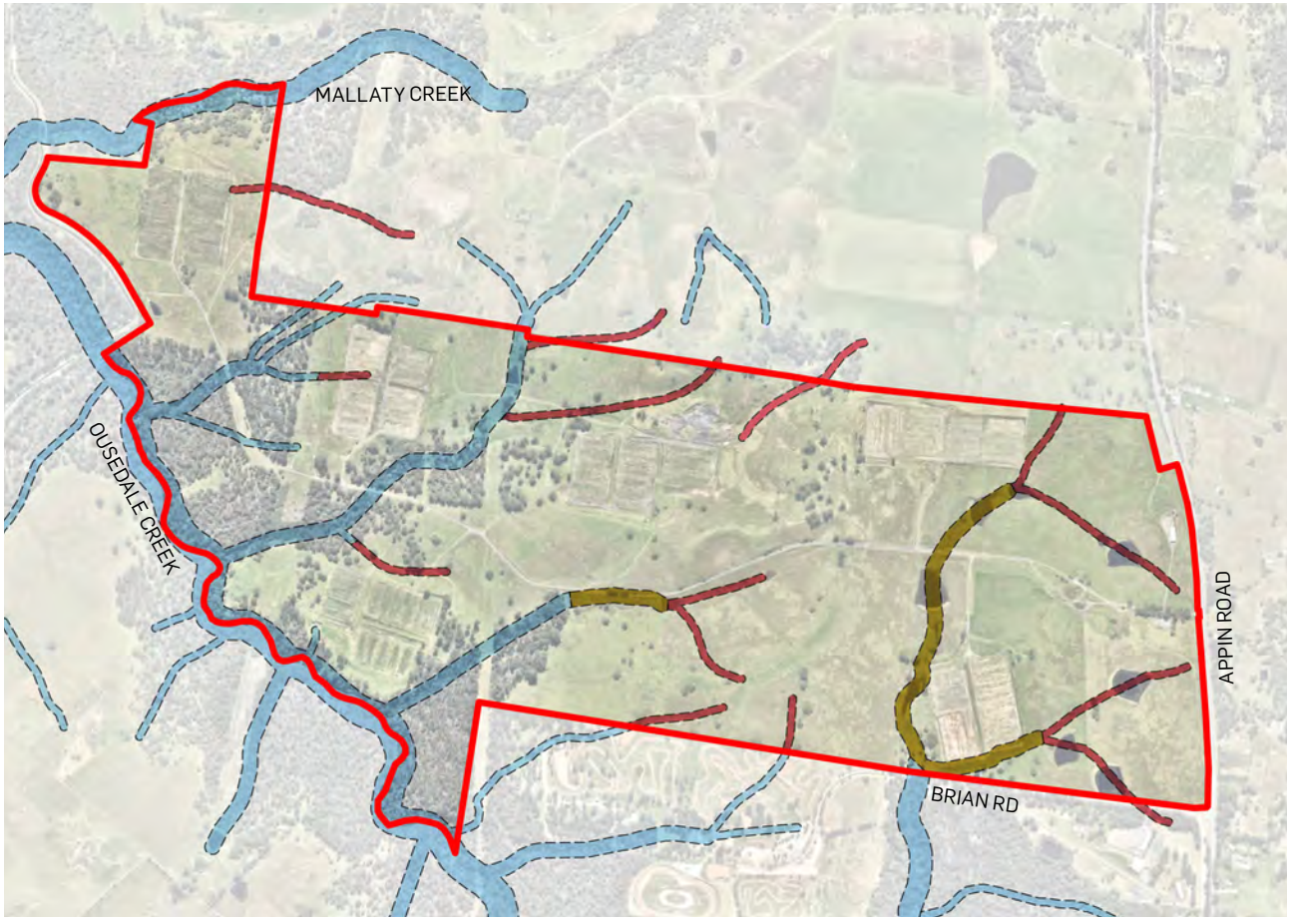


Figure 8 Riparian Corridor Map (Strahler 2, 3 and 4 water courses) (Adapted from Travers Ecology)

4.5 Existing Green Network

The site is largely cleared, with the western edge heavily vegetated. The vegetation comprises Cumberland Plain Woodland which aligns with the watercourses that converge along the site's western boundary and feed into the Nepean River. The remainder of the site is largely unencumbered by Cumberland Plain Woodland.

Cumberland Plain Conservation Plan (CPCP)

The Cumberland Plain Conservation Plan (CPCP) is a conservation plan for Western Sydney that identifies strategically important biodiversity areas within the Cumberland subregion to offset the biodiversity impacts of future urban development to facilitate a vibrant, green and liveable city. As identified in Figure 9, The CPCP mapping captures a series of land categories, and following have been identified within the subject site:

- **Avoided Land** - These lands have high biodiversity value and they are not suitable for development. Most of the Avoided Land within the subject site are adjacent to the southwestern site boundary in pronged shapes that extend into the subject site,
- **Excluded Land** - The Excluded Lands mapped within the subject site are easements that intersect with Avoided Land and situated with the Avoided Lands.
- **Certified Urban Capable Land** - The remainder of the site is identified as Urban Capable Land. These lands are suitable for development and divided unevenly into two portions:
  - A larger eastern portion is off Appin Road and,
  - A smaller western portion confined to the northwestern corner of the site. This land parcel is isolated from the rest of site by Avoided Land. For development to occur within this area, access is to be sought, or across the Avoided Land.

Ousedale Creek to Appin North Koala Movement Corridor (Corridor E)

In the Draft Cumberland Plain Conservation Plan Sub-plan B: Koalas (August 2020), the Department will secure at least one east–west koala movement corridor using ecological restoration to ensure enough width and a fauna crossing for safe koala movement across Appin Road. The corridor identified in Figure 10Figure 10 is recommended as the most suitable for koala movement because of the condition and width of the existing vegetation.

Existing Ecological Communities

Threatened ecological communities have also been identified, most of which are located within the CPCP 'Avoided Land' with the exception of a few isolated remnants of vegetation scattered at the centre of the site.

Key Insights

- The CPCP lands need to be protected and impacts from future development should be minimised. The Koala Corridor needs to stay free from disturbance and protection measures should be established.
- The highly vegetated lands also provides passive recreational opportunities for future residents; and
- Other mature clusters of vegetation should be retained where possible, to provide for ecological and recreational value.

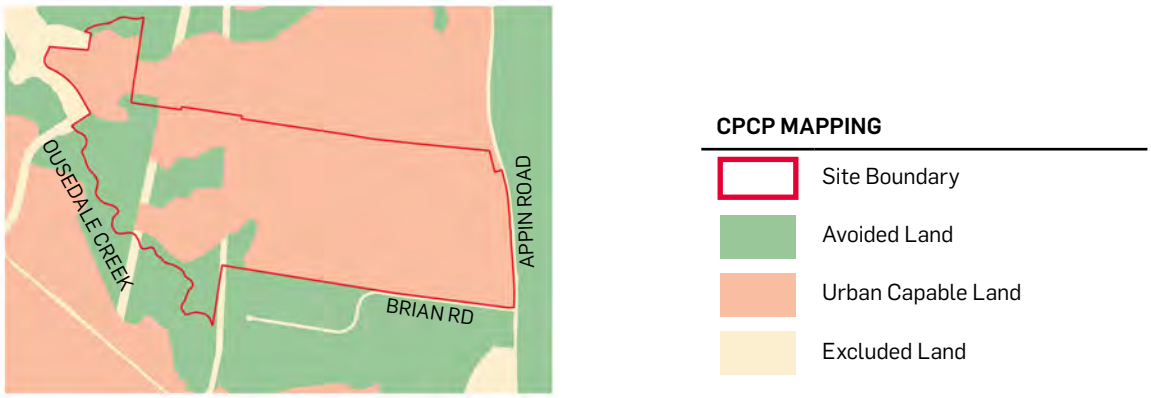


Figure 9 CPCP Mapping (Source: DPE SEED Data)

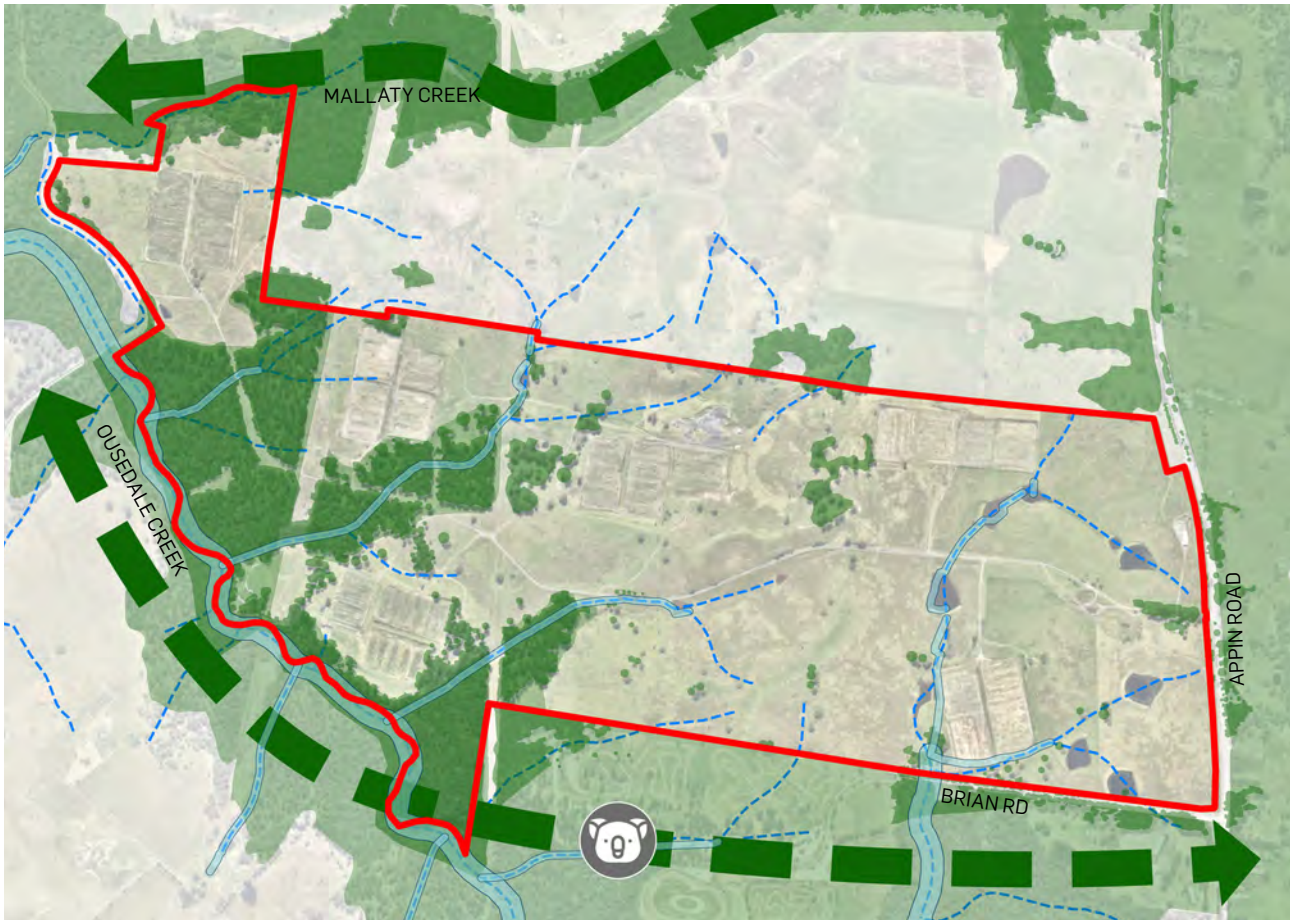


Figure 10 Biodiversity Map (Adapted from Craig and Rhodes)

4.6 Bushfire

A bushfire assessment has been undertaken by Blackash to review and assess the potential bushfire risks within the subject site.

Key Insights

The assessment finding are as follows:

- Due to the combination of vegetation and sloping land throughout the site, Asset Protection Zones (APZ) will be required as is identified in the image below.
- Off-site evacuation is considered a key issue and needs planning as well as on-site refuge locations for redundancy. More than one access point into the site will be required for emergency access/egress and fire trucks.
- APZs to vary in width (referred to in Figure 11) and include in this width any cleared buffer areas, perimeter roads and front setbacks to homes fronting perimeter roads.
- Perimeter roads buffer all residential homes from bushfire, and are to be located within the APZs.
- Where possible, incorporate retention basins within the APZ zones as buffer and water access for fire trucks.

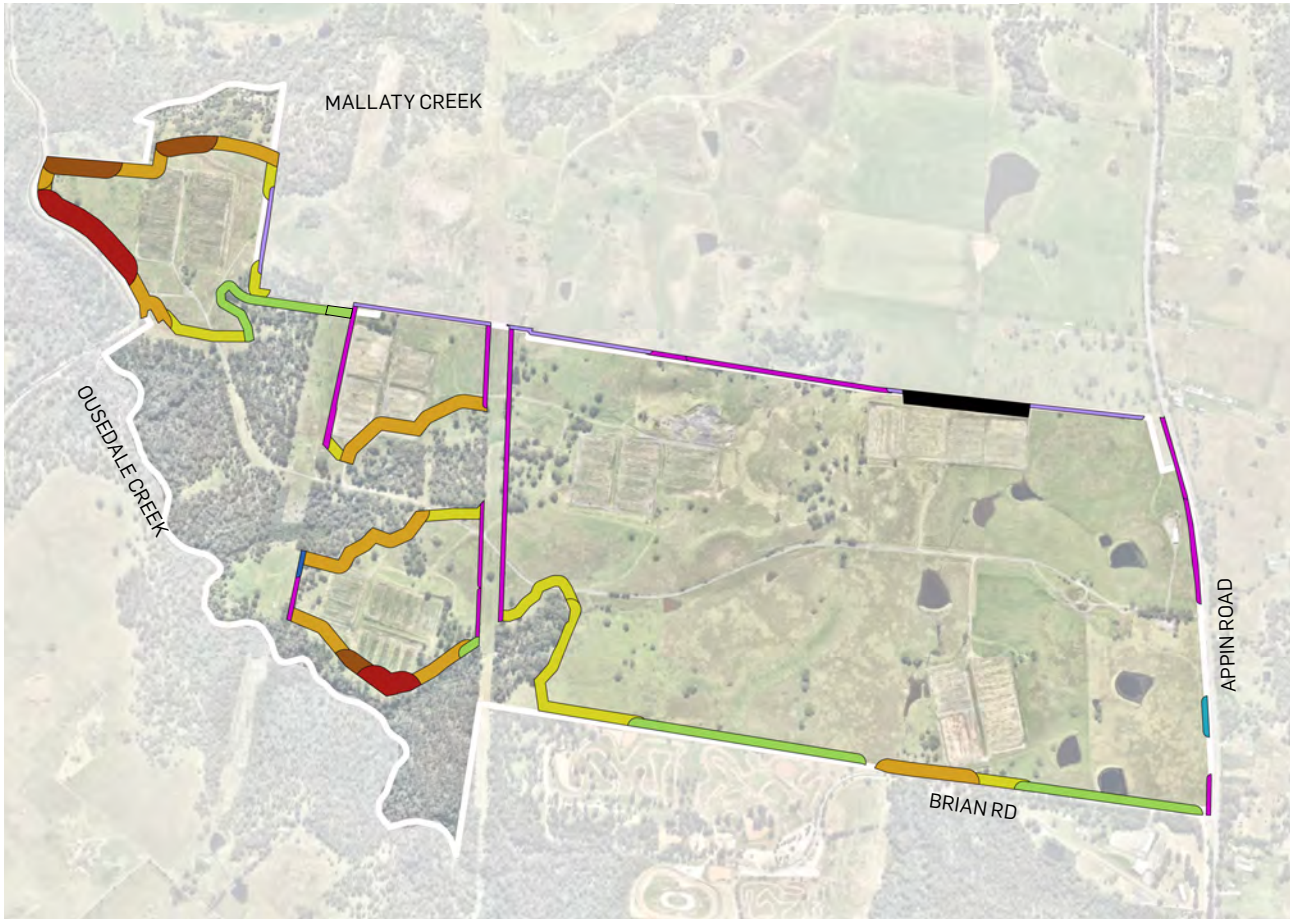


Figure 11 Bushfire APZ map (Adapted from Blackash)

4.7 Flooding

Craig and Rhodes has undertaken high level assessment of flooding on the site, based on the work undertaken by Advisian for Wollondilly Shire Council in 2021.

The site generally lies outside the mainstream flood extents of the Nepean River. The site predominantly drains into Ousedale Creek, which is approximately 12ha in the vicinity at the downstream end of the site (prior to merging with Mallaty Creek. The east of the site is bordered by Appin Road, which acts as the ridgeline separating Ousedale Creek and Georges River catchments.

The eastern portion of the development experiences some overland flow, as shown by the 1% AEP flood map. Flood depths are generally <0.2m outside of the existing dams and watercourses. These flows will be assessed and incorporated into the master plan at the next stage of the Project.

Key Insights

- A site specific flood study is to be undertaken for the subject site.
- Strategically locate roads, open spaces and residential lands to minimise potential flood impacts.
- Manage the existing flow path and provide stormwater management facilities that control and manage the flood and stormwater.

4.8 Movement Network

Existing Road Network

The site has limited access to the existing road network externally:

- Appin Road is a north-south main road which runs along the eastern site boundary. It connects to Appin Township to the south and Campbelltown-Macarthur region to the north. Appin Road is currently the only available main access road.
- Brian Road runs east west along the southern site boundary (immediately south of IPG land)
- No pedestrian or active transport paths have been identified.

Public Transport

Limited public transport is identified in the vicinity of the site. Currently there is one bus stop for Route 887 along Appin Road. This bus line provides services regionally between Campbelltown Station and Wollongong Station and operates from 7 am till 7 pm.

Planned Transport

The Greater Macarthur 2040 Structure Plan identifies a north-south Transit Corridor connecting Campbelltown-Macarthur, Gilead, Appin and Douglas Park.

The GM Structure Plan identifies an East-west Connector Road within the subject site (indicated in blue dashed line below). The purpose of this east-west connector is to connect the Transit Corridor and Appin Road. Upon review, this alignment does not work well with the existing topography and divides the north-eastern site corner into irregular and isolated development parcels.

Key Insights

- A hierarchy of streets will need to be provided within the subject site.
- Upgrades to Appin Road will be required to accommodate the future increase in traffic.
- The North-South Transit Corridor will be provided, and
- Consider realigning GM2040 East-west Connector Road for efficient utilisation of land while delivering a neighbourhood that is connected and walkable. Review of the site constraints and opportunities has identified Brian Road as the preferred alignment for the east-west connector. The design of this east-west connector road is discussed further in Section 7.

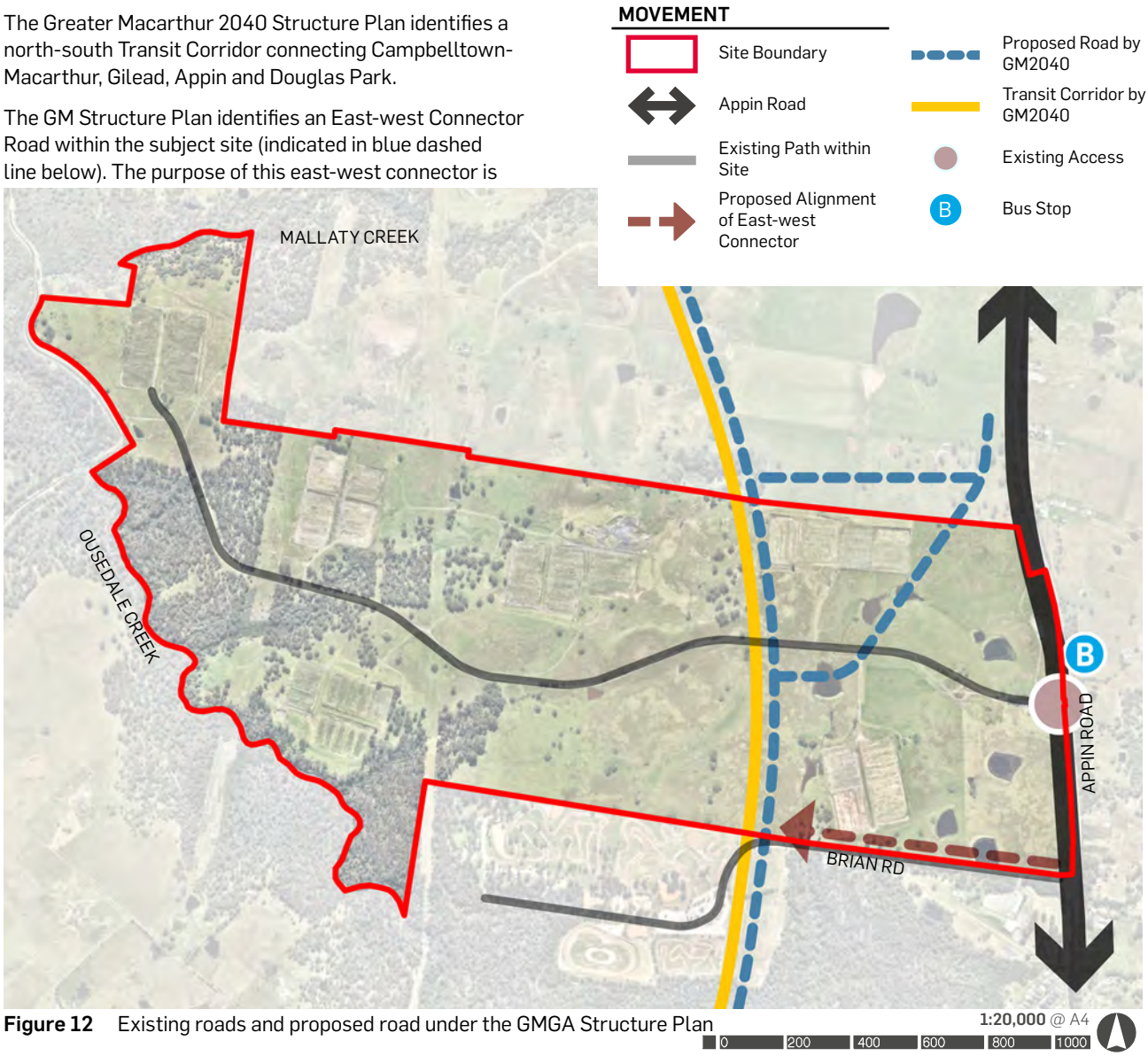


Figure 12 Existing roads and proposed road under the GMGA Structure Plan

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4.9 Housing Demand Analysis

Overview

Urbis has prepared a Residential Needs Assessment report which defines Campbelltown and Wollondilly LGA as the study area then outlines and analyses its demographics, housing market and housing demand.

Population Growth

The study area is forecast to accommodate another 90,188 residents by 2041 at an average growth rate of 1.7% per annum. This is greater than the average Greater Sydney growth rate of 1.0%.

By 2041:

- The proportion of residents aged 60 and above is projected to increase from 19% in 2021 to 23% in 2041. This indicates increasing demand from downsizers who will be looking for **smaller lot sizes and medium density housing.**
- While the population is forecast to age significantly, the majority will be under the age of 39, **generating demand for family homes.**
- Smaller, more affordable lots will attract younger families while larger, lifestyle lots will attract older more established buyers into the Study Area. Medium density lots will bring in both families seeking affordable housing and older downsizers.

Residential Supply

In the study area, total approvals over FY2017 –FY2022 averaged around 2,140 per year with the bulk of approvals for houses. The study area has seen stable approval levels since FY 2017 with a high of 2,495 in FY2019. Approvals and completions have been relatively unaffected by market trends in the Study Area. This reflects that demand for housing is less affected by the state of the market than demand for family homes. The majority of the development pipeline is located around Gilead and Menangle. Areas such as Appin and Douglas Park do not have many lots in the supply pipeline currently. However, future residential subdivisions will add to the pipeline.

Residential Demand Analysis

Median lot sales prices in the study area have grown significantly in the last 10 years. This represents an average growth rate of 8.4% per annum. Challenges in housing affordability result in trend towards smaller lot sizes so that developers can provide more affordable housing.

In the last 12 months to June 2023:

- Liverpool LGA has 64.1% sales between 150-375 m² and only 3.5% above 550 m².
- Camden LGA has recorded around 75% of sold lots under 450 m² and only 9.2% above 550 m².
- Campbelltown LGA buyers prefer a mix of smaller more affordable lots and larger lifestyle lots.
- Wollondilly LGA represents larger percentage of sales for larger lots. 33.7% of the lot sales are between 650-1,000 m² range. In addition to this, only 30.5% of lot sales were below 450 m².

There is likely to be increasing demand for smaller dwellings. Therefore, the low supply of lots between 150-450 m² in Campbelltown and Wollondilly LGA's could represent a gap in these markets.

Key Insights

The Residential Needs Assessment concludes that the majority of demand in the development will be for lots under 450 m². This includes:

- The smaller product (150 – 375 m²) providing affordable dwellings for first home buyers, especially when located near local centre, school and Transit Corridor.
- Growth in downsizers and smaller households will also generate demand for medium density product in the precinct.
- Overall, the lot mix of around 80% low density housing and 20% medium density dwellings will meet the demand in the market and the changing household needs in the region.

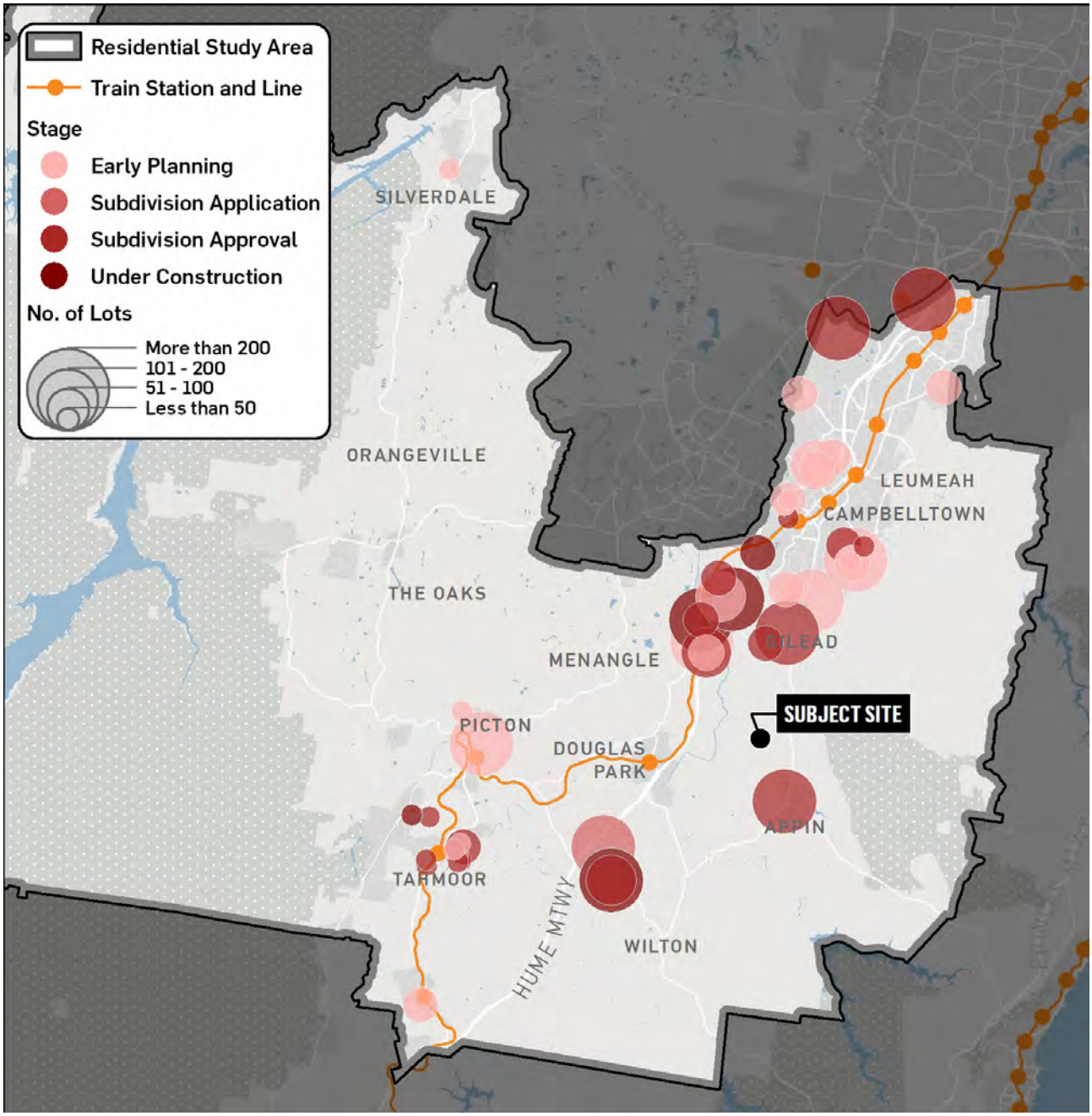

Figure 13 Housing Demand Analysis

4.10 Open Space and Recreation Demand Analysis

Overview

Urbis has prepared a Social Infrastructure and Open Space Assessment. It defines the Appin Precinct as the study area and examines the existing open spaces and provide guidance on the provision of these facilities.

Existing Open Space and Recreational Facilities

Existing open spaces in the vicinity are primarily conservation land and bushland. Some of these open spaces provide walking trails and they could be used for passive recreational uses.

There are two main active recreational facilities in the region:

- **Gordon Lewis Oval** – a sports oval primarily used by Appin Football Club and co-located with Appin Community Hall. The oval contains a clubhouse, small playground and single outdoor hardcourt.
- **Appin Park Reserve** – an outdoor playing area that supports various activities. The reserve contains an outdoor playing field, two outdoor hardcourts, exercise park, playground, off leash area and skatepark.

Open Space Need Assessment

To identify the new community's need for open spaces, the assessment has adopted a multi-criteria analysis method to identify the open space needs:

- Adopting a hierarchy of provision for open space across the Precinct, based on state and local standards, and
- Considering both performance based and quantitative spatial standards for open space.

The assessment highlights that:

- Benchmark of quantitative demand for open space:
  - 10% of Net Developable Area (NDA) as local and district open space, and
  - 2.83ha open space per 1,000 people, including active recreation provision at a rate of 1.37ha per 1,000 people (requirements provided by DPE).
- The potential incoming population based on approximately 3,000 dwellings will generate demand for approximately 25.5ha of open space, and:
  - A sports ground consisting of two double playing fields;
  - Two to three multi-purpose outdoor courts;
  - One to Two playgrounds; and
  - One to Two play spaces.
- Outdoor courts, play spaces and fitness stations should be distributed within the open spaces. These facilities should be accessible from homes, schools and workplaces, and be visible from and oriented to the street. A large proportion of these facilities should be co located with the mixed use centres and community facilities to maximise accessibility and use.

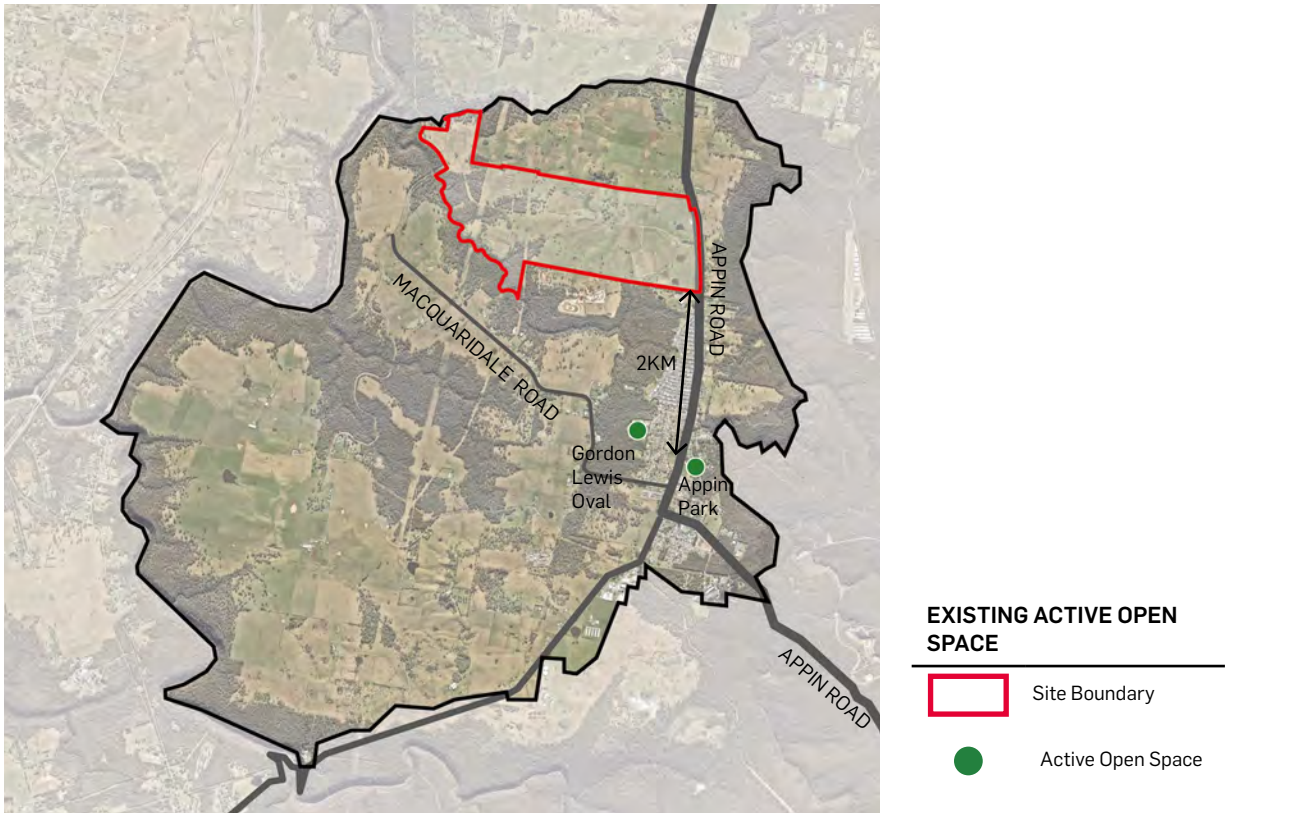

Figure 14 Open Space

4.11 Social Infrastructure Demand Analysis

Overview

Urbis has prepared a Social Infrastructure and Open Space Assessment. It defines the Appin Precinct as the study area and examines the existing social infrastructure and provide guidance on site's provision of social infrastructure.

Existing Social Infrastructure

Most of the existing social infrastructure is concentrated in the Appin Township, a summary of these facilities are provided below:

- **Community Facility:** There are three community facilities - Appin Historical Society, Appin Community Hall and Appin Mens Shed.
- **Education Facility:** Appin Public School is the local government school. For non-government schools, students have to travel to Campbelltown or Camden LGA.
- **Childcare Facility**: There are two Bright Sparks Early Learning facilities in Appin on Rixon Road and Wilton Road, and one Outside of School Hours Care.
- **Health Facility:** Appin Family Practice is a general medical practice and is the only health facility in the suburb. Campbelltown Hospital is currently the closest hospital to Appin.

Social Infrastructure Need Assessment

The assessment has identified the following demand for each type of the social infrastructure within the subject site based on an incoming population of 9,000 residents:

- **Community Facility:** One local multi-purpose community facility of approximately 720m² and library of 380m² in local centre area. However, further consultation with council will be needed with regards to the location;
- **Education Facility:** One primary school;
- **Childcare Facility:** 3-4 long day childcare centres and 4-5 out of hours school care centres; and
- **Health Services:** 2 private general practices.

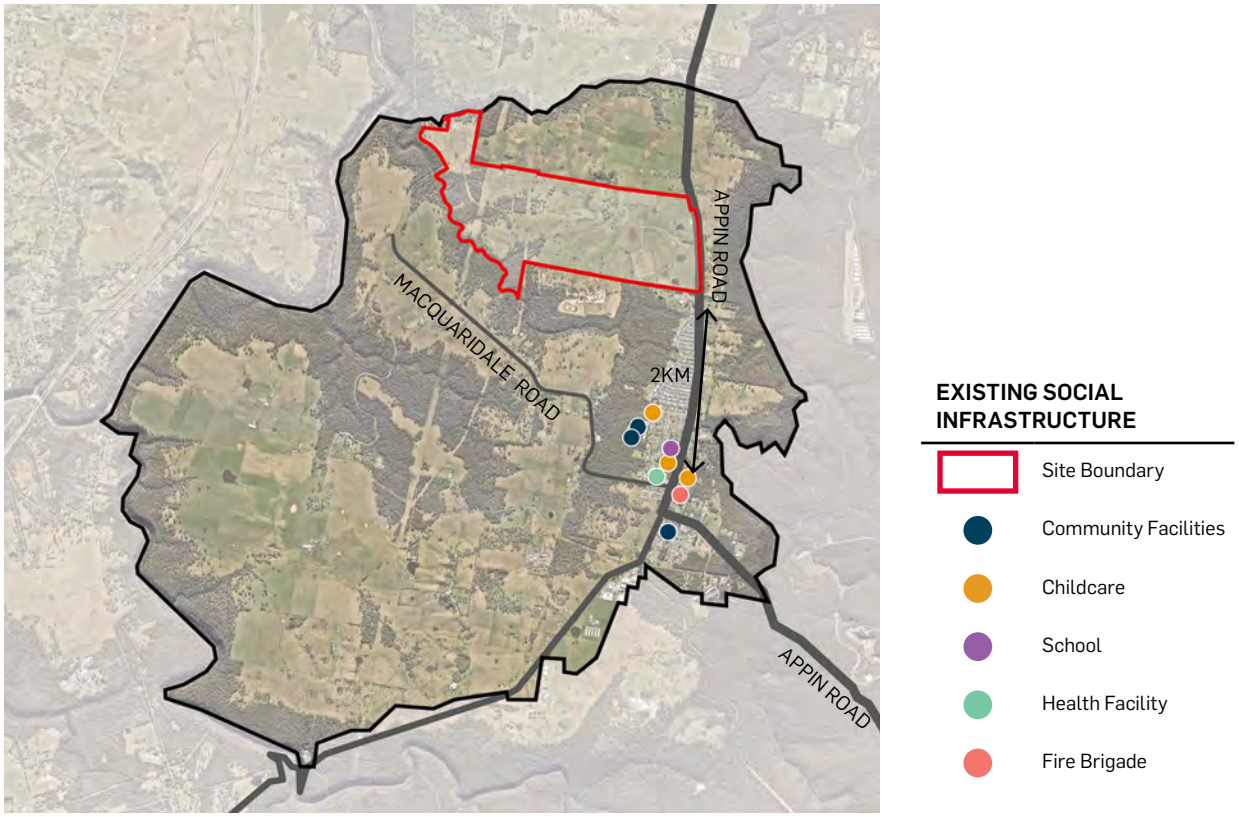

Figure 15 Social Infrastructure

4.12 Retail Demand Analysis

Existing Retail Facilities

Existing retail facilities are primarily concentrated in current Appin Town Centre near the intersection of Appin Road and Macquariedale Road. It is around 1.5km south of subject site and some of the key retail facilities include:

- IGA Appin,
- Appin Hotel,
- Appin Petroleum, and
- Several small-scale restaurants and shops.

Greater Macarthur 2040

Greater Macarthur 2040 earmarks one local centre within the subject site and another three in the vicinity, including the existing Appin Centre.

Campbelltown-Macarthur will be the primary centre for the region and other centres will need to protect this primacy. Also, neighbourhood retail and services should not undermine the viability of planned local centres.

Retail and Employment Study (HillPDA).

- The local centre shall theoretically include:
  - A supermarket up to 3,300m²;
  - Approximately 2,600 m² of: specialty shops, retail & commercial, food services, child care, possible GPs and gyms;
- The most appropriate location for the local centre would be on the proposed Greater Macarthur Transit Corridor in the middle of the Precinct and adjacent to the school site,
- In total, there is a potential to generate 353 jobs.

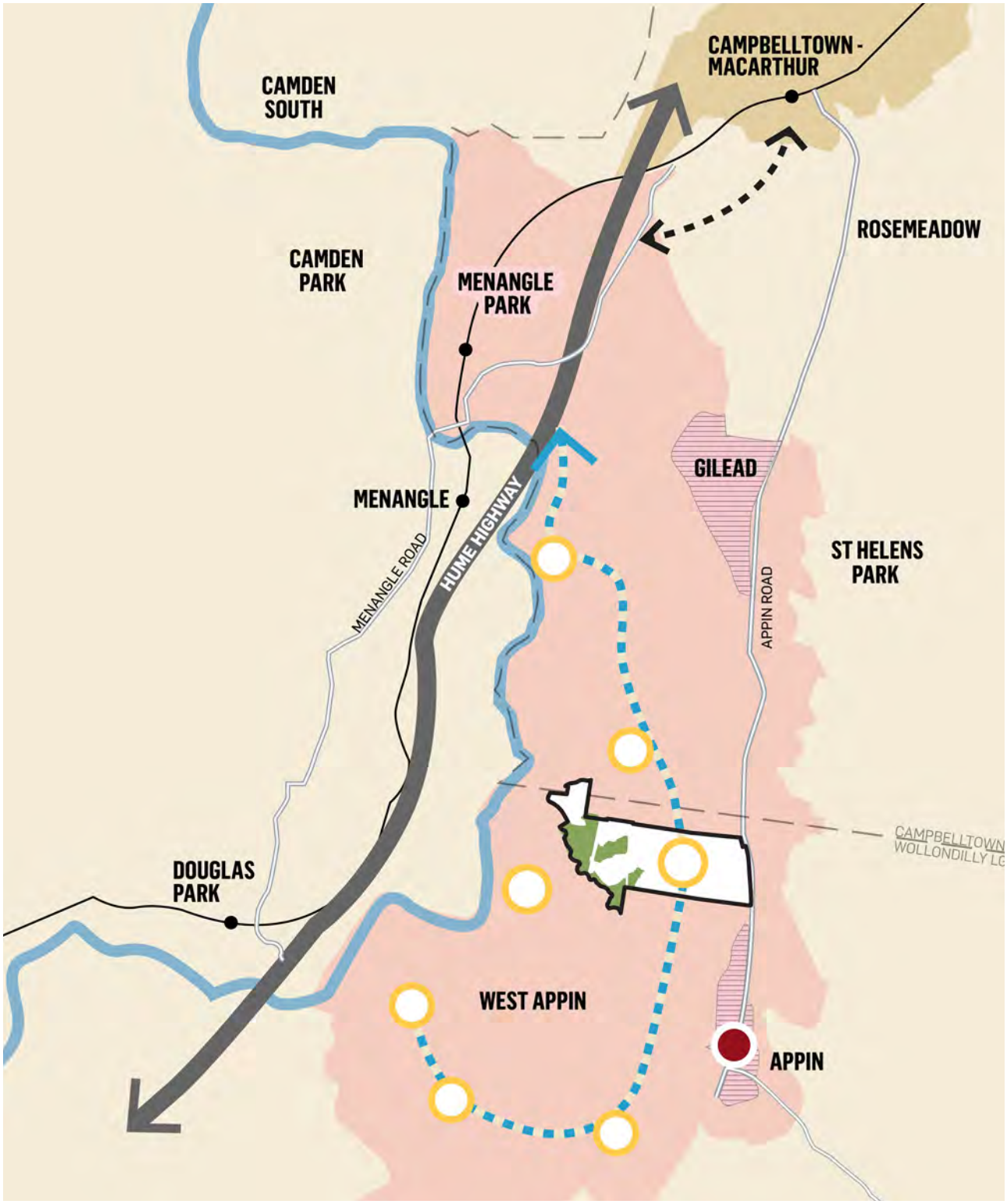

Figure 16 Retail Demand Analysis

4.13 Utilities

The site is presented with an opportunity for initial connection to key utility services, as well as being able to contribute to the delivery of long term solutions. Following assessment and recommendations on utilities have been made by IDC.

UTILITIES	CURRENT PROVISION	RECOMMENDATION
Easements	The site is bisected by a number of large utility easements These include a 66kV/330kV electrical easement, water easement containing a 1,200mm trunk water main and a gas easement containing the Eastern Gas Pipeline.	The easements present both opportunities for connection services and land use restrictions that have been considered as part of the Draft Structure Plan for the site.
Integrated Watercycle Management	The site's natural blue-green assets provide an ideal skeleton to serve as a backbone for a fully integrated water cycle management system.	A fully integrated water cycle management system will be implemented and owned and operated by Sydney Water. The solution will consist of stormwater runoff treatment in naturalised basins with regional harvesting and recycling, along with the treated wastewater in a reticulated recycled water system (purple pipe).
Potable Water	There is an existing 125mm main running along Appin Road as well as the 1,200mm Trility main that burdens the site.	Any capacity in existing infrastructure to be utilised for initial stages. A new precinct reservoir near the site's high point will be needed. This will facilitate the delivery of suitable supply storage that will service the site. Timing of new reservoir and connection to existing network will be confirmed by Sydney Water.
Waste Water	Currently no wastewater servicing available. A new Wastewater Treatment and Recycling Plant is proposed to the west of the site, adjacent to Nepean River by Sydney Water.	In the short term, the site will be serviced either via a new rising main to Rosemeadow and then by gravity to the Glenfield Wastewater Treatment Plant, or if capacity is not available, a temporary on site wastewater treatment package plant. Both options would be delivered under a Developer Service Agreement with Sydney Water. For the long term (ie. 2031 +), connection to future Upper Nepean TP via new pressure mains to transfer flows from the site to the west to be delivered once the new treatment plant is operational.
Electricity	There are existing electrical feeds along Appin Road as well as the 66kV/330kV feeder lines that burden the site.	A new zone substation of approximately one hectare in size will be required on-site. The new zone substation will be delivered in early stages of development when existing capacity at the Appin zone substation has been exhausted. Four new 11kV feeders from either the existing Appin zone substation (subject to available capacity) or new North Appin zone substation to supply development will be required.
Telecommunication	The site currently has mixed levels of coverage for telecommunications with full coverage for 3G and 4G, sporadic coverage for 5G and fixed wireless NBN across most of the site. There is, however, fixed line NBN servicing the Appin township to the south.	Subject to confirmation by NBN Co., fixed line infrastructure will be extended to the site from the existing Fibre Access Point will be required. It is anticipated Telstra's existing 5G coverage will continue across the site as the development progresses. With other telecommunication providers coming online in the future.
Gas	There is an existing Eastern Gas Pipeline that traverses the site (via an easement). It will restrict select land uses (eg. schools, nursing homes, etc.) in the vicinity of the main.	The presence of the pipeline will require collaboration with Jemena during the detailed rezoning phase to ensure that suitable land uses are proposed, and their easement and access is preserved. The provision of natural gas to the development will be confirmed following further feasibility analysis.

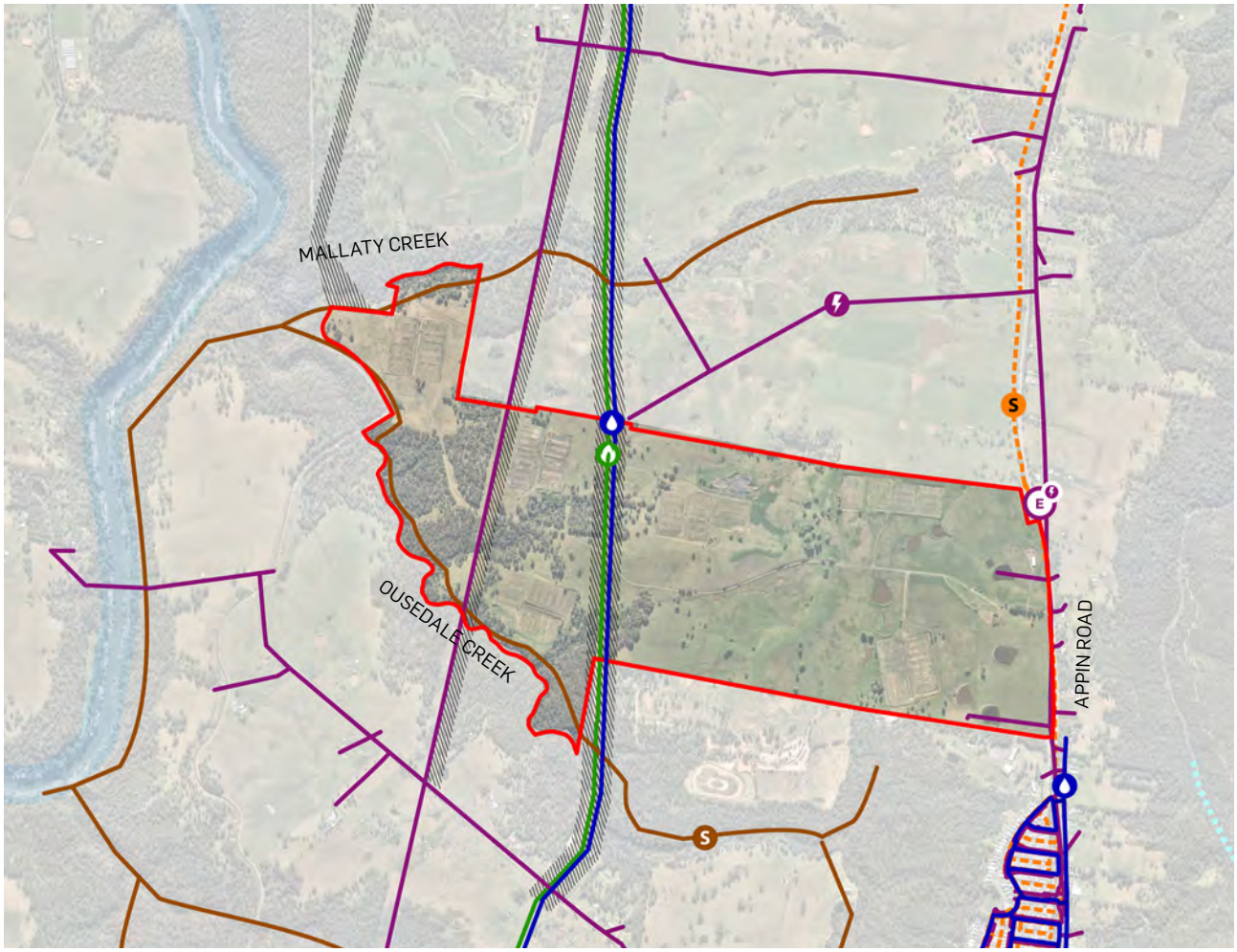

Figure 17 Existing Services Map

LEGEND:

- Site Boundary
- Existing Electrical
- Existing Water Mains
- Existing Sewer Mains
- Existing Gas Easement

4.14 Constraints & Opportunities

The following constraints and opportunities have been identified based on the site analysis and have informed the Draft Structure Plan for the site.

SITE CONSTRAINTS

Easement

The site is bisected by easement corridors. These easement corridors impose land use restriction on the subject site.

Bushfire - Asset Protection Zone (APZ)

The site contains bushfire-prone land, with the need for APZs to be established accordingly.

Existing Vegetation Corridor

The vegetation corridor wraps around the site and is mostly identified by CPCP for conservation.

SITE OPPORTUNITIES

Movement

Transit Corridor

The Greater Macarthur 2040 proposes a north-south running Transit Corridor that potentially accommodates public transport, walking, driving and active transport.

Appin Road Site Access

Two site access points are proposed off Appin Road.

- Northern access point is located to provide most suitable access to local centre and internal road network. Location of intersection has been coordinated by Urbis with TfNSW.
- Southern access point will initially be a roundabout intersection at Brian Rd / Appin Rd with upgrade works to Brian Rd as required. Following construction of GM Transit Corridor, the east-west connector between the Transit Corridor and Appin Rd will be provided, including a left-out access from the site

Place

Local Centre

A local centre is proposed at the heart of the subject site along the Transit Corridor to service future community. The centre will provide mix of services including: retail, health services, community facilities etc.

Green Connections

There are opportunities to provide green corridors that strengthen the ridgelines and links to the wider vegetated corridor and facilitate wildlife movements.

Local Parks

Locate a variety of open spaces at high points and in places most accessible by the community (400m).

Views

Frame view lines to and from the local ridge lines, which is a part of locality's identity.

Infrastructure

School

Opportunity to locate a new primary school in proximity to the local centre.

Sporting Fields

Co-locate a sporting field next to the primary school. The balance of sporting fields can be located on existing flat land adjacent to bushfire prone vegetation as a buffer to future development.

Perimeter Roads

Perimeter roads are required to address bushfire risks and provide opportunities for co-locating active transport routes and water management.

Reservoir

A water reservoir is required at the site's high point at Appin Road.

Zone Substation

A zone substation is required and should be located in proximity to the existing electricity transmission line.

Developable Areas

Medium density

The lands between the Transit Corridor and Appin Road are suitable for medium density development given proximity to the Transit Corridor, Local Centre and Appin Road.

Opportunities for higher densities along the Transit Corridor and around the Local Centre as they have the optimal access to services.

Lower density

The lands to the west are most suited to lower density development, particular in areas of steep topography and adjacent to conservation vegetation.

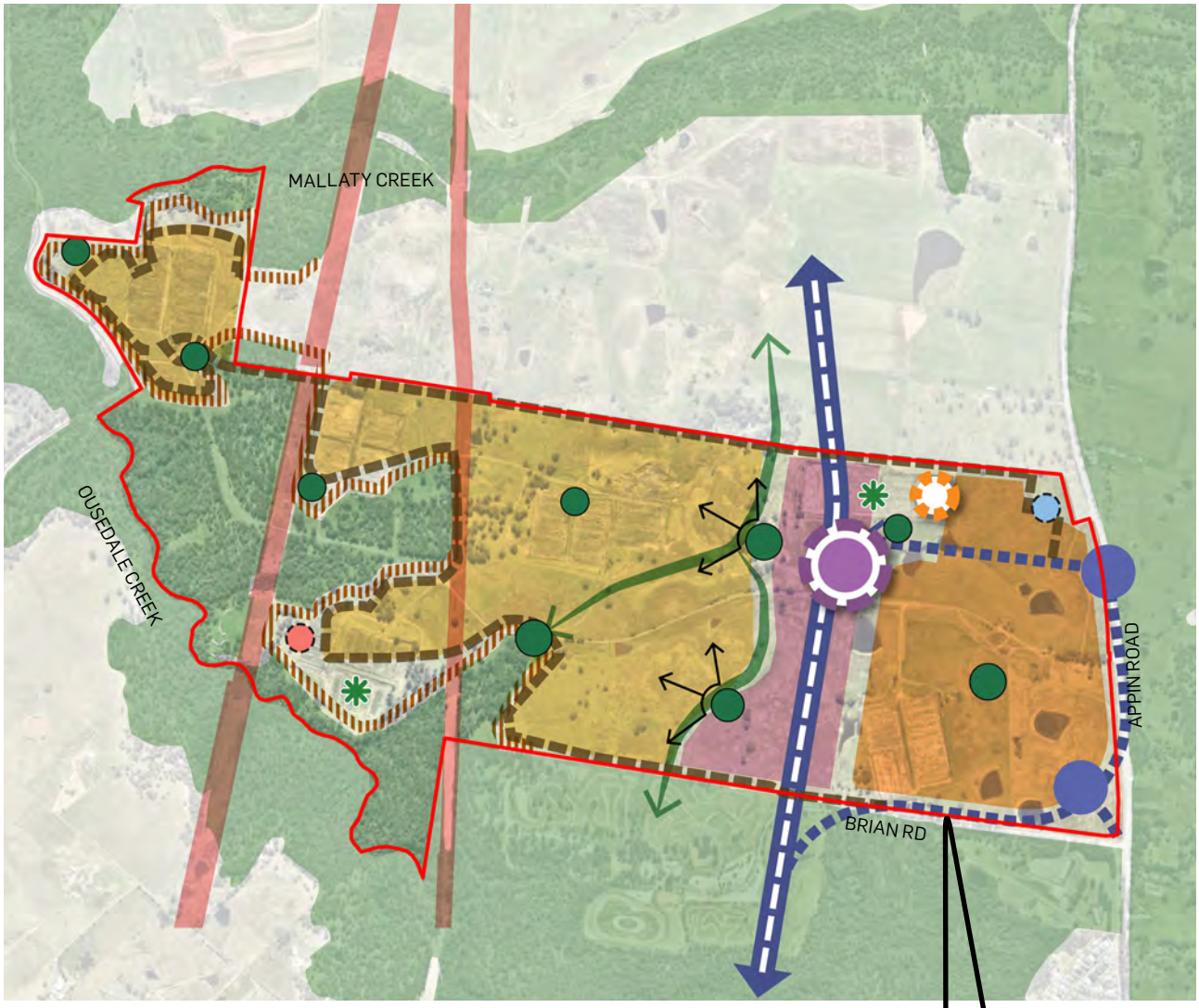

Figure 18 Opportunities and Constraints

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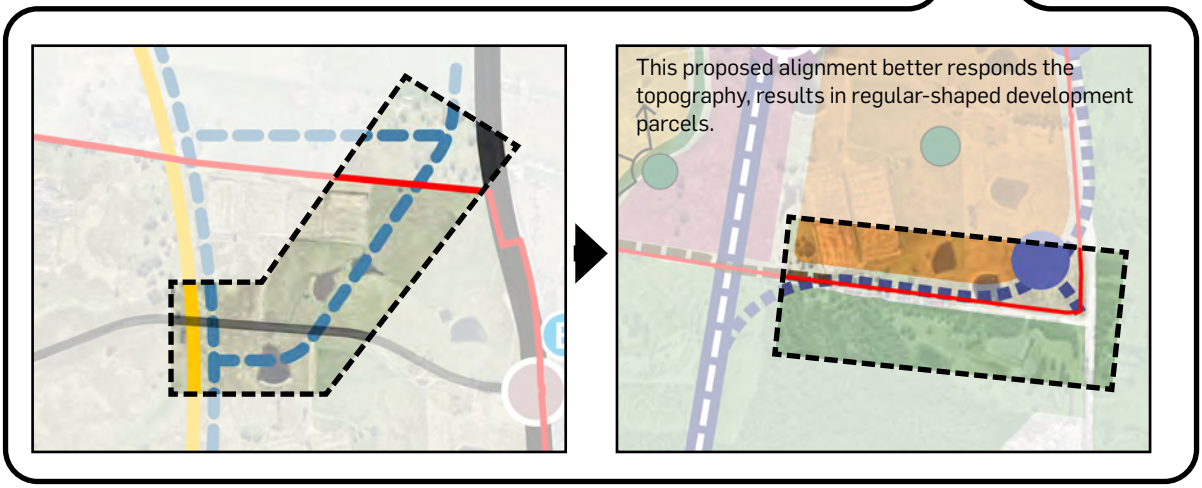
Figure 19 Re-alignment of Greater Macarthur 2040 East-west Connector Road as endorsed in principle by TfNSW



5.0
VISION

5.1 VISION

The most prominent natural feature is the ridgeline that bisects through the middle of the site in a north-south direction, and the native vegetation community to the west of the site. The site is also framed by the Ousedale Creek scenic riparian corridors. These natural features are of considerable significance, and are characterised by Cumberland Plain Woodland, various ecological communities, and koala corridors.

The Draft Structure Plan has been shaped by the existing and unique natural characteristics of the land, and as such, many opportunities to progress the implementation of the Connecting to Country framework have presented themselves in the design phase. These include opportunities to connect to the land, the hills, the regions, the people and to Appin. The urban design for the precinct has embedded these natural landscape elements into the Draft Structure Plan.

The existing native vegetation and riparian corridors that frame the site will be elevated, connected through a network of parks and drainage systems. The design celebrates the central north-south ridgeline through its use of open space and road alignments to link high points and ensure pedestrian and cycle connectivity is achievable. The Cumberland Plain Woodland will also be conserved and further integrated into the network of open and recreational spaces within the precinct. Another key aspect of the proposal is to ensure that the koala corridors are safe and meaningful, and that development in the precinct protects the local koala community.

The proposal's sensitivity to both its blue and green natural assets will allow the precinct to evolve into a sustainable and healthy community, with the benefits of tree canopies and water sensitive urban design fully realised to mitigate the effects of climate change induced urban heat. The neighbourhood will be friendly to pedestrians and cyclist, footpaths and cycleways will link key destinations to people's homes, free from regional traffics.

An emphasis has been placed on enabling the delivery of well-located and market ready lots and ensuring that a significant supply of housing can be made readily available. Diverse housing types will be proposed to address the housing affordability crisis and extraordinary demand for new housing in southwest Sydney.

The vision for a Transit Oriented Development will also be realised. A thriving local centre will be created at the heart of the precinct surrounded by open spaces, offering amenities, services, and education. The closely connected housing and local centre will further strengthen the Appin area. The community will be within 30 minutes to the local centre and also, employment precincts such as Campbelltown-Macarthur, Wollongong, and the future Western Sydney Airport and Aerotropolis.

6.0 DESIGN PRINCIPLES

VISION

CONNECTING TO

THE LAND
special places - gullies, vegetation, riparian

THE HILLS
ridgelines and views

REGIONS
road connections and context

PEOPLE
villages with a loop road

APPIN
proximity and staging character with connections

CONNECTING TO

1 THE LAND

Connecting to the land demonstrates an understanding of the natural flow of the land and natural aspects such as the existing trees, waterbodies and tributaries that flow from the site to the Nepean River.

Key designing with country principles include:

- Conservation of Cumberland Plain Woodland. Story telling about use of waterways, fishing and aquatic species;
- Create walking paths within the riparian area to allow human engagement with landscape;
- Re-vegetate aquatic species to promote environmental diversity;
- Riparian zones provide a buffer between the development and existing environmental systems to ensure both human and non-human kins thrive in cohabitation;
- Power of water and ephemeral of water to be celebrated; and
- Areas of trans-evaporative cooling. Water bodies as an extension of a dam for human and natural interaction.

> **An opportunity to leverage the riparian corridors to connect with the community.**

Figure 20 Connecting to The Land

CONNECTING TO

2 THE HILLS

Connecting to the hills references the significant north-south ridgeline that transects the site and opens up long range views to the west. The views to the hills will be connected back to the site through walking trails, open space and movement corridors.

Key designing with country principles include:

- Create connected open spaces with concentrated and re-vegetated planting;
- Streets considered as connecting paths for biodiversity. Planted verges and tree planting create a comfortable and biodiverse environment;
- Opportunity for community centres and educational gathering spaces;
- Utilise streets for productive landscape species. Wayfinding to tell a story of country;
- Allocate series of open spaces along the ridgeline and preserve outlooks to and from these places. This will help emphasise the significant ridgeline, which is deeply connected to the place; and
- Minimise benching of lands where possible.

> **An opportunity to enhance the natural topography of the site and connect it to the sky.**

LEGEND

- Site Boundary
- Open Spaces along Ridge Lines
- Key Outlooks Opportunities

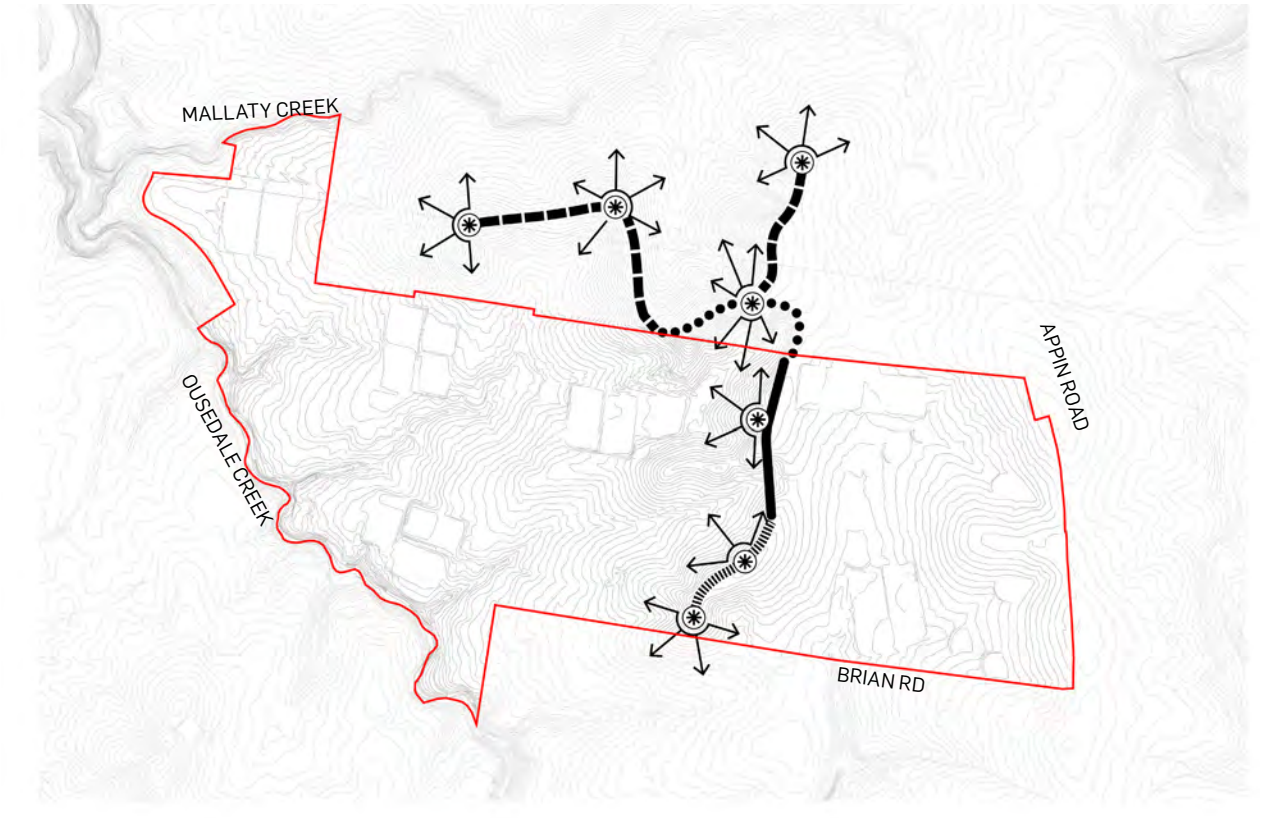


Figure 21 Connecting to The Hills

CONNECTING TO

3 THE REGIONS

Connecting to the regions refers to the north-south connectivity along Appin Road and future public Transit Corridors.

Key designing with country principles include:

- Open space connector paths for both human and non-human kin and tie into the larger Koala Habitat Corridor.
- Distribution of open space to utilise as pockets of vegetation and habitat planting;
- Integrated walking tracks and active recreation;
- Social gathering spaces for residents and visitors. Active recreation opportunities;
- Ensure elements positioned within open space do not have a detrimental effect on function; and
- Consider an open space buffer or setback along boundaries.

> **An opportunity to create an authentic journey throughout North Appin.**

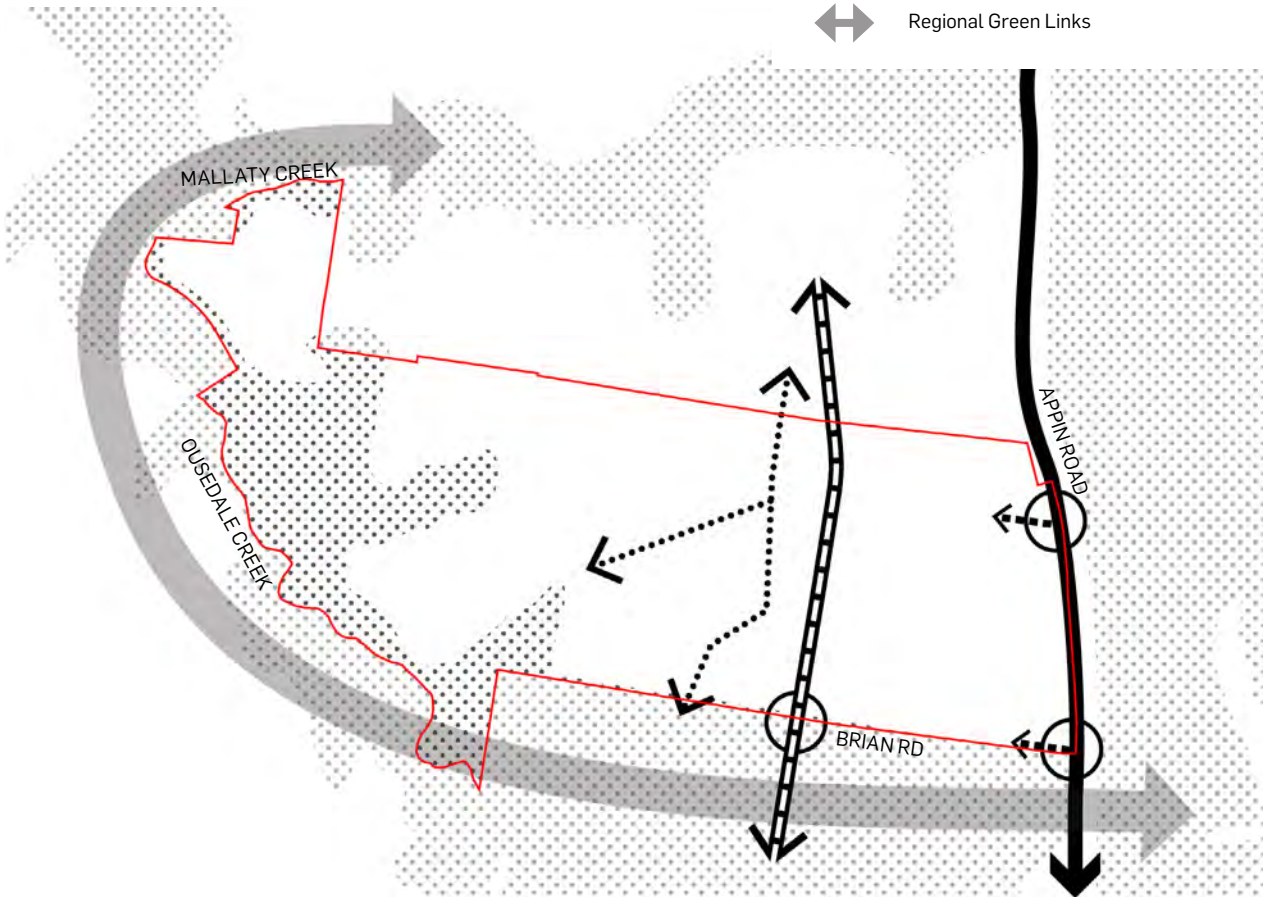


Figure 22 Connecting to The Regions

CONNECTING TO

4 THE PEOPLE

Connecting to the people demonstrates identification of movement corridors and villages throughout the North Appin precinct to allow easy movement and creation of distinct neighbourhoods within the broader precinct.

Key designing with country principles include:

- Create diverse types of open spaces that are distributed evenly for the access of the entire community.
- Create safe, community spaces for performance, gathering and knowledge sharing.
- Opportunity for gathering and recreation (ie. play etc). Productive species for commercial use;
- Concentration of habitat planting in areas outside of open space for improved biodiversity and for human comfort;
- Encourage diverse species planting, and pockets of nonendemic species;
- Promote urban cooling and canopy and coverage through on lot planting;
- Consider supplementary guidelines and mandate canopy coverage, permeable surfaces and specific species; and
- Consider interface of the open spaces.

> **An opportunity to create distinct neighbourhoods, that are connected along the site's contours.**

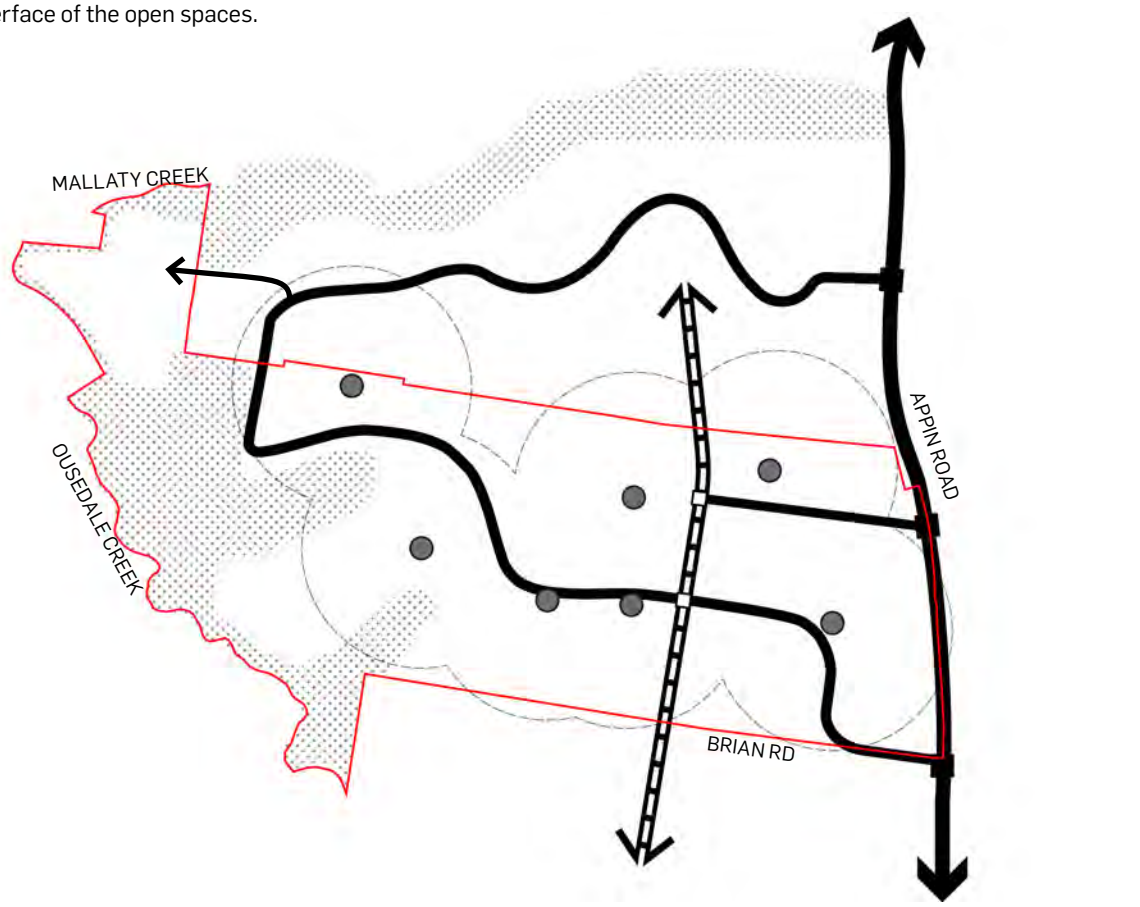


Figure 23 Connecting to The People

CONNECTING TO

5 APPIN

Connecting to Appin refers back to the historic Appin township and other adjacent local centres. This demonstrates how we will connect the site to the wider Appin through movement corridors, open space networks and a public realm built form narrative that is representative of the region.

Key designing with country principles include:

- Story telling about the Appin township and the movement patterns of the people;
- Utilise streets for productive landscape and use species similar to those within the Appin township;
- Rain gardens to treat water within road corridors such as Appin Road;
- Create unique pedestrian experiences that transition from Appin surrounds to the North Appin (part) Precinct; and
- Promote connections to other adjacent local centres.

> **An opportunity to build on the Appin Township and stage the extended community from day one.**

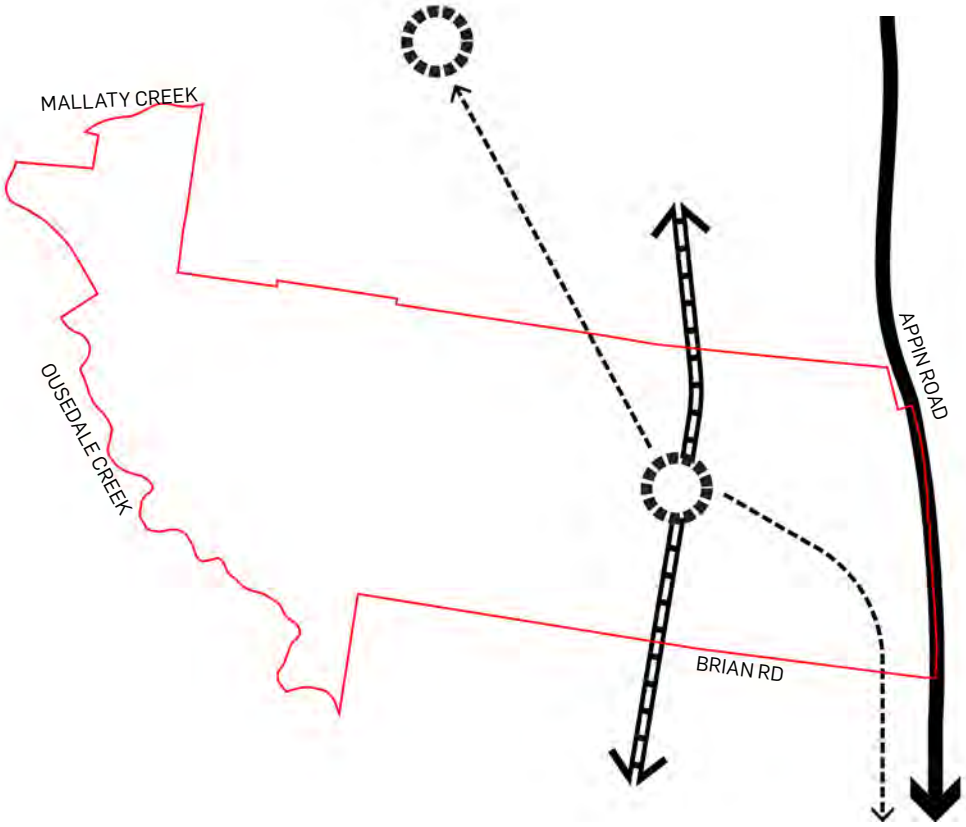


Figure 24 Connecting to Appin

7.0 DRAFT STRUCTURE PLAN

7.1 Draft Structure Plan

LEGEND	
	Site Boundary
	Urban Development Land
	Proposed Local Centre
	Proposed Primary School
	Proposed Retail Centre
	Sports Field
	Active Recreation Cluster
	Local Parks
	Zone Substation
	Reservoir
	North-South Transit Corridor
	Key Roads
	Indicative Future Roads
	Site Access Points
	Excluded Land (Potential co-location with recreation uses)
	Environmental Conservation Land (CPCP)
	Ousedale Creek Koala Corridor
	Fauna (Koala) Underpass
	Heritage Item - Upper Canal
	Potential Access Road
	Bypass off Appin Road

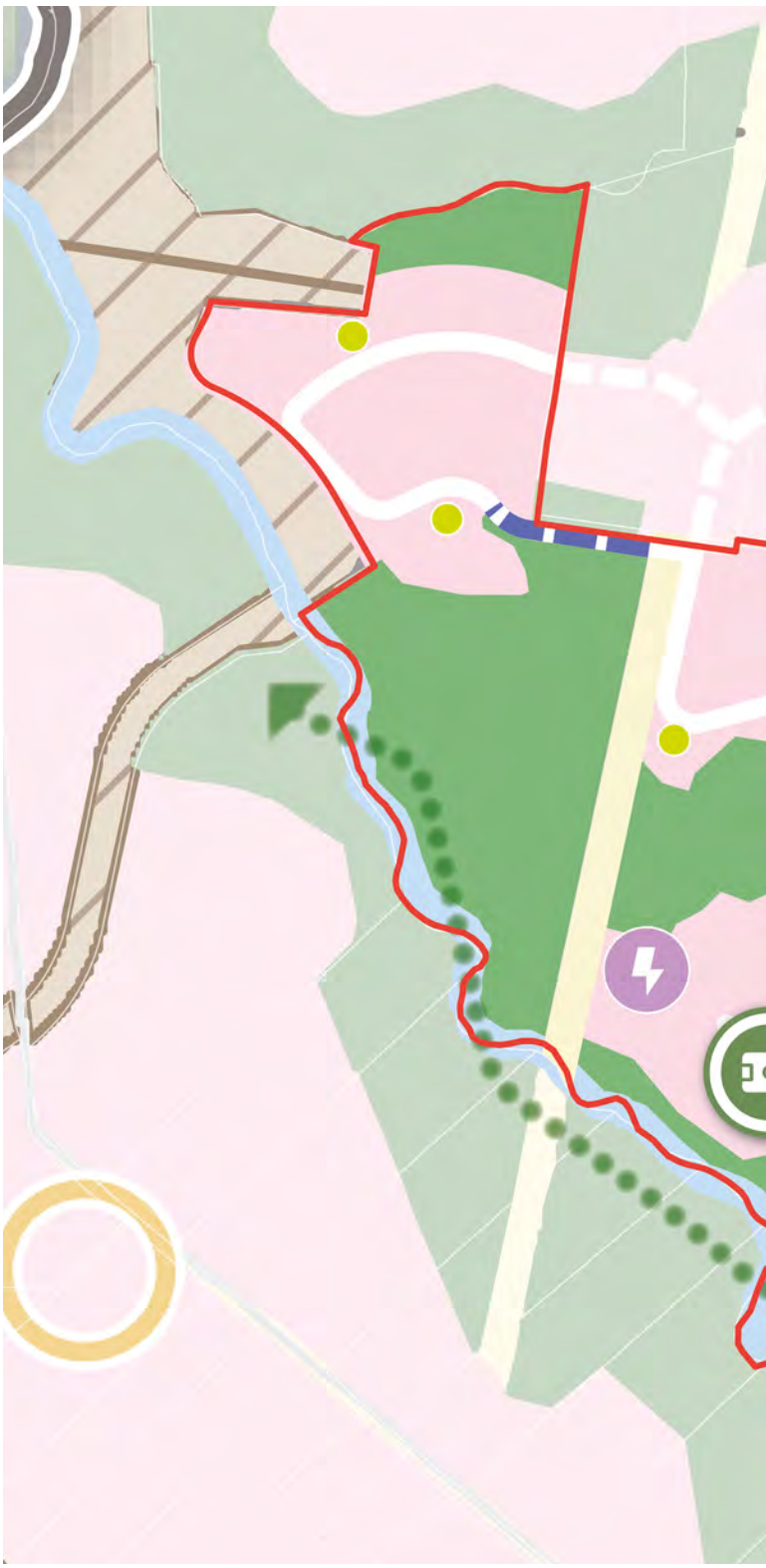
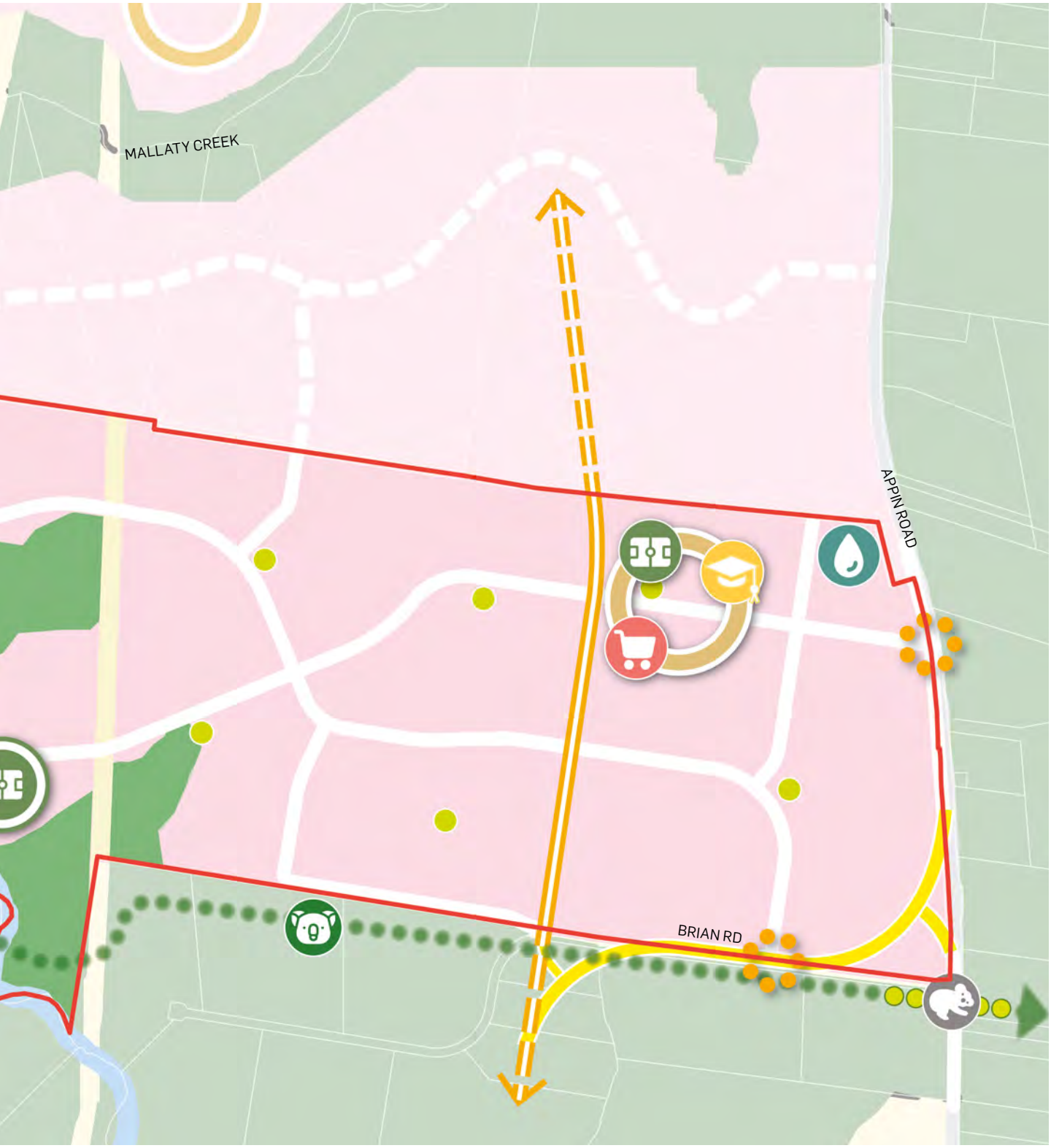


Figure 25 Draft Structure Plan


MALLATY CREEK
APPIN ROAD
BRIAN RD
0
100
200
300
400

7.2 Key Strategies

Greater Macarthur 2040's vision is framed around five themes: Place, Landscape, Built Form, Land Use and Movement. These themes are further underpinned by local character as summarised in the wheel chart below.

This section of the report frames the Draft Structure Plan strategies around the five themes and demonstrate the proposal's alignment with Greater Macarthur 2040.

PLACE

LANDSCAPE

BUILT FORM

LAND USE

MOVEMENT

7.2.1 Land Use

"The Growth Area varies from the north's lower density residential areas to the Metropolitan Centre of Campbelltown-Macarthur and large format light industry, warehousing and logistics centres in Ingleburn and Minto, to predominantly rural uses in the south, including former poultry enterprises and extractive industry. Menangle and Appin are rural townships, with Appin home to smaller-scale residential development."

The Draft Structure Plan envisions an appropriate mix of land uses to support a thriving community, including a range of residential typologies to provide for housing choice and facilities providing community, education, retail and recreation opportunities. Community centres and educational gathering spaces will be promoted as a Connecting with Country response.

EMPLOYMENT, RETAIL, HEALTH AND EDUCATION

Facilities	Location	Indicative Area (ha)
Local Centre	At the intersection of the Transit Corridor and northern entry road. The local centre at the heart of the precinct will provide a variety of services and amenities for the future residents.	**Approx 5,000sqm**
School	A school is provided in close proximity to the Local Centre. The school is well-serviced by transport infrastructure, and co-located with a sporting field, which has the potential to offer the community with space for events, activities and recreational uses.	**2 ha**

HOUSING

The Draft Structure Plan is estimated to provide approximately 3,000 dwellings. Low and medium housing types are suggested to cater for the different needs of the community. Medium density housing is proposed in proximity to the proposed Transit Corridor and future Local Centre. Low density housing is proposed in areas of environmental sensitivity, such as steep land and interfaces to conservation land.

Types	Location
Medium Density	Along the Transit Corridor and the proposed Local Centre.
Mixed Low and Medium Density	Between the Transit Corridor and Appin Road.
Low Density	• Mostly within western part of the site. • Respond to unique environmental conditions including steep land and the interface with bushland to the west and north.

LEISURE AND COMMUNITY

The Draft Structure Plan provides for generous recreation and leisure opportunities, with new local parks and sporting fields facilitate community gathering and activities.

Type	Location	Indicative Area (ha)
Community Centre	Provided within the Local Centre.	1,10m² inclusive of multi-purpose community centre and library. These could be provided within the local centre, pending on further consultation with Council.
Retained Bushland	The vegetated corridor of Ousedale Creek is retained in response to CPCP.	Approximately 56ha will be protected. The potential for managed access to conservation areas for the provision of passive recreation to be explored.
Proposed Open Space (Including Sporting Fields)	New open spaces are proposed across the site to provide ecological connections to a wider network and recreation opportunities for the residents	For the future population of 9,000 new residents, 25.47ha of passive open space is provided inclusive of 12.33ha of active open space.

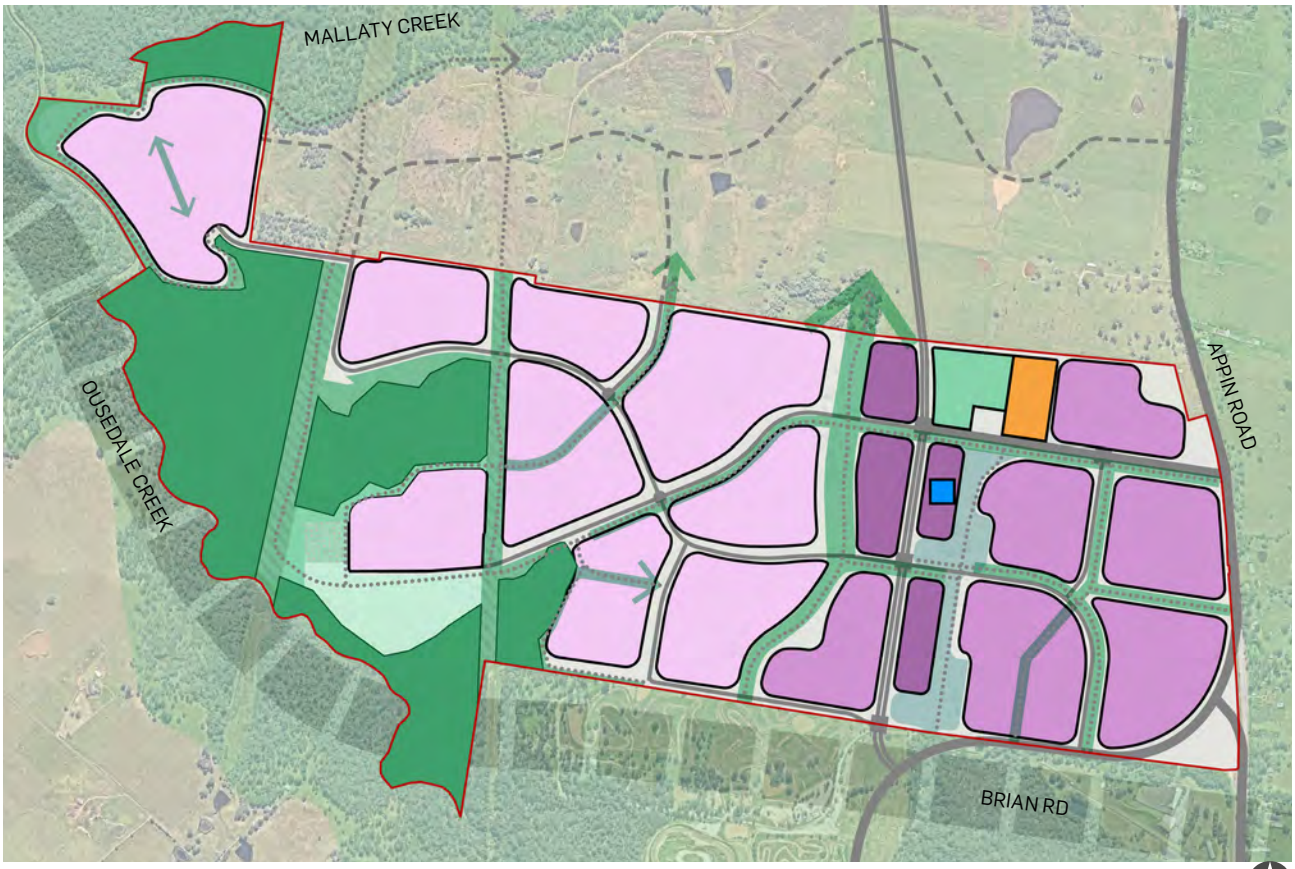
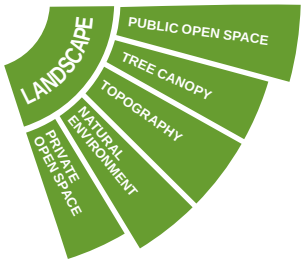


Figure 26 Land Use Strategy

7.2.2 Landscape



"Environmental conservation and protection are central to the sustainable development of Greater Macarthur. Greater Macarthur is home to a range of unique fora and fauna including koalas."

The Draft Structure Plan recognises, protects and enhances the safe passage of koalas through dedicated wildlife corridors and celebrates the natural landscape through it's extensive open space network. Considering a multi-use approach to drainage basins in open spaces i.e. Playing fields, boardwalks, lookouts etc. Ensuring CPCP area is protected and creating educational opportunities for future custodianship and protection of the environment.

PUBLIC OPEN SPACE

Public parks, facilities, urban and street spaces will be well designed, scaled and located to respond to the community's needs and expectations.

Sporting fields

Create considered landscape settings for sports park that promote biodiversity along edges and promote visual connection to nature.

Two sporting fields are proposed, one co-located with the primary school and the other to the south-west at the interface with CPCP land. They are connected by a series of linear open spaces and exist within a considered landscape setting. Facilities should not be single use, and the usage is maximised throughout the year.

Green Connection

The site will be equipped with green connections among open spaces and key destinations offering active transport, walking and shading to the residents, subject to further investigation.

Local Parks

Local parks are provided across the site. They promote connection to Country by employing principles of nature play and diverse vegetation structures through considered planting strategies. Integration of education on Dharawal Country are considered in nature playgrounds using elements of the surrounding Country to create tactile and lasting experiences. Integrate stories and allow for story-telling also occur in gathering points, providing space for community to inhabit and use the space for cultural opportunities.

Parkland within Easement Corridors

The two easement corridors could be used for passive recreation opportunities and pollinator and wildlife corridors. Integration of walking paths and activity nodes should be considered and they could also function as view corridors to help with orientation within larger landscape.

TREE CANOPY

Street trees provide shading and effectively mitigate the urban heat island.

The Draft Structure Plan is capable of delivering effective tree canopy coverage via street trees together with trees in yards and setback zones. Provisions for tree canopy coverage will be addressed in a future site specific DCP.

TOPOGRAPHY

The development is carefully designed to enhance and leverage the existing topography.

View Points and Outlooks

Local vantage points within the open spaces function as view points and provide outlooks to connect the people to the land

Stormwater Detention Basins & Drainage Corridors

Stormwater retention and treatment on site through rain gardens, swales and detention basins to improve the water quality before returning to the natural system within Country. Where possible, human connection to these spaces should be allowed in the form of boardwalks, lookouts etc. Water Sensitive Urban Design will be consolidated into the design of these basins.

NATURAL ENVIRONMENT

The existing natural environment is respected and protected as much as possible. New open spaces will be framed around existing significant trees clusters and creek tributaries. This also includes the protection of koala movement corridors.

Preserved CPCP Avoided Land

The preservation of CPCP avoided land supports the ecosystems and broader ecological movements. They provide opportunities for interaction with nature and ensure non-human kin can thrive in healthy habitats.

Approximately 56 ha of existing vegetated lands identified by CPCP will be retained and protected. Recreational activities are located away from conservation areas.

Asset Protection Zone

Buffer landscapes should not be devoid of vegetation, and RFS standards for asset protection zones make significant allowances for canopy trees in particular. Buffer areas may be utilised as productive landscape spaces so long as they not capable of carrying bushfire. In practise, this will often result in a parklike setting with scattered canopy trees, almost no shrub layer and ground cover that can be maintained to low heights. The buffers can also contain roads, recreational, drainage and services infrastructure and should form a multipurpose space.

An assessment of bushfire risk has been undertaken by Blackash and indicative bushland-urban interface areas are illustrated in following pages.

Bushfire Emergency Access / Egress

A perimeter road forms part of the APZ along the northern boundary and along retained bushland in accordance with RFS standards.

Ousedale Creek Koala Movement Corridor

The corridor facilitates the protection of an important movement corridor for non-human kin.

It creates opportunities for observation without disturbance and provides opportunities for the community to participate in habitat creation through planting and landcare initiatives.

PRIVATE OPEN SPACE

Private open space provisions to be addressed in a future site specific DCP.

In principle, open spaces within private lots should promote opportunities for planting within lots and native species are encouraged.

Surfaces will be permeable to reduce stormwater runoff and explore roof planting which provides benefits of insulation, water retention and habitat or food for non-human kin.

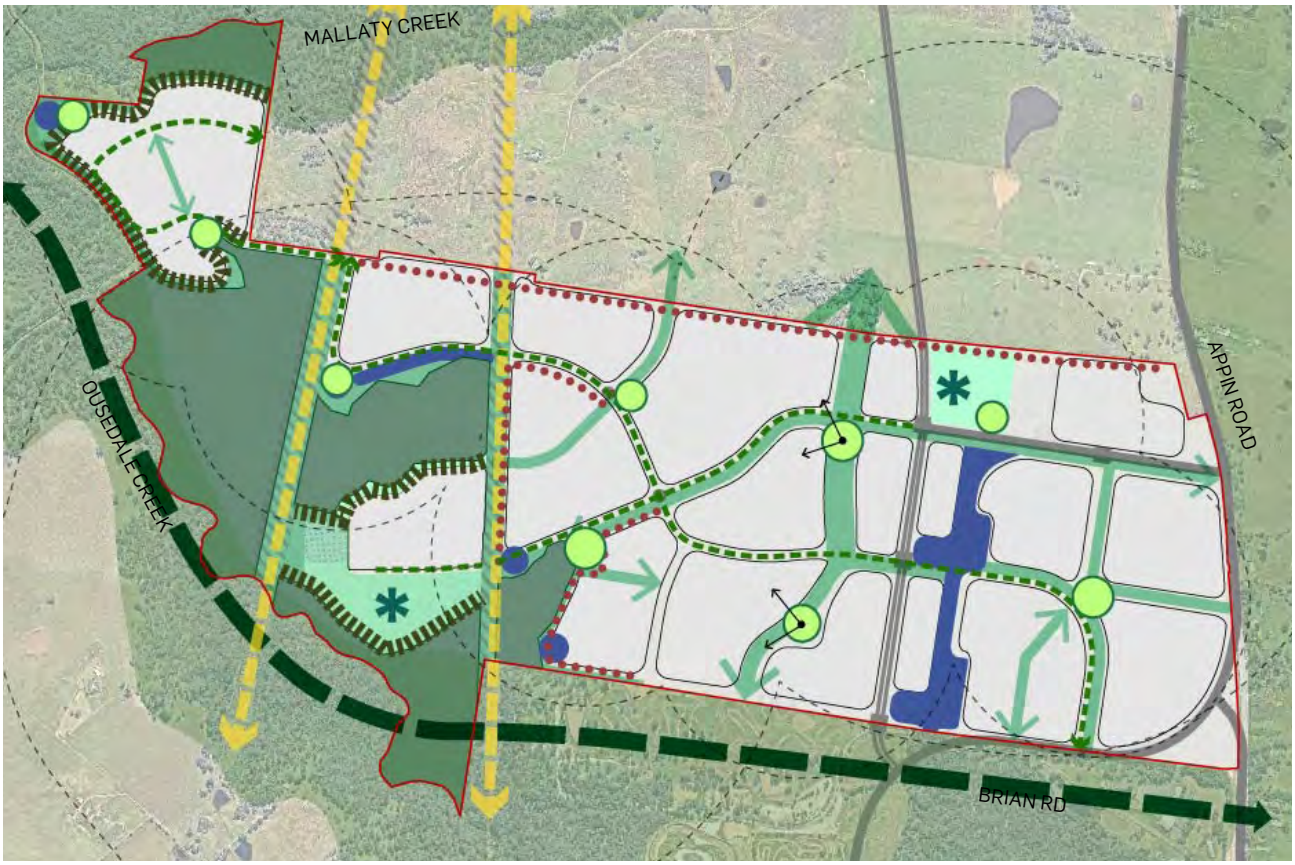


Figure 27 Landscape Strategy

0 100 200 300 400 500

Indicative APZ Interface Treatments

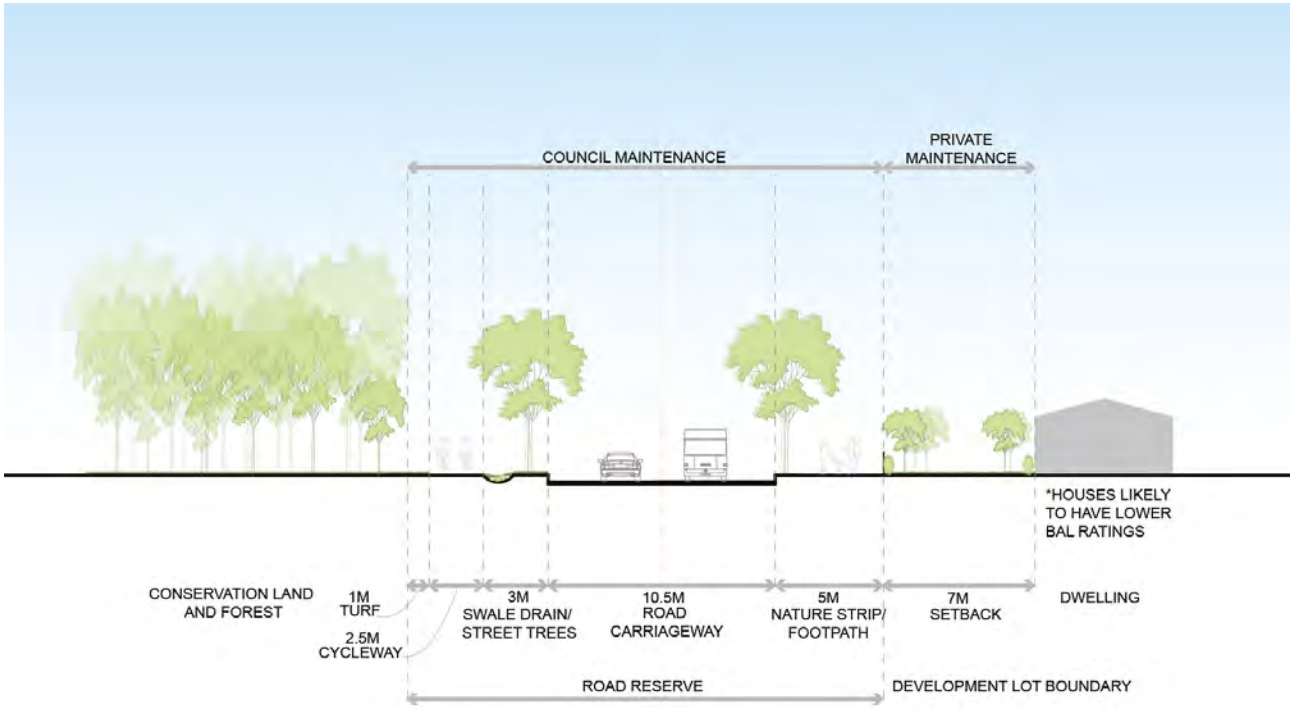


Figure 28 Indicative 29m Asset Protection Zone interface

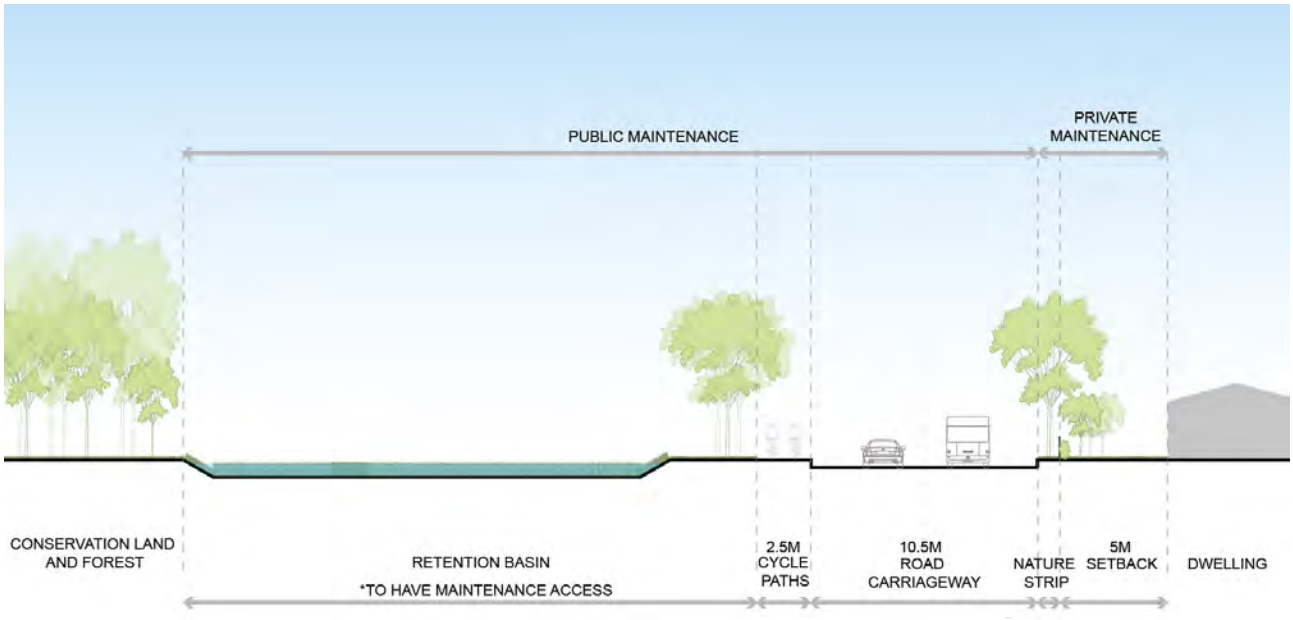


Figure 29 Indicative 18m Asset Protection Zone interface

CPCP Avoided Land Modification

The CPCP establishes a disconnected urban area within the north-western corner of the site. Access to this area will require connection through the CPCP avoided land. To enable the access, an 8m wide access road, 280m in length with a 15m Asset Protection Zone (APZ), is needed across the Avoided Land (Figure 30). To compensate for the loss, IPG has identified an area of Urban Capable land in the northern portion adjacent to existing Avoided Land that is proposed by IPG for re-vegetation.

Separate to this Planning Proposal, a modification to the CPCP has been sought from DPE by IPG, to enable the 8m wide access road to be provided and to increase the Cumberland Plain conservation area within the site.

Figure 30 Access to isolated site.

Figure 31 Current CPCP mapping per Department of Planning & Environment CPCP Viewer

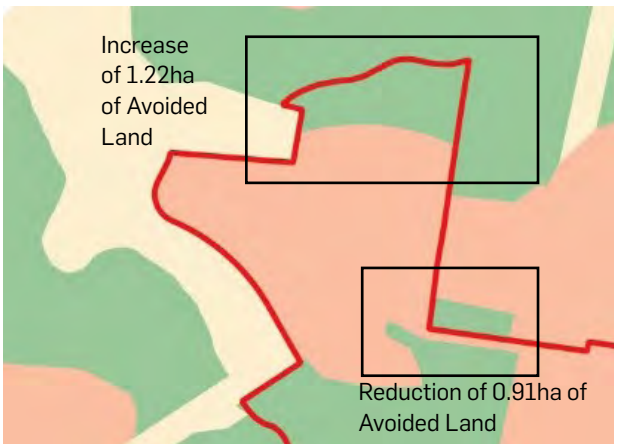


Figure 32 Proposed configuration of CPCP after amendment

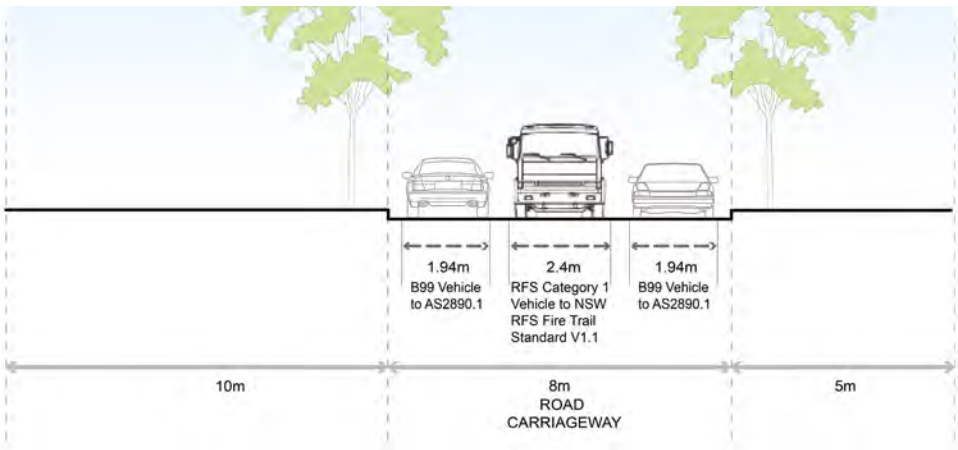
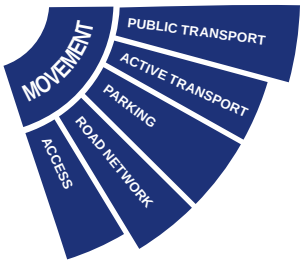


Figure 33 8m Carriageway allowing two-way traffic and RFS Category 1 Vehicle to NSW RFS Fire Trail Standards

7.2.3 Movement



"Movement is fundamental to the evolution of Greater Macarthur. Ease of movement in the Growth Area will rely on a diverse and connected network of transportation options including, integrated public transport, safe and direct routes for walking and cycling, together with well-designed road networks."

The Draft Structure Plan proposes a variety of transport and movement options linking key destinations both locally and regionally. Streets considered as connecting paths for biodiversity. Planted verges and tree planting key to a comfortable and bio-diverse environment. Utilise streets for productive landscape species. Way finding to tell a story of Country.

GM 2040 Transit Corridor Alignment and East-West Connector

GM 2040 proposes a Transit Corridor and east-west connector road connecting to Appin Road as is shown in Figure 34. The design team has reviewed the GM 2040 indicative alignment of the east-west connector and identified that this indicative alignment:

- Prevents walkable neighbourhoods and a pedestrian and cycle friendly precinct by having a highway running through the site.
- Prevents amenable access to the local centre and school.
- Severely impacts on the green network and amenity for residents, including walkable access to areas of passive and active open space.

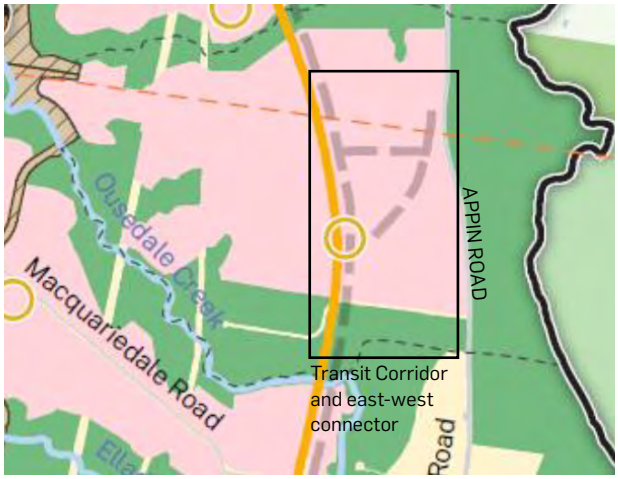


Figure 34 GM 2040 Structure Plan

The proposed GM 2040 alignment poses significant design constraints on the land form as illustrated in Figure 36.

GM 2040 Transit Corridor

- The GM2040 alignment runs across a local ridge line, and several segments have natural slopes and surface gradients in excess of 10%, which would require significant earthworks to achieve a compliant sub-arterial road design through these areas.
- The proximity between the ridgeline and the GM2040 Corridor also leaves limited space for higher density development to occur on either side of the corridor in accordance with GM 2040. This undermines the land use efficiency and limits future residents' access to transport infrastructure.

Draft Structure Plan Revised Transit Corridor

The Transit Corridor is re-aligned in the Draft Structure Plan:

- The revised alignment allows the corridor to be located on less undulating lands,
- More space is reserved on both sides of the corridor to enable higher density development to occur, and
- The revised alignment runs across cleared lands the south of the site boundary. There are approximately 60m between proposed Transit Corridor and bushlands south of subject site.

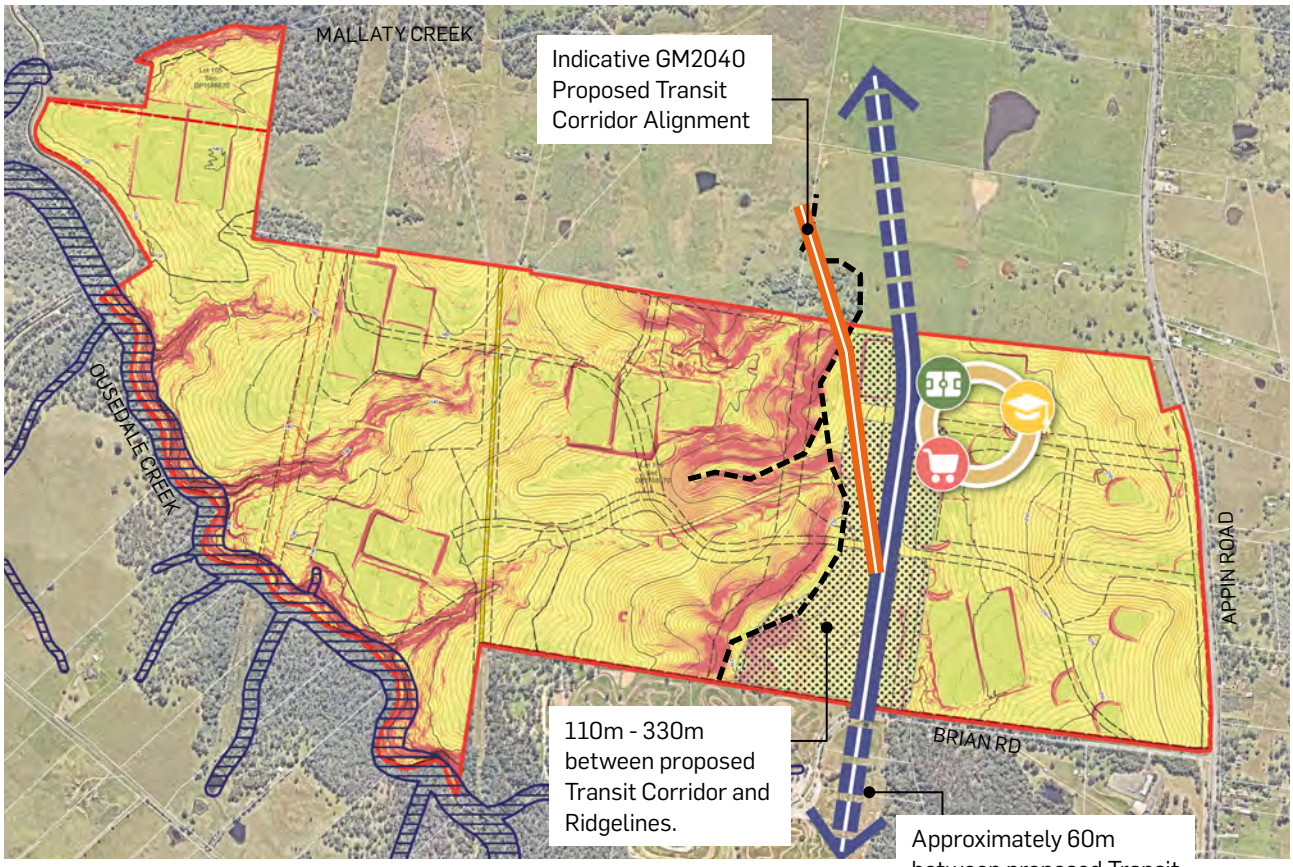


Figure 36 Topography & riparian considerations

Transport Network (Prior to Transit Corridor Delivery)

The proposed Transit Corridor is a long-term commitment. Prior to the delivery of this corridor and major regional road and surrounding road upgrades, the site will have at least five precincts settled as is shown in Figure 35.

Initial North South Connection

Two-lane Connector Road along the alignment of future Transit Corridor. This will be upgraded to full-width Transit Corridor in later stages.

Existing Brian Road

Brian Road will function as the southern access road, upgraded to facilitate access to the site.

Appin Road Upgrades

Appin Road will be upgraded to allow for increased traffic from the precinct.

Collector Road

This Collector Road will be built at early stage to service the upcoming residents.

X **Precincts**

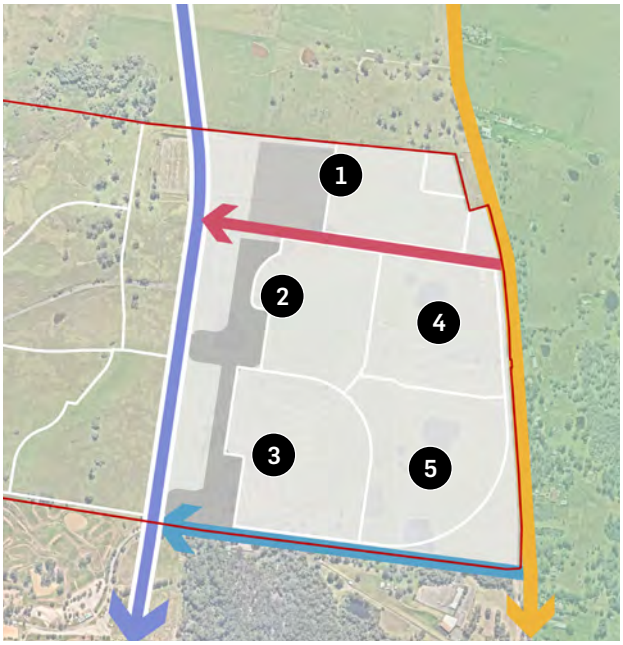


Figure 35 Transport Network in Early Staging

ROAD NETWORK

The Draft Structure Plan has proposed a hierarchy of roads providing safe and fast connections. Key components are outlined below and delivered in stages (Figure 35).

The streets incorporate diverse verge planting for thermal comfort and habitat creation and help to reduce site stormwater runoff with integrated WSUDs along roads and parking Opportunities for rest points along pathways that take advantage of views and create inclusive pedestrian environments will also be explored.

Transit Corridor - 40m Corridor Width

The GMGA Structure Plan proposes a Transit Corridor that will be a future movement and activity spine traversing across the site. It extends north-south to the neighbouring precincts and is to accommodate public transport, on-road parking, cycleway and footpath.

Major Regional Road Upgrade

① **Appin Road** plays an important role in regional connections. Appin Road northwards of the southern most entrance will be upgraded to provide for two lanes of traffic in each direction to align with the duplication on Appin Road to the north to support the Gilead Planning Proposal.

② **Brian Road will be upgraded to provide the east-west connector between Appin Road and the GM Transit Corridor.**

Major Entry Road - 30m Corridor Width

The major entry roads provide access off Appin Road close to northern boundary.

Connector Road - 20-24.2m

Potential Future Road Connection

Intersections

Roundabouts

ACCESS

The precinct would be accessed via the following

Site Access Points

Two access points are proposed to connect with the Transit Corridor as shown in Figure 37. The location of the connections will be confirmed through detailed design.

PARKING

Vehicular parking will be integrated into the urban fabric in a sensitive, holistic way. Safety, shade and convenience will guide the design principles for the location of vehicular parking. On street parking will be provided across most of the precinct.

ACTIVE TRANSPORT

Safe and dedicated active transport links are proposed to connect key destinations.

Preliminary Higher-order Road Network (Including Shared Pathway)

Off-road Shared Pathways

PUBLIC TRANSPORT

The proposed Transit Corridor accommodates public transport through the higher density area to maximise its utilisation. The highly permeable road network also provides opportunities for the bus network to further infiltrate into the wider neighbourhood.

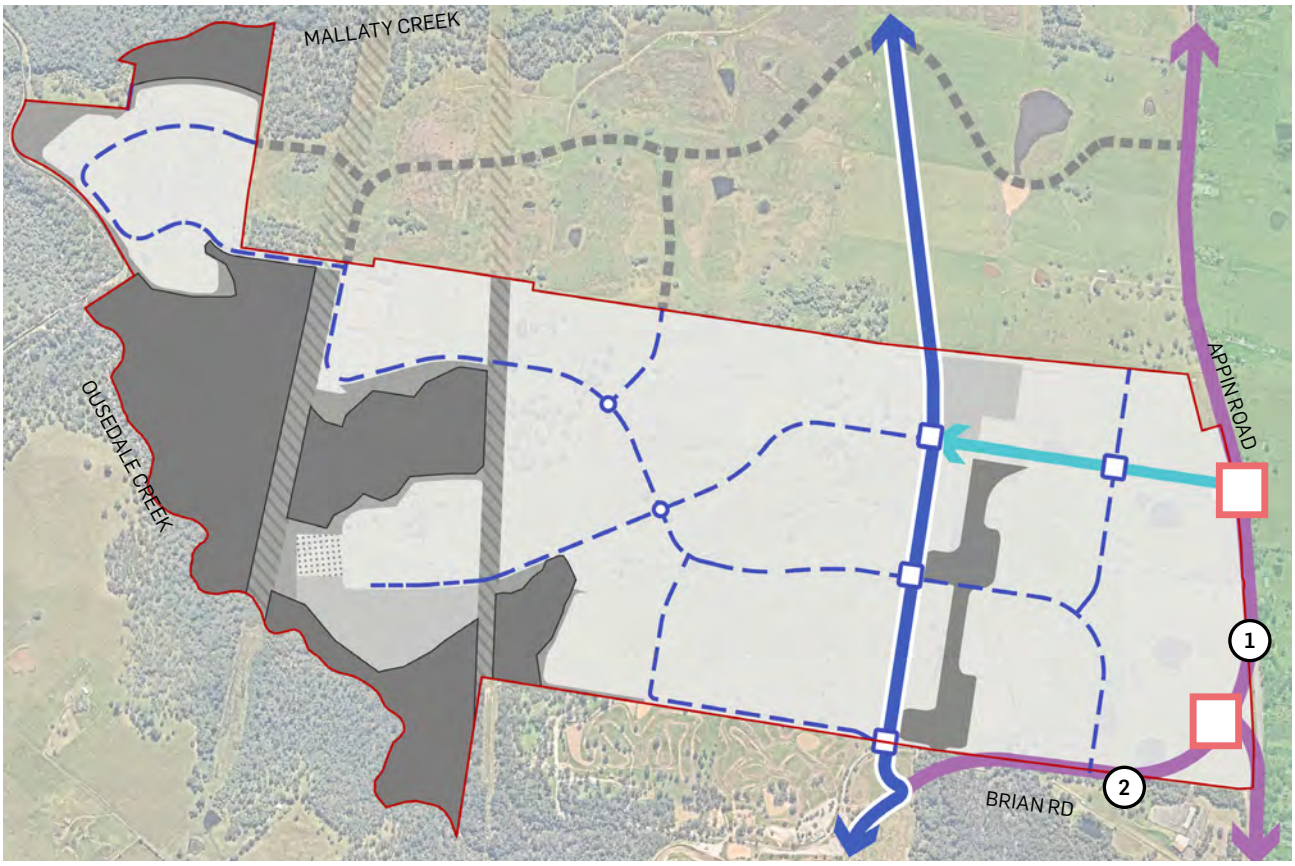


Figure 37 Movement Strategy

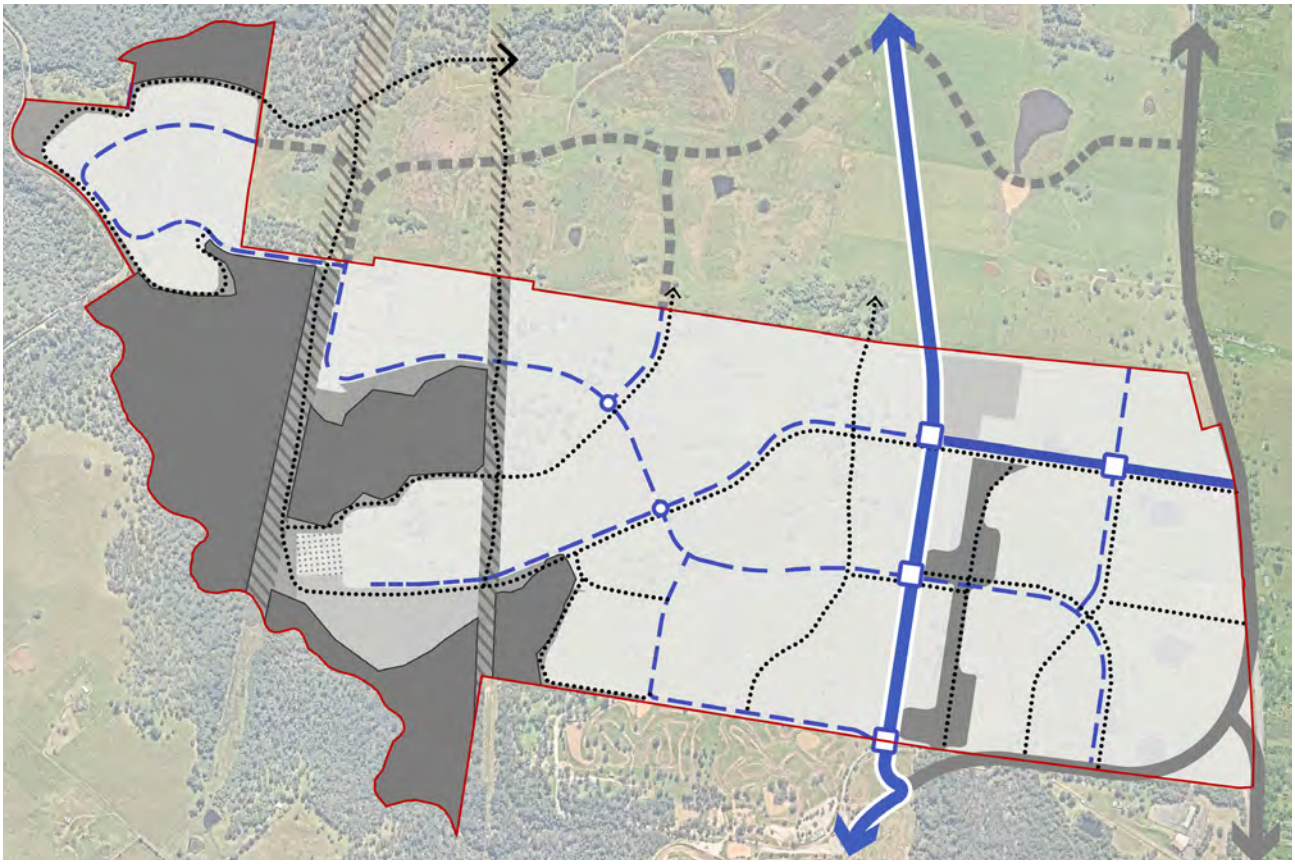
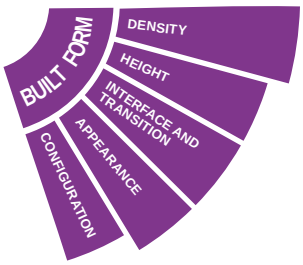


Figure 38 Active Transport Plan

7.2.4 Built Form



"Urban design, density, height, massing and architectural design influence the built environment. As the south of the Growth Area transforms from rural to urban uses, the built form will influence the physical character of new places. In the urban renewal corridor, the built form must enrich the area's existing character."

Densities will respond to local character and deliver various options of housing. The Draft Structure Plan provides a clear framework to create distinct neighbourhoods within the precinct. Designing with Elements of Country to create unique and individual design of lots and built form. Considering integration of street planting for canopy cover and urban cooling while serving as habitat corridors.

DENSITY + INTERFACE AND TRANSITION

The Draft Structure Plan has distributes built form typologies in response to proposed infrastructure and amenities and environmentally sensitive land.

Lower Density

Indicative average lot size 300 – 600m²

Mix of Lower and Medium Density

Medium Density

Medium density indicative average lot size 125-300m²

- Smaller sized lots will contribute to the delivery of more affordable housing options in a place that is well serviced by infrastructure, amenities and services in the future.
- Siting lower density lots next to the preserved green corridor could minimise disturbance to the environment and provide a sensitive urban interface that supports and enhances the significance of corridors and reserves.
- Medium density dwellings are proposed along the North-South Transit Corridor and towards Appin Road to maximise the utilisation of infrastructure.

HEIGHT

Low to medium rise buildings are proposed across the precinct as a sympathetic response to the semi-rural setting.

BUILDING APPEARANCE & CONFIGURATION

The development will build on the existing character of historic Appin, with a strong focus on creating a village character with quality modern architecture.

Buildings will address the public domain to provide passive surveillance and increased legibility. Block lengths create a permeable and walkable neighbourhood.

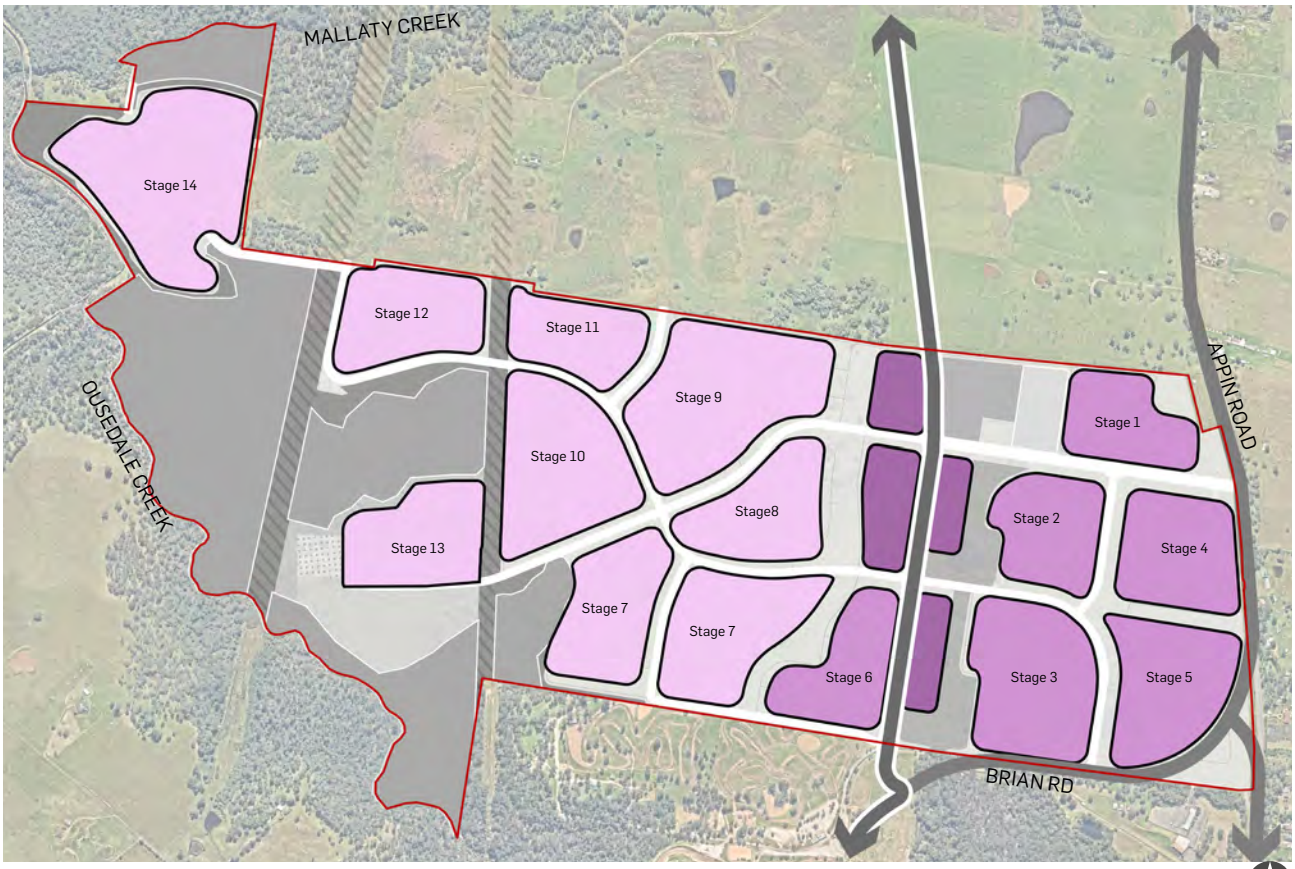
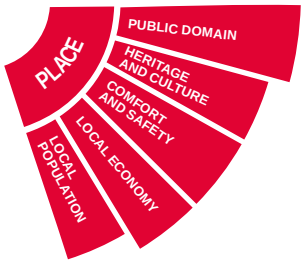


Figure 39 Built Form Strategy

7.2.5 Place



"Greater Macarthur is an area that has been built around a shared sense of community values and culture. It contains centres and neighbourhoods that have a unique mix of people, history, culture and the natural environment..."

To support the growth of the community, the Draft Structure Plan seeks to deliver infrastructure and amenities to encourage social interaction, promote safe and comfortable living environments and public domain, safe from the disruption of through traffic and foster local economy. Considering the open space amenity, variety, quantity and distribution through a connected network. Considering people on country through recreation and opportunities for gathering.

PUBLIC DOMAIN

The Draft Structure Plan envisages an active, safe, accessible and inclusive public domain comprising active main streets, community facilities and open spaces that provide for a range of recreational activities.

Community Gathering Spaces

Local Park

Local Centre

Sporting fields

Local Centre

The Draft Structure Plan proposes a number of local parks plus two sporting fields across the site. The parks are located where all the residents are within a 5-10 minute walk from home. A community centre is to be incorporated in the new local centre. These facilities provide places for people to interact and gather.

HERITAGE AND CULTURE

The Draft Structure Plan will not impact any heritage item within or in the vicinity of the subject site.

WaterNSW Upper Canal

There are no heritage items within the site area.

However, WaterNSW Upper Canal, which runs just outside of the western site boundary is recognised to have significant heritage value. The Draft Structure Plan provides an opportunity to connect the residents to the canal via the preserved CPCP land. This provides both cultural and recreational value to the community.

COMFORT AND SAFETY

Residents will have access to places that are safe and high-quality. Activation and passive-surveillance are provided across the precinct, and streets offer ample and safe space for pedestrians, cyclists and drivers.

Green Spaces

The Draft Structure Plan offers generous green spaces and street trees that provide for shade and reduce urban heat island effect.

Preserved CPCP

The preserved CPCP land provides people with potential access to nature and assist with achieving a sustainable neighbourhood

LOCAL POPULATION

Support population growth by delivering approximately 3,000 new homes to the North Appin Precinct.

LOCAL ECONOMY

Housing, amenities, infrastructure and services are proposed to support the growing community and boost local economy.

Local Centre

A local centre is proposed at the heart of the neighbourhood along the new Transit Corridor. It accommodate various functions including retail, health, and services and also create employment opportunities for the community.

Greater Macarthur 2040 Transit Corridor

This corridor provides public transport, active transport and pedestrian connection to/from other regional key destinations, and it is a key infrastructure for the Greater Macarthur Growth Area.

Figure 40 Place Strategy

0 100 200 300 400 500

8.0
IMPLEMENTATION

8.1 Utilities

Resilient utilities planning underpins the efficient and timely delivery of housing and employment in new growth areas. Initial investigations determined that several options are available for a staged approach to utility provision that utilise the existing trunk services in the vicinity of the site while embracing sustainability. There is an opportunity for initial connection to key utility services, as well as being able to contribute to the delivery of long term solutions.

UTILITIES	STRATEGY
Recycled Water	At this stage there are no plans for recycled water on site as it will not be available until the Upper Nepean Treatment Plant is operational in around 2031-2032. To future proof the site and facilitate future reticulated recycled water, it is proposed to construct the purple pipe recycled water reticulation throughout the site with a temporary cross connection to the potable water network.
Potable Water	A temporary reservoir may be required to support initial stages of development, ahead of Sydney Water completing upgrades to the Macarthur WFP.
Waste Water	For New Gravity Mains, SPS and Pressure Mains, Connection to the existing sewer network at Rosemeadow via new gravity mains, pump stations and pressure mains to be delivered at start of development. For New Pressure Mains, Connection to future Upper Nepean AWRC via new pressure mains to transfer flows from the site to the west to be delivered once the new AWRC is operational (circa 2031).
Electricity	A new zone substation of approximately one hectare in size will be required. The new zone substation on the site to be delivered in early stages of development when existing capacity at Appin zone substation has been exhausted. Four new 11kV feeders from either the existing Appin zone substation (subject to available capacity) or new North Appin zone substation to supply development.
Telecommunication	Subject to confirmation by NBN Co., fixed line infrastructure will be extended to the site from the existing Fibre Access Point. It is anticipated Telstra's existing 5G coverage will continue across the site as the development progresses. With other telecommunication providers coming online in the future.
Gas	Gas pipeline to be retained in green corridor. Two road crossings over easement to be provided, with reticulation infrastructure to be co-located with new roads.

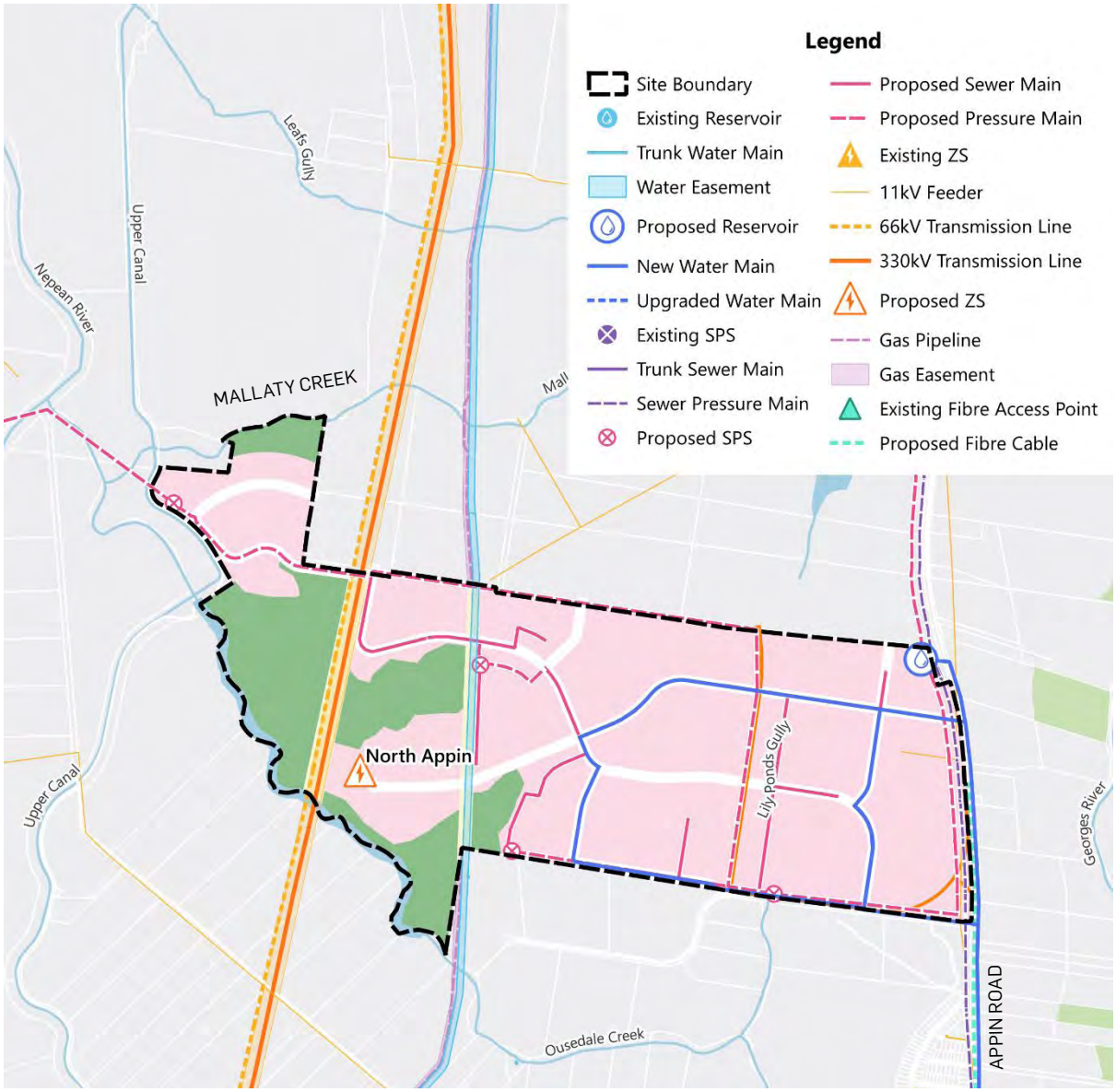


Figure 41 Utility Strategy (Source: IDC)

8.2 Precincts

The subject site is envisaged to deliver approximately 3,000 dwellings across 14 precincts as indicated in Figure 43.

Generally, development will commence on the eastern side at Appin Road and progress in a westerly direction.

Delivery of key amenities will be within Precincts 1-5. This includes the delivery of the primary school, a sporting field, and the retail centre. This will bring more residents to the precinct earlier to support the growth of the community and offer more affordable housing options.

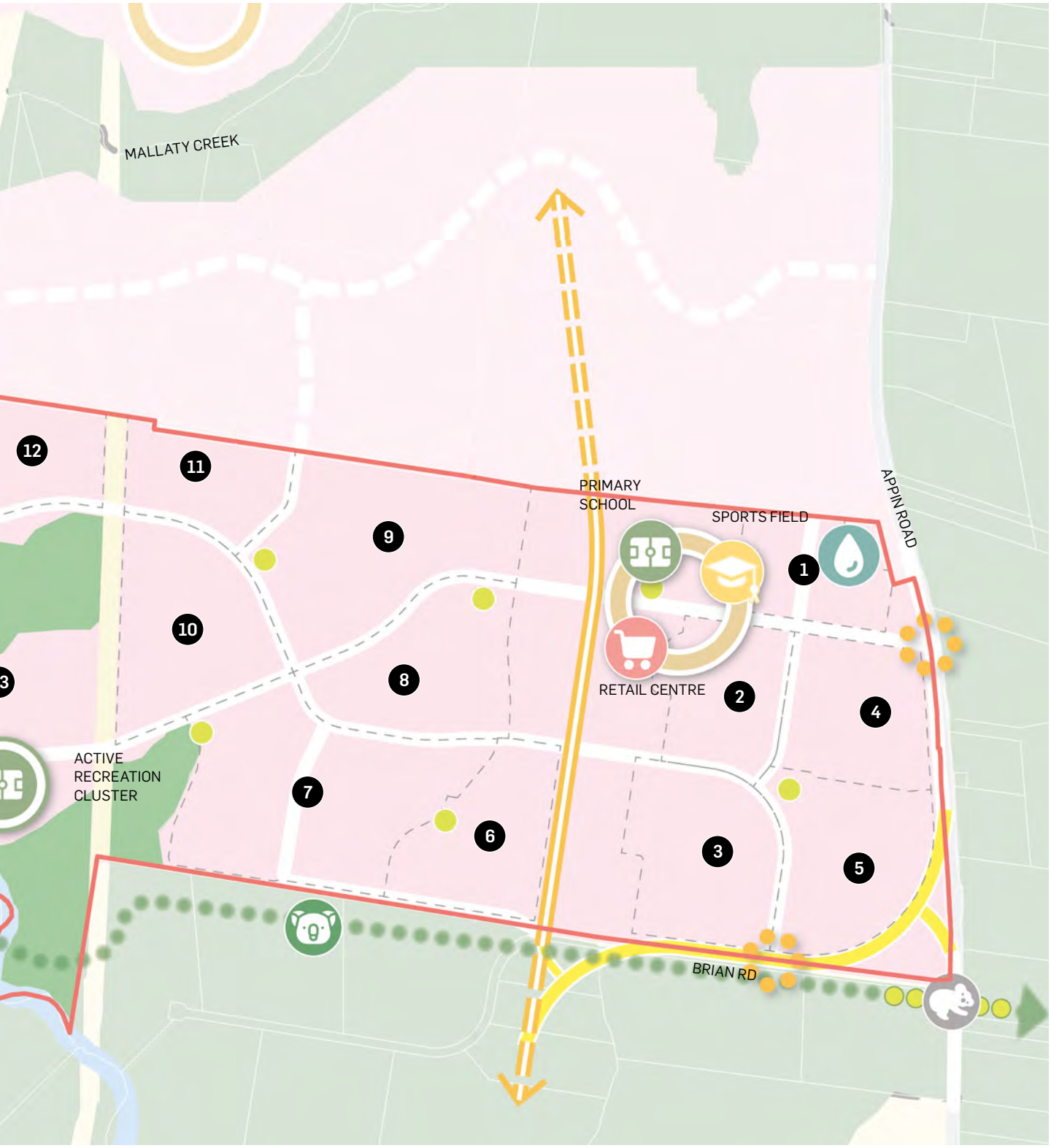
Later precincts (Precinct 7 onwards) will deliver mainly low density residential development adjacent to areas of environmental sensitivity. Also, the active recreation cluster will be delivered in Precinct 13 to service the growing community.

Legend

1 Precincts

Figure 42 Indicative Staging Plan

Disclaimer: All areas and yields are approximate only and subject to further det



ailed investigation. These figures should be used as a guide only.

9.0
CONCLUSIONS

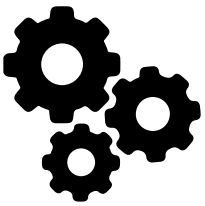
9.1 Conclusion

The Draft Structure Plan is framed around the significant investment and opportunities depicted by the Greater Macarthur 2040. It is designed to sensitively respond to the unique ecological assets and envisions a thriving community that harmonises with the rich heritage of the Country.

The Draft Structure Plan embodies key connecting with Country principles, considers the site's constraints and opportunities and provides a robust framework for future development. In summary, the Draft Structure Plan has provides for:

Environmental Conservation

Approximately 56 ha of CPCP land and Ousedale Creek Koala Corridor will be preserved. A green network is established as well within the site to provide additional green spaces and tree canopies.



Key Infrastructure

Land dedicated for essential enabling infrastructure including a Zone Substation, a Reservoir and the north-south Transit Corridor earmarked by Greater Macarthur 2040.

Also, a local centre comprising a primary school, retail facilities and a community centre will be proposed at the heart of the precinct.

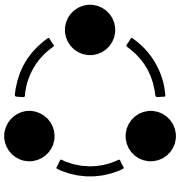
Liveable Neighbourhood

Residents are within walking distance to local parks, and key destination. Two sportsfields are provided at either end of the precinct to diversify recreation offering.

The neighbourhood will be well-connected by high-quality footpaths and cycleways that will be separated from arterial roads and regional traffic.

Housing for Everyone

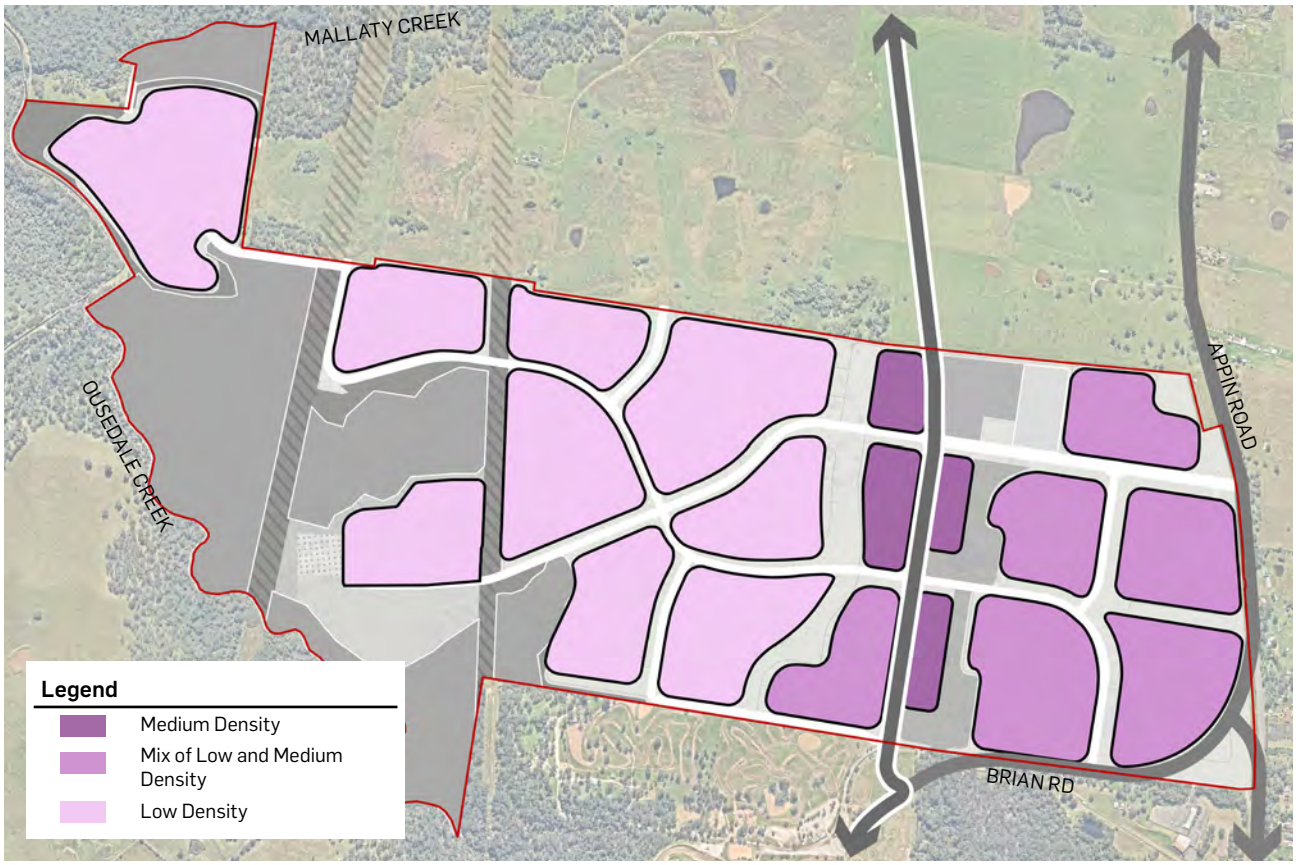
Opportunities to deliver approximately 3,000 dwellings in a various typologies ranging from more affordable smaller-sized housing to life-style lower-density houses.



Thriving Community

New local parks and community facilities will encourage community members to gather. Residents will not only be connected with each other but also the region. Visual primacy will be established to local ridgelines, and the future design will frame key view corridors so people could connect to the sky, land and water.

The delivery of this Draft Structure Plan will assist achieving the vision set out by Greater Macarthur 2040. Accordingly, favourable consideration of this Urban Design Report and Draft Structure Plan is sought as part of a recommendation for the Planning Proposal to be endorsed for gateway determination by DPE.


MALLATY CREEK
OUSEDALE CREEK
APPIN ROAD
BRIAN RD
Legend
Medium Density
Mix of Low and Medium Density
Low Density


Subject Site
MALLATY CREEK
OUSEDALE CREEK
APPIN ROAD
APPIN ROAD
APPIN
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