

APPENDIX G

Orchard Hills North: Supporting Technical Documents

G1 Urban Design Report

ORCHARD HILLS NORTH

URBAN DESIGN REPORT

December 2021



URBAN DESIGN REPORT ORCHARD HILLS NORTH

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1 INTRODUCTION

Legacy Property is proposing to rezone a site in Orchard Hills North, located within the Penrith LGA. The proposed rezoning area is approximately 151.92 ha with frontages to Caddens Road to the north, Kingswood Road to the west, the Western Motorway to the south and Claremont Meadows residential lots to the east.

The Site comprises 54 existing lots (including the school and Uniting Church) within the proposed rezoning area, located at the following addresses:

- 80-154 Caddens Road, Orchard Hills
- 26-48 Kingswood Road, Orchard Hills
- 117-149 Castle Road, Orchard Hills
- 53-105 Castle Road, Orchard Hills
- 182-226 Caddens Road, Orchard Hills
- 2-164 Castle Road, Orchard Hills
- 1-5 Castle Road, Claremont Meadows
- 7 Castle Road, Claremont Meadows
- 5, 9, 13, 19, 23, 29, 33 and 35 Frogmore Road, Orchard Hills

The existing fragmented ownership has historically made coordinating planning or development of the area difficult, however Legacy Property has now secured agreements covering a majority of the rezoning area.

Legacy Property nominated the Site under Penrith City Council's Accelerated Housing Delivery Program in October 2017. In November 2017 the Site was endorsed by Council as a short-term rezoning opportunity to allow housing delivery over the next 3-5 years.

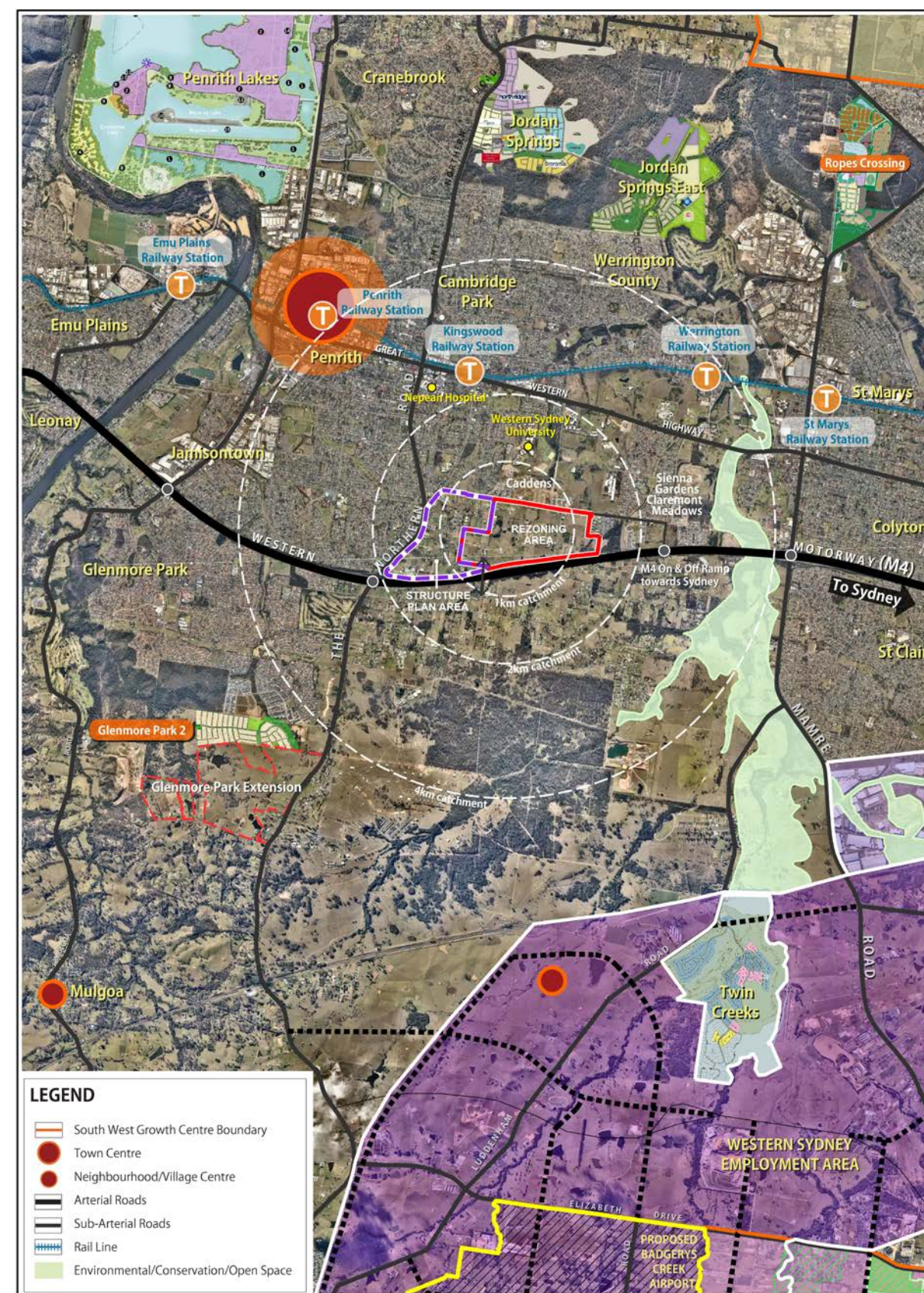


Figure 1: Regional Context

1.1 STRUCTURE PLAN AND REZONING AREA

The Planning Proposal for the Orchard Hills North rezoning area aims to rezone the 151.92 ha site from agricultural land to mixed land uses, forming around 1,729 residential lots, a neighbourhood centre and numerous areas of green space.

Discussions with the Department of Planning and Environment (DP&E) and Council have highlighted the need to consider the logical extension of the rezoning area west (namely the Structure Plan area) to The Northern Road, to ensure that future land uses and connections for the entire Orchard Hills North precinct are planned in a holistic manner.

In order to ensure that the future development is fully integrated, a high level Structure Plan has been prepared for the entire precinct, covering an area of approximately 268.06ha. The Structure Plan considers how the rezoning area, Area A, (151.92ha) integrates with the balance of the precinct, Area B, (116.14ha) and identifies potential future land uses as well as key road connections. It is expected that the Structure Plan will provide a framework for the future rezoning of the remaining area, either through a Council Local Environmental Plan (LEP) amendment or a developer/owner led Planning Proposal.

Council has endorsed proceeding with the rezoning area at present to meet the objectives of its Accelerated Housing Delivery Program. A significant factor in this approach is that Legacy Property has secured agreements covering a substantial part of the rezoning area and is therefore in a position to progress with the planning proposal and provide greater certainty for coordinated future development. Council is also proposing to undertake a strategic corridor study for The Northern Road and any proposal to rezone that land may pre-empt the outcome of this study.

Consequently, the same level of technical investigations undertaken for the rezoning area have not yet been undertaken for the wider Structure Plan area. The balance of the Structure Plan area has been considered as part of investigations for this planning proposal, however not at a detailed level to support rezoning.



Figure 2: Proposed Rezoning and Structure Plan Area

1.2 BACKGROUND

The cultural landscape of the Orchard Hills North site has developed as a rural landscape over the past 100 years with constantly evolving pastoral practices and declining Cumberland Plain Woodland. Within the last 50 years Orchard Hills North has typically been associated with orchard food production, grazing farming practices with some specialisation in agricultural farming and rural residential communities.

Although genuine food production practices have steadily declined over recent years, and only two lots within the site are currently used for any form of agricultural production, the site remains zoned as RU4 Primary Production Small lots. Today, the majority of the site is utilised for residential purposes and has been substantially cleared.

1.3 OUR VISION

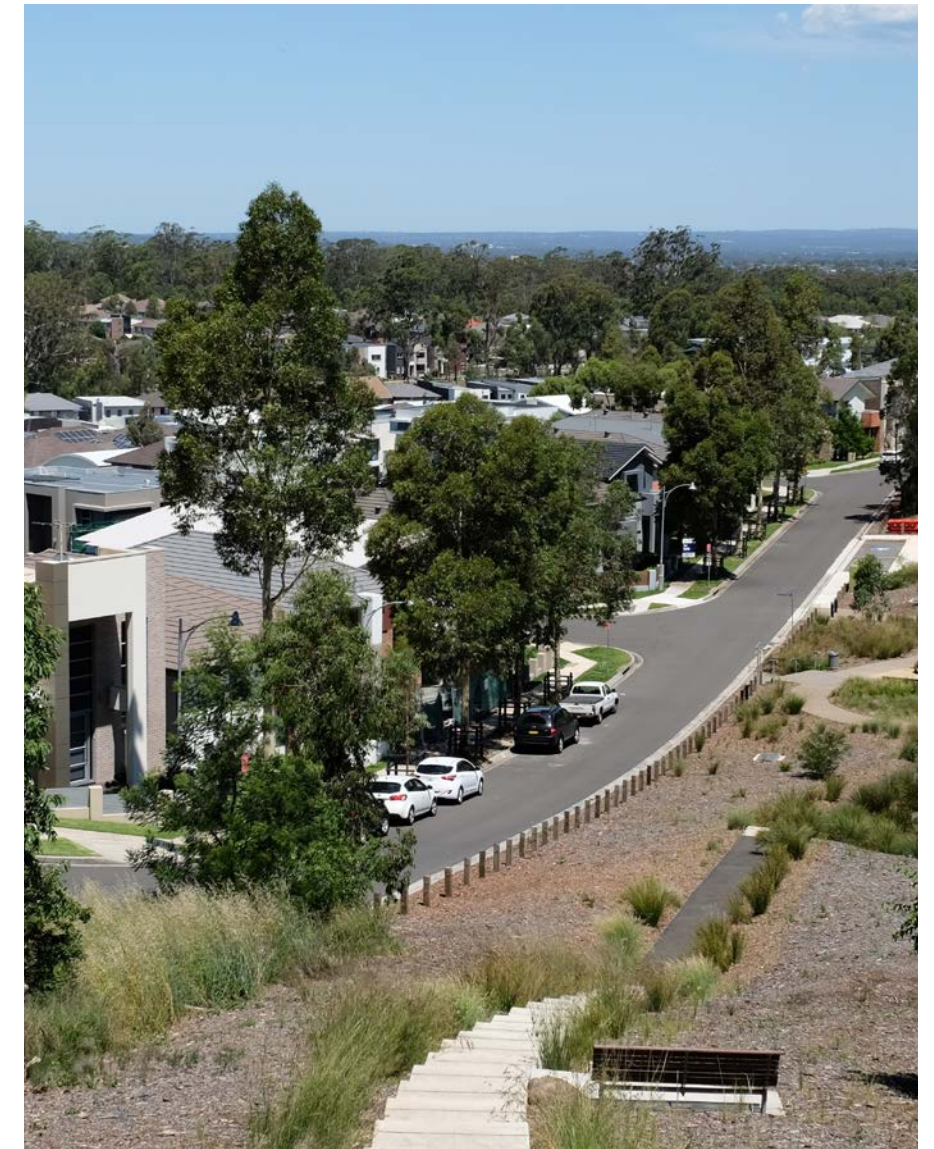
Orchard Hills North will be a residential community set amongst rolling hills in the rich natural landscape of Western Sydney and offering panoramic views to the Blue Mountains and surrounding areas. The development will incorporate a diverse mix of housing types across 1,729 dwellings, focused around a new neighbourhood centre that forms the focal point of the future community and offers a high level of convenience for residents.

The overarching objective of Orchard Hills North is to support a safe and connected community. This will be achieved through the provision of a wide variety of green spaces and links, connecting each of the future neighbourhood precincts with one another as well as the wider regional community, thereby placing a focus on active transport such as walking and cycling.

1.4 DESIGN PRINCIPLES

A site analysis supported by extensive technical studies has informed the following design principles for the Structure Plan and rezoning area:

- Retain key creek lines and capitalise on the opportunity to create a central green link.
- Retain existing significant vegetation as natural bushland.
- Manage and retain views into and out of the site.
- Create a new neighbourhood centre combined with a relocated primary school to establish a community focal point.
- Provide opportunities for a diverse mix of housing types, with medium density housing located around the neighbourhood centre and major open space amenity.
- Respect heritage buildings and the character of the area.
- Integrate with the community to the north, west and east.
- Link O'Connell Lane, Caddens Road, Frogmore Road and The Northern Road into a meaningful urban road network.
- Improve water quality and water flow.
- Utilise landscaping and topography on the southern boundary to manage noise.
- Promote pedestrian and cycle linkages.
- Generate employment opportunities along the Northern Road.



1.5 PROPOSED REZONING

It is proposed to rezone the site for predominantly residential uses. The rezoning of Orchard Hills North will provide between 1,729 residential lots.

It is expected that the site will ultimately provide a broad mix of housing typologies from attached housing (comprising lots with land area of a minimum 220m²) to traditional detached residential lots (primarily 300-600m²) and larger environmental living lots (2,000m²). The proposed neighbourhood village centre will provide around 6,000-8,000m² of retail space supported by cycle and pedestrian links with approximately 15.77 ha of open space and bushland and in addition 4.54ha of riparian corridors.

The site is physically and strategically suited for urban development, noting that:

- It is a discrete area formed by the boundary of an existing urban area and major road infrastructure.
- It adjoins an existing residential subdivision, and is in close proximity to the Nepean hospital, Western Sydney University and the Penrith CBD.
- There are limited environmental or physical constraints that would prevent redevelopment.
- It is outside the Western Sydney Priority Growth Area and is therefore better placed to be rezoned through a developer led planning proposal.
- The rezoning of the land will support the Government's investment in infrastructure and will result better utilisation of the land.
- The site has proximity to an extensive regional road network and is well located in terms of the future Western Sydney Airport and employment lands of Eastern Creek and the Western Sydney Employment Area (WSEA).
- It is able to capitalise on the availability of new and existing infrastructure, such as the recently completed Werrington Arterial Road and new M4 on and off-ramps, the signalisation of the Frogmore Road/Northern Road intersection as part of The Northern Road upgrade, and four train stations within 4.5km of the site (Penrith, Kingswood, Werrington, St Marys).

2 SYNOPSIS OF SITE INVESTIGATIONS

2.1 SPECIALIST CONSULTANTS INVESTIGATIONS

2.1.1 Traffic and Transport Assessment

Traffic and transport was assessed for the site and its surrounds by reviewing the existing traffic and transport conditions, generating preliminary trip data, determining likely infrastructure upgrades and identifying public transport measures. The report found that at least five percent of mode shift towards public transport would be expected once Orchard Hills North is developed. Opportunities for further mode shift could be achieved through the implementation of further bus services. The following road upgrades are noted:

- The Northern Road upgrades.
- Werrington Arterial Stage 1 upgrades.
- Upgrade of Caddens Road and Cadda Ridge Drive.
- Upgrade of O'Connell Street.

The TMAP technical report has been endorsed by TfNSW and Penrith City Council.

2.1.2 Geotechnical Investigation

The key geotechnical constraints identified for the site are as follows:

- Potential for slope instability on the steeper slopes
- Moderate to highly reactive soils
- Moderate and high potential of saline soils

None of the above will result in any limitations to development if adequately addressed. The Geotechnical Engineering assessment concluded that the subject site is suitable for construction of residential buildings.

2.1.3 Site Contamination

Preliminary site contamination findings as a result of a site inspection and desktop study are as follows:

- Historic and current uses of the properties for orchards and market gardens and the grazing of animals.
- Presence of asbestos likely in some buildings and in stockpiles and fragments of some properties.
- Presence of above ground fuel tanks and limited agricultural chemical storage.
- Rubbish scattered and stockpiled on some sites.
- Infilling of farm dams with unknown materials.

The site can be remediated and made suitable for residential development.

2.1.4 Water Cycle & Flood Study

Water cycle and flood management was assessed as part of the rezoning proposal with a comprehensive strategy formulated for the effective management of existing and proposed flows through the development site, with a series of basins proposed.

The proposed basins will form part of a comprehensive water quality and detention system, together with the retention and vegetation embellishment of Werrington Creek and Claremont Creek as natural creekline corridors through the site. This technical report has been endorsed by Penrith City Council.

2.1.5 Ecology

A Flora and Fauna assessment was undertaken across the site. During the surveys one hundred and fifty plant species were recorded with the majority being exotic. Sixty five fauna species were recorded within the subject site with five threatened species detected. River-flat Eucalypt Forest is listed as Endangered under the Biodiversity Conservation Act 2016 and occurs as a linear corridor along Claremont Creek in addition to fragmented patches throughout the site. Cumberland Plain Woodland is listed as critically endangered under both the Biodiversity Conservation Act 2016 and the Environment Protection and Biodiversity Act 1999.

The report accounted for the proposal removing 120 hectares of non-native vegetation dominated by exotic grasslands and weeds. Cumberland Plain Woodland is proposed to be retained within bushland parks and creek corridors.

There is the potential for 0.85 ha of River-flat Eucalypt to be removed to facilitate development subject to offsetting. The report found that the proposed avoidance, mitigation and compensatory measures are likely to sufficiently manage the impacts of the project.

2.1.6 European Heritage

Heritage was assessed for the site and its surrounding areas and the following key considerations:

- Proposals for development should conserve the heritage significance of the heritage items identified on site (identified as 155, 156, 657 and 845 on the LEP map) and known as Brick Farm House, Lindfield, Orchard Hills Uniting Church and Water Reservoir.
- Proposals for development should aim to conserve the heritage significance of heritage items within and in the vicinity of the site through appropriate visual curtilage created by landscaping elements and new parks.
- Interpretation of road names and the heritage items may be considered throughout the parks and community areas to provide an appreciation of the development history of the site.
- Sections of the site are classified as having Scenic and Landscape Values under Penrith Local Environmental Plan 2010.
- Future development of the site is to consider the visual impact of the new development and include and the identified heritage items and curtilage.

2.1.7 Aboriginal Cultural Heritage

An Aboriginal Heritage Study was undertaken of the site that included field surveys and desktop survey and no Aboriginal objects (artefacts) or Aboriginal archaeological sites were identified within the study area.

Desktop assessment and background research indicates that there are seven area of potential Archaeological deposits (PAD) sites within the study area with moderate Aboriginal archaeological potential. Where avoidance of these PAD sites is not possible, a further assessment would need to be undertaken to determine if an Aboriginal heritage impact permit (AHIP) is required.

2.1.8 Landscape Strategy

An open space and landscape strategy has been endorsed by Penrith City Council which provides a comprehensive design approach for the ridgelines, riparian areas and streetscapes and vegetation to be retained. This analysis sets up the following landscape design principles:

- Maintain and develop views from the ridge line and all points west and south west of the ridge line out towards the Blue Mountains.
- Identify and maintain views out to the Blue Mountains and towards the semi-rural land .
- Maintain and develop views looking east along street towards the distant views of the South Creek riparian corridor.
- Protect existing watercourses and associated vegetation.
- Riparian corridors should be designed to manage a diverse range of community needs.
- Riparian vegetation areas should have a strong management edge such as a pathway or roadway.

2.1.9 Retail Assessment

A preliminary retail market assessment was undertaken that determined current retail capacity in the area and the potential for a new supermarket within the proposed area for rezoning. The analysis showed that a supermarket can be supported by the new proposed population.

Two areas were investigated as potential locations for the new local centre and these included a central location near the current

Kingswood Road and Castle Road intersection or at the western edge near Bringelly Road. The analysis concluded that the co-location of non-retail uses around a retail centre make a central site more appealing. Centrally located retail facilities may also result in greater equity of access for residents. The retail site is proposed to be centrally located being east of Kingswood Road, with the northern boundary of the site facing Castle Road.

2.1.10 Infrastructure Servicing Assessment

Services and infrastructure options were investigated for the site and included potable water, wastewater, electricity, telecommunications and gas. Substantial existing infrastructure is present in and around the site and it is understood that there may be sufficient capacity to support the potable water needs of the development. The existing trunk mains are proposed to be maintained in their current location.

The Sydney Water Growth Servicing Strategy to June 2019 confirms that the adjoining Claremont Meadows Stage 2 can be serviced by connection to existing infrastructure and the Caddens Road Precinct to the north has been serviced by developer lead in works. There are two main services at present that feed into the St Marys trunk system. Amplification works downstream may be required in order to provide further wastewater capacity.

NBN Co. is the main provider of telecommunications within the precinct. Currently there are no NBN Co. assets fronting the site on Caddens Road. However, there are assets north of the site in Caddens and in Castle Road, Frogmore Road and Kingswood Road at Orchard Hills within the site. As such, connection is not expected to be an issue for the development. Jemena is the provider of natural gas in the area and has confirmed that there is capacity to service the development.

2.1.11 Bushfire Assessment

The bushfire assessment report identified that the majority of the Rezoning Area is substantially cleared land with undulating topography. Therefore APZ requirements were only recommended for the rehabilitation of Werrington and Claremont Creek and for the vegetation in the M4 Motorway to the south of the rezoning area.

2.1.12 Social Infrastructure Assessment

The community needs were assessed to be as follows (based on 1,729 dwellings and a population of 5,187 people):

- One new primary school.
- No provision for new health care facilities.
- The development should encourage an active lifestyle.
- Community facility contribution to be made offsite or within the new local centre.
- Additional childcare demand of 156 places which is likely to be met by existing facilities.
- New parks within the development totalling 15.77 hectares of open space.
- Embellishment of land adjacent to the natural open space riparian corridors to allow for walking and cycling connections.

2.2 SITE CONSIDERATIONS AND CHARACTERISTICS

2.2.1 Existing Land Use Activities

The existing land uses within the site include four heritage items, together with Orchard Hills Primary School. The land is predominately currently used for large lot residential purposes and incorporates some market gardens and animal grazing. Notable features of the site and its immediate surroundings include an interface with the M4 motorway and a well located precinct in terms of access to a regional road network being The Northern Road and M4 Motorway. The wider structure plan area also includes further educational uses including Penrith Christian School.

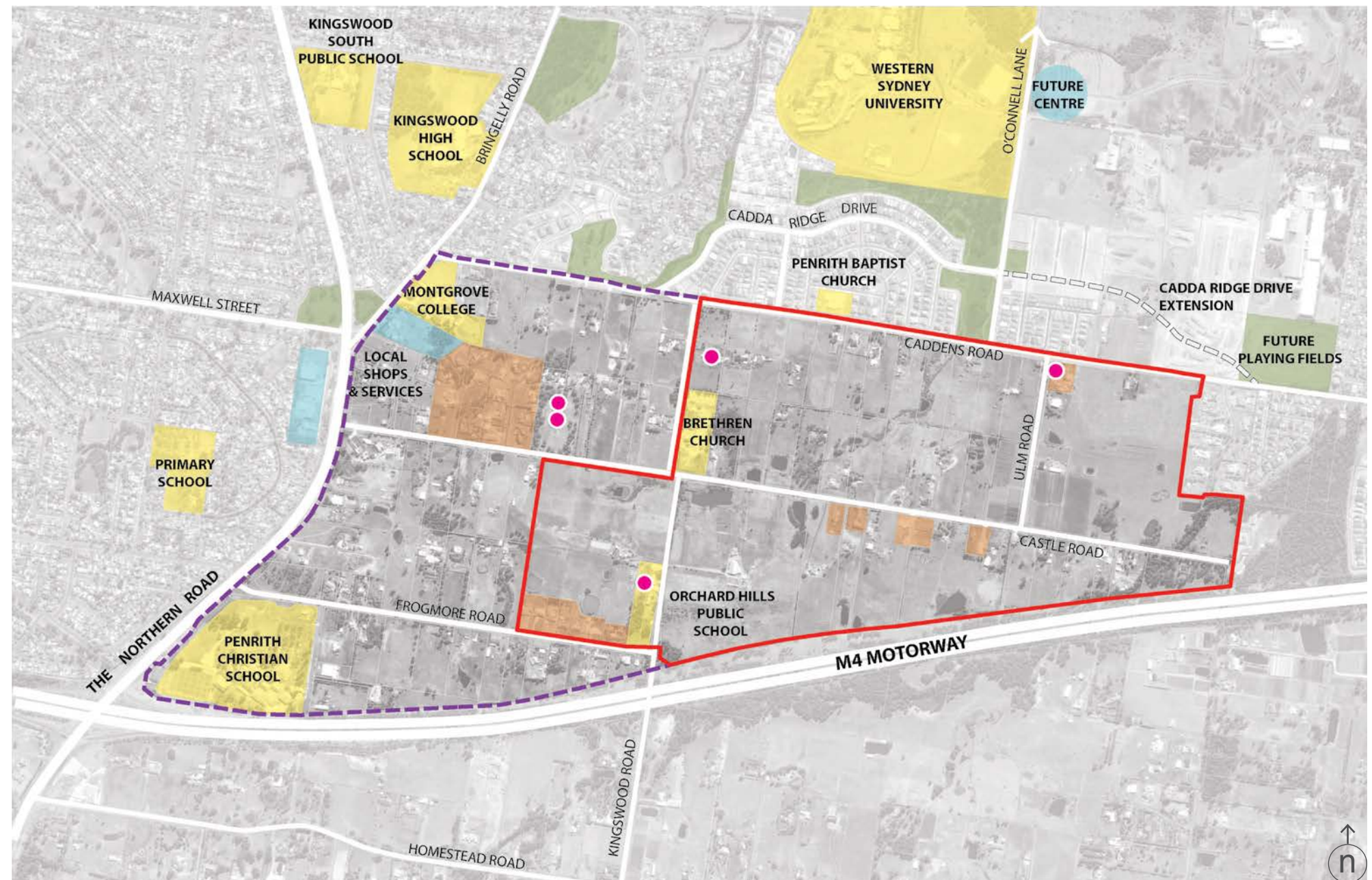


Figure 3 : Existing Land Use Activities

LEGEND

	Subject Site		Commercial
	Structure Plan Area		Large lots to be retained
	Community		Heritage Item
	Open Space		

2.2.2 Existing Movement Patterns

The site has a number of access points including The Northern Road (from the west), Caddens Road (from the north) and Kingswood Road (from the south). Entry points are to be considered in the context of sight lines and road grading as the topography is undulating which impacts on movement through the site. The site will benefit from road upgrades to The Northern Road as part of works being undertaken by the Roads and Maritime Services (RMS) and planned upgrades to Frogmore Road as part of the proposed redevelopment.

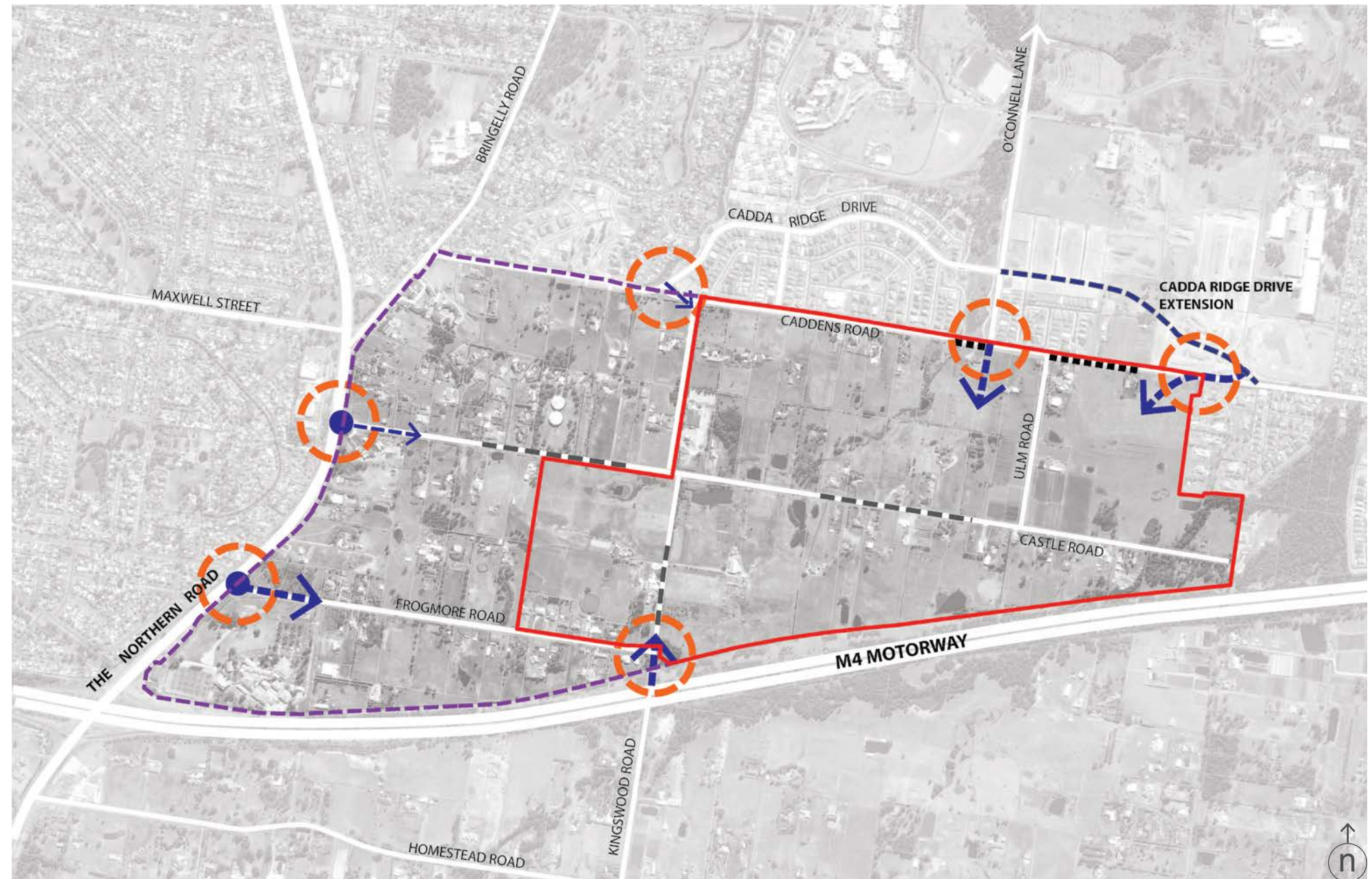


Figure 4 : Existing Movement Patterns

LEGEND

- Subject Site
- Structure Plan Area
- Gateway/Entry Statement
- > Access
- Poor sight lines and existing road gradings
- Caddens Road Closure

2.2.3 Vegetation Classification

The site has been predominantly cleared of most native vegetation. There exists small pockets of scattered and fragmented stands of Cumberland Plain Woodland and River-Flat Eucalyptus Forest across the site. These ecological constraints are identified in Figure 5 and their protection are to be considered in the urban design.

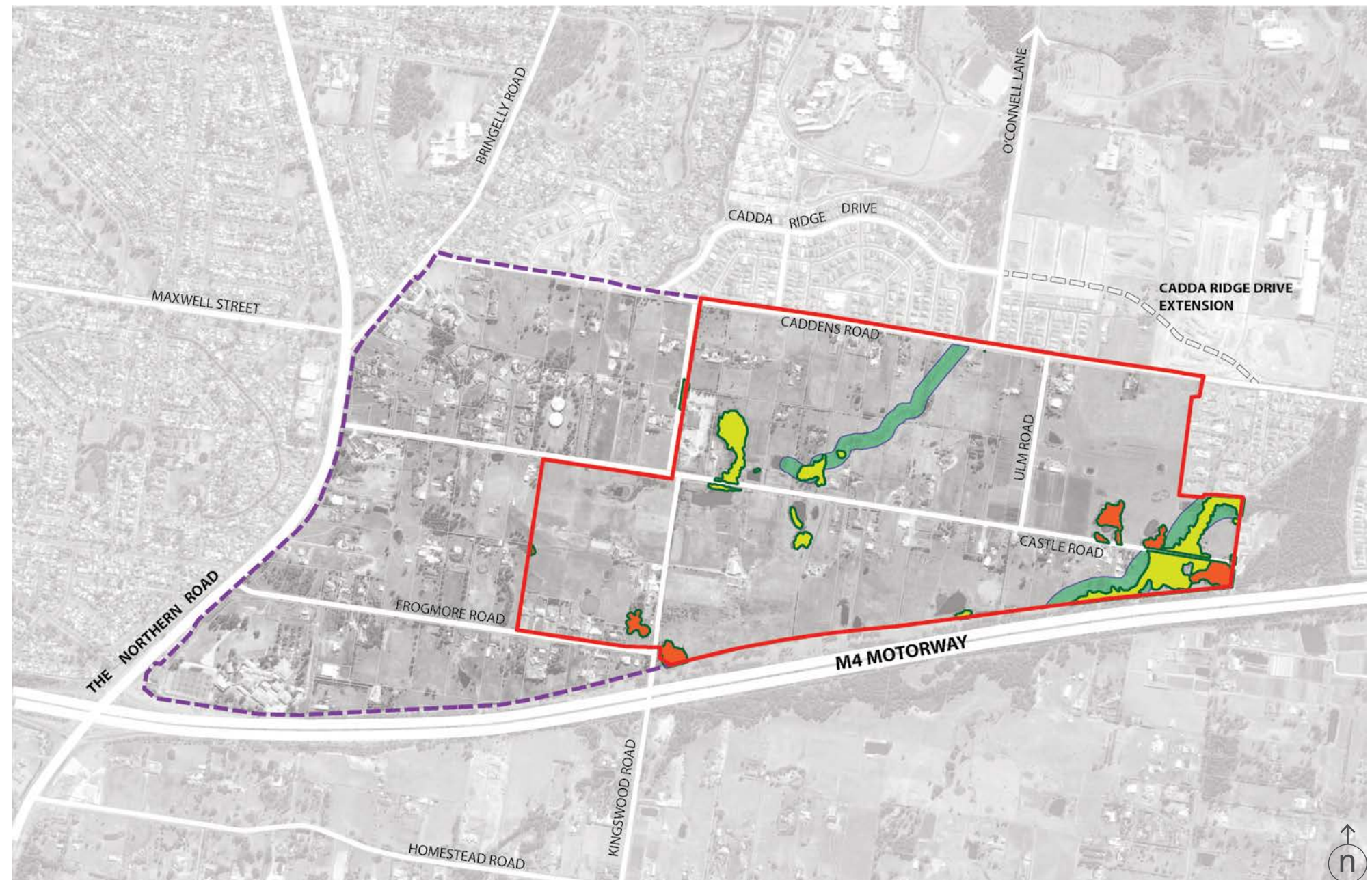


Figure 5: Significant Vegetation Mapping

LEGEND

- Subject Site
- Structure Plan Area
- Moderate Ecological Constraint
- High Ecological Constraint
- Riparian

2.2.4 Topography and Geographical Features

The topography is undulating, creating a landscape with view corridors and distant views to the Blue Mountains. Werrington Creek and the hills that enclose it also creates a distinct valley bowl. The site has special places of value including heritage items on hilltops with significant ridgelines. Much of the land is between 5-10% slope and the steepest land is at 20%+ slope.

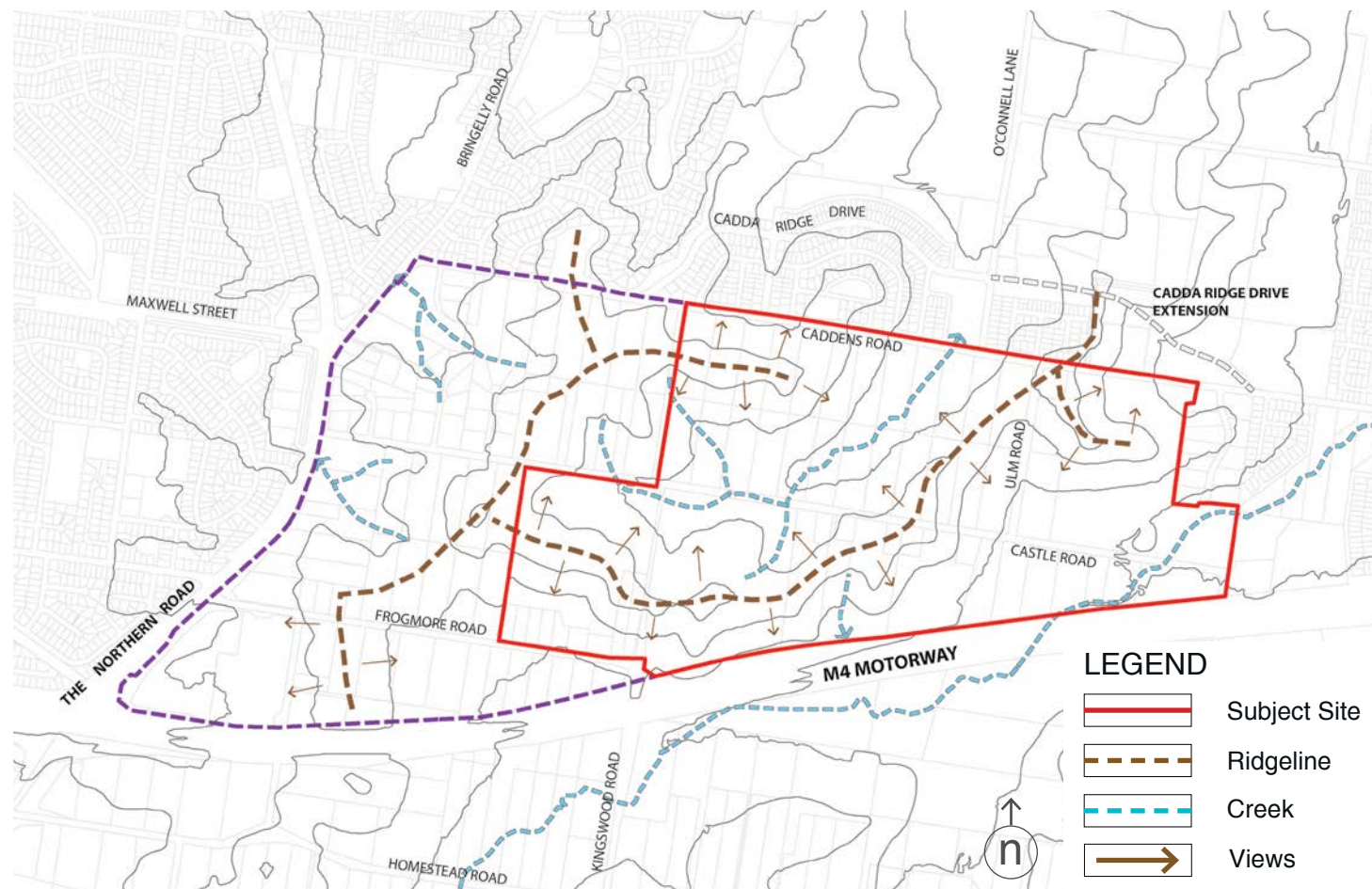


Figure 6: Ridgelines and Creeks

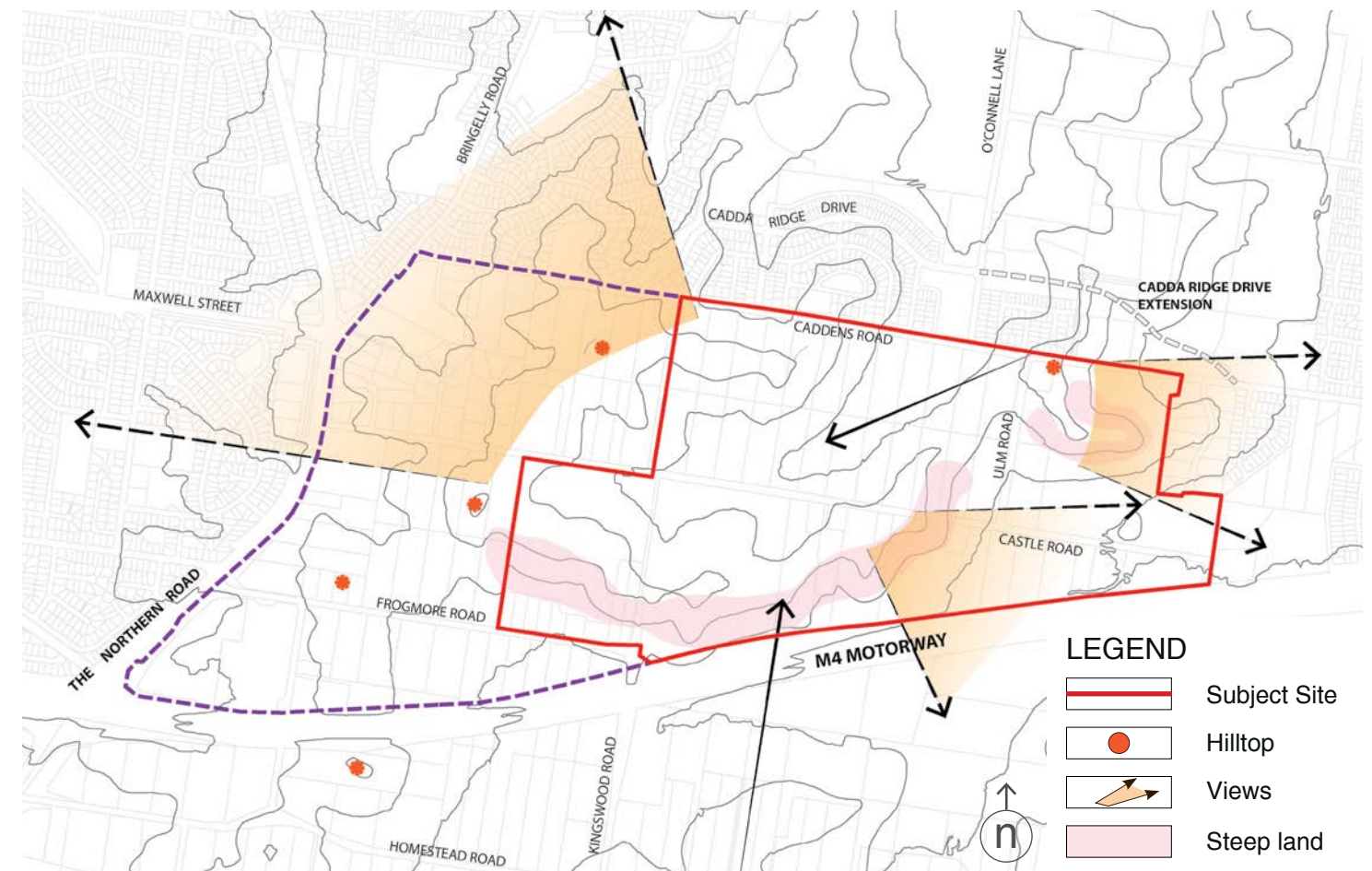


Figure 7: Views and topography

2.3 RESPONSE TO THE PHYSICAL SITE FEATURES

The site benefits from a pleasant outlook over the blue mountains and a local area that makes an ideal canvas for a unique residential community that will attract new residents engaged with the natural characteristics of the site whilst being well located to local amenities.

The detailed site analysis shown below as Figure 8 identifies dominant features of the landscape that influence the urban design and assist to establish a strong sense of identity for future residents through achieving a diverse visual landscape that reinforces the inherent reasons for people wanting to live in the area.

The identified elements such as prominent ridgelines and valleys, creeklines, significant trees and view corridors together with an existing fabric of local heritage buildings create a hierarchy and contrast between the natural environment and the new urban environment by commanding attention and creating landmarks of distinction on the landscape. It is these elements that also guide the urban form.

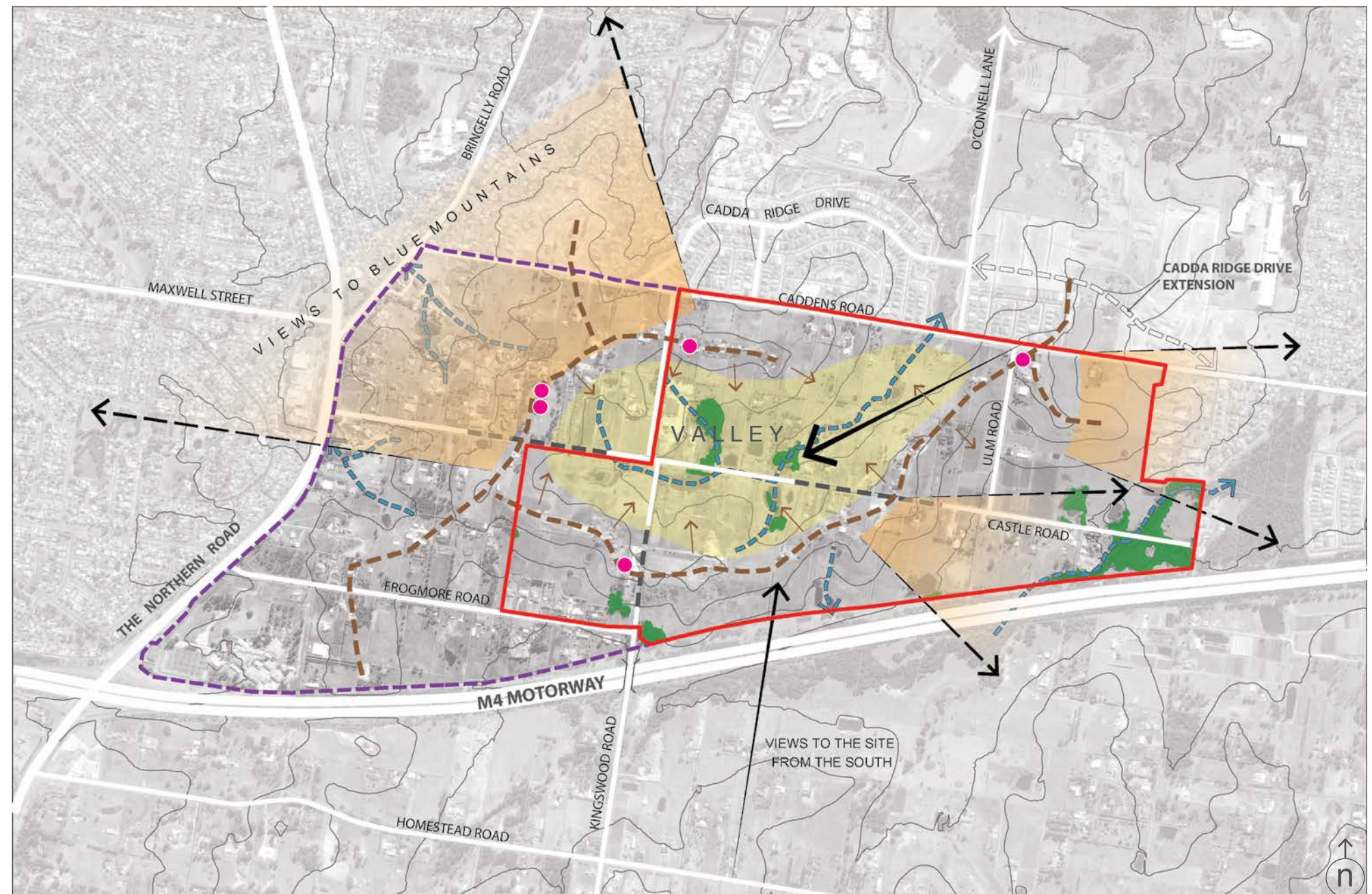


Figure 8: Detailed Geographical Site Analysis

LEGEND

 	Subject Site	 	Valley/Bowl
 	Structure Plan Area	 	Heritage Item
 	Vegetation/Bush	 	Creek
 	Ridgeline	 	Poor sight lines and existing road gradings
	Views		

3 DESIGN APPROACH AND RATIONALE

3.1 DESIGN PHILOSOPHY

The contemporary urban design philosophy applied in realising the vision for Orchard Hills North focuses on creating a well-connected and highly sustainable urban environment with all the activities required by the local community in a close and convenient location and that is enriched by a backdrop of rolling hills. This approach integrates the natural creekline corridors with walking and cycling pathways connecting people to places and a central heart containing a new local centre for everyday convenience and amenity in close proximity to a new primary school (subject to negotiations with the Department of Education).

The emphasis on creating residential amenity and a sense of neighbourhood through compact housing forms around a new village centre that responds to the topography and environmental features of the site. The precinct is supported by a proposed relocated primary school (subject to negotiations with the Department of Education), local parks, riparian corridors and bushland areas.

Walkability is a key theme of the development, which proposes significant walking tracks along the creekline corridors, connecting people throughout the development to Caddens and bringing people into the centre of the development to the local centre. Streets are designed to be sensitive to topography and connect people to places they want to go, with leafy green streets set amongst the backdrop of the rolling hills. Pockets of bushland vegetation are to be retained, creating a haven for local birds and wildlife.

The development capitalises on significant growth and redevelopment within the Penrith Local Government area and connections and interchanges to the M4 motorway and road upgrades along The Northern Road. The development proposes acoustic treatment to the M4 motorway to create a high level of residential amenity for future residents that mitigates potential acoustic impacts from the motorway.

The development provides an opportunity to improve the safety of existing intersection treatments and to improve safety distances. Retaining pockets of bushland enhances the rural feel, which combined with the rolling hills establishes a strong foundation for a uniquely local character for the future community.

3.1.1 Design Principles

The urban design principles of the Orchard Hills North Master Plan area are based on creating a new community that retains the unique character and the heritage values of the site. These features are further enhanced by the natural environment which includes pockets of bushland to be retained in parks and delivers sustainability in the revegetation of creekline corridors which serve as the healthy arteries of the development, delivering people to places through a well-connected pathway and road network.

The fundamental elements underpinning the design philosophy are outlined as follows:

- Movement networks comprising of roads and pathways that connect people to places.
- Local Centre as a focal point of the development and for everyday convenience.
- New Primary School at the heart of the development.
- Local Parks in neighbourhood settings.
- Enhancement and protection of the natural environment with bushland parks and revegetated riparian corridors to retain the rolling hills of the landscape.
- Walkable community and tree lined streets enhanced by a walking and cycling path network.
- Business and Commercial land uses along The Northern Road, which is a major transport corridor, enabling the establishment of a variety of employment generating land uses.
- Creation of a safe environment with local convenience.
- Protection of the heritage quality of the site through the retention of heritage buildings and retention of natural bushland to maintain the rural character, particularly in the southern corner of the development.
- Inclusion of large lots in an environmental setting.

4 STRUCTURE PLAN OPTIONS DEVELOPMENT

Structure plans options were formulated for the land subject to the rezoning. Each option explored the relationship between the local centre, the proposed new relocated primary school and the existing central riparian corridor to form the heart of the development whilst considering future and existing movement patterns and how pedestrians, cyclists and motorists move within the precinct and site.

Each option considered the topography of the site, existing road connections, the existing heritage and environmental qualities of the site and the design principles outlined in chapter 3 to achieve a high quality concept design.

Some of the key design options explored and tested were:

- Location of the local centre and community facilities.
- Prominence of Werrington Creek Corridor within the precinct and relationship with the local centre.
- The alignment of major east-west and north-south roads and future transport corridors.
- Location and relationships between open spaces within the landscape (hilltop, ridgeline and valley).
- Road network in relation to topography and Water Sensitive Urban Design.

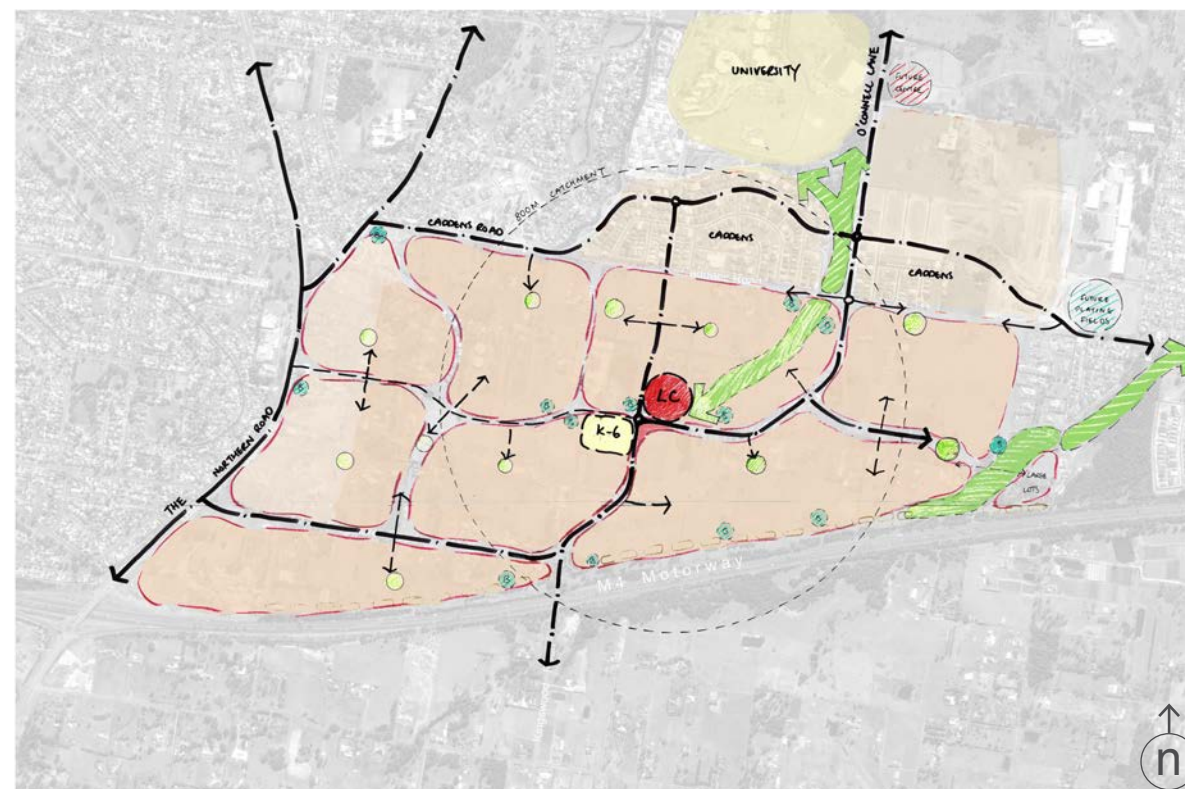
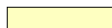


Figure 9 : Concept Structure Plan 1



Figure 10 : Concept Structure Plan 2

LEGEND

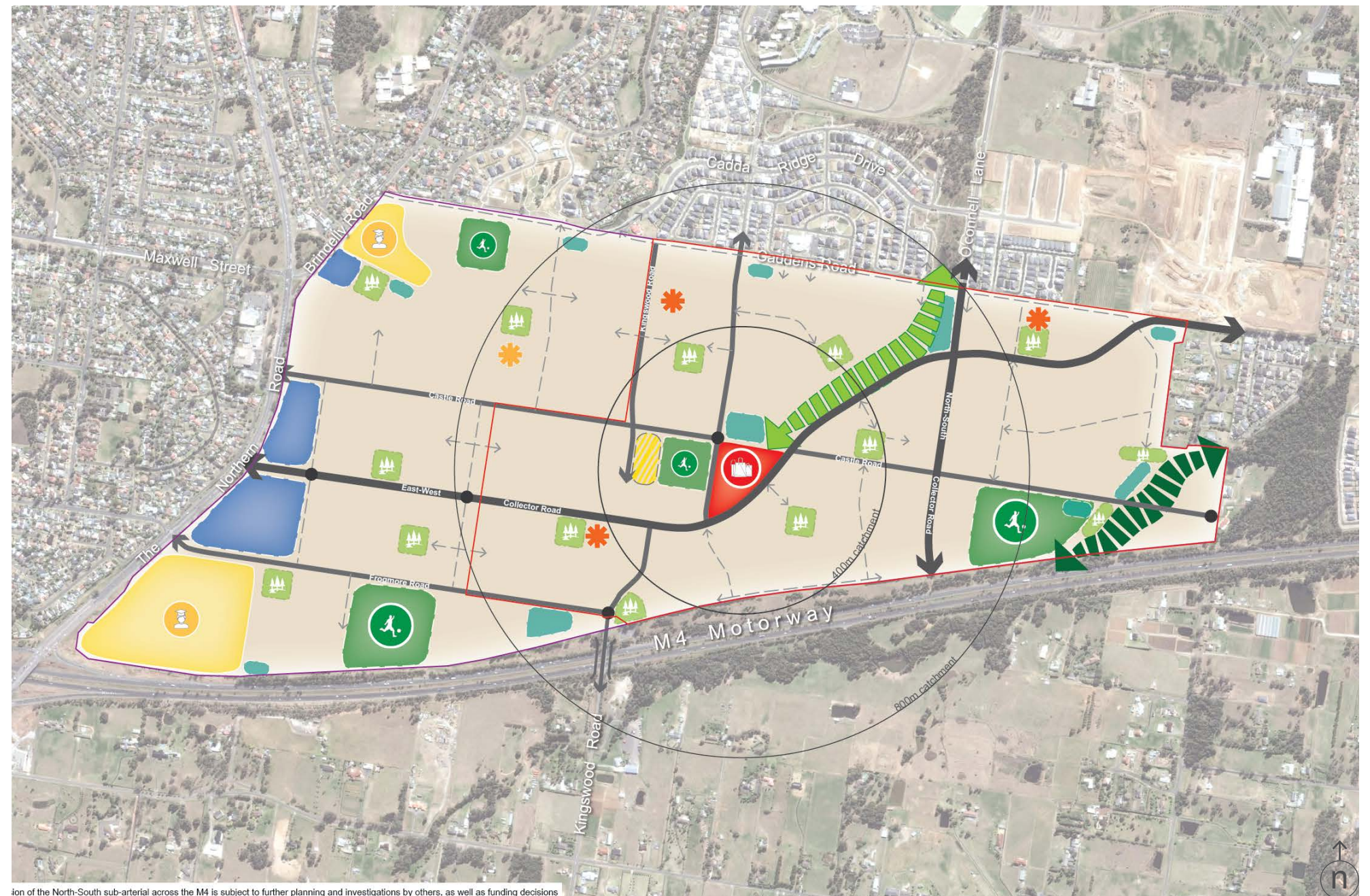
	Subject Site		Riparian
	Local Centre		Open Space
	Basin		
	Community		

5 PREFERRED STRUCTURE PLAN

5.1 URBAN CHARACTER AND LAND USE ARRANGEMENT

The Structure Plan creates opportunities for a range of land uses supporting the new residential community. These include recreational zones for new parks, drainage, opportunities for retail and employment, education and environmental conservation. The main elements are described as below:

- Local Centre – a local centre on a neighbourhood scale to provide everyday convenience to the community reinforced by compatible surrounding land uses including more compact housing forms to capitalise on the amenity created together with a primary school and the central riparian corridor which will provide pedestrian and cycleway connections through the centre of the development and to the adjoining Caddens development.
- Retail and commercial employment opportunities will be provided in the local centre for new residents and the surrounding communities with additional employment resulting from the expanded/relocated primary school (subject to negotiations with Department of Education).
- Vibrant Residential Neighbourhood – creating vibrant areas of unique character within a neighbourhood containing a diverse range of housing types, focussed on creating quality living environments across a range of housing forms.
- Conservation corridors – identified to protect identified riparian corridors and vegetation considered worthy of retention within bushland parks, offering opportunities for passive recreational pursuits.
- Environmental living lifestyle - a sustainable residential community that is connected to the environmental and has a cooling effect.



ion of the North-South sub-arterial across the M4 is subject to further planning and investigations by others, as well as funding decisions

Figure 11: Preferred Structure Plan

LEGEND

- Area A
- Area B
- Collector Roads
- Major Roads
- Village Centre
- Employment
- Residential

- Active Open Space
- Open Space
- Open Space Corridor
- Riparian Corridor
- Heritage
- Water Towers
- Basin
- Existing School
- Potential Future School

The land use allocation is a broad scale indication of the land uses of the site supported by the technical studies undertaken and which can respond to the needs to the community based on market demand and identified needs within a framework of supporting the new residential community.

The inclusion of the entire structure plan area allows greater opportunities for employment land due to the frontage to the Northern Road and ease of access to the M4 Motorway. This differs from the discrete site that is the proposed rezoning area.

Identified areas of heritage significance are retained.

5.2 MOVEMENT ARRANGEMENTS

5.2.1 Road Networks

The transport network for the Structure Plan incorporates existing connections through the site and accommodates two new major east-west and north-south collector roads. The development is designed to connect seamlessly to the Caddens development to the north whilst having its own unique character, local centre and primary school providing amenity to residents. The development will benefit from significant road improvements and upgrades in the area including the current upgrades to The Northern Road by the RMS, the new Kent Road on and off ramps to the M4 Motorway and upgrades associated with the Caddens development including O'Connell Lane. The road network is a reflection of existing connections and the topography of the site.

5.2.2 Pedestrian / Cycle Networks

The plan has a strong emphasis on pedestrian and cycle amenity and access. The proposed share path adjoining the central riparian corridor provides a connection to the Caddens development to the north and shared paths along the collector roads will connect people and residents beyond. Pedestrians and cyclists will be drawn to new parks within the development that will be created to capitalise on views to the Blue Mountains, surrounding District and localised neighbouring areas.

5.2.3 Public Transport

Orchard Hills is serviced by the 781 bus route at Wentworth Road and Kingswood Road to St Marys with a more regular route 778 operating on weekdays, weekends and public holidays from nearby Caddens.

The redevelopment of Orchard Hills North would create a greater demand for public transport in the area and is likely to improve the bus services currently available, through additional bus services or an extension to the existing more regular services that operate through Caddens. This has occurred previously as part of the NSW Government's Growth Services Program with an extension to route 778 to the residential area of Caddens.

Roads within the development are being designed to cater for the future potential of an extended bus network through the development to service the new community.



Figure 12: Major Road Network

LEGEND

- Collector Roads
- Major Road Network
- Pedestrian/Cycle Links
- Potential Bus Routes

5.3 LOCAL CENTRE

The Structure Plan emphasises the establishment of a new local centre as a vibrant focal point of the new Orchard Hills North Community. The new local neighbourhood centre is proposed within the centre of the site and is easily accessible from the proposed pathway network running through the riparian corridor and connecting the community to the north.

Urban design of the new centre will be subject to a future detailed analysis and design exercise which embraces principles including the creation of a walkable neighbourhood that creates a strong sense of place and a high level of amenity to residents. The inclusion of the new local centre in a central location creates equity of access and supports the co-location of a relocated primary school (subject to negotiations with the Department of Education) and open space to be located adjacent.

The neighbourhood is an expression of the community and a place for the community to relax, reach out and connect.



Figure 13 : Local Centre Catchment

LEGEND

■ Neighbourhood Centre

5.4 GREEN SPACE

The natural green spaces are a key component of the Structure Plan and consist of:

- New local parks
- Revegetated riparian corridor of Werrington Creek with walking and cycling trails and passive recreation facilities
- Revegetation of Claremont Creek
- Retention of Cumberland Plain Woodland and River-Flat Eucalyptus Forest in Bushland Parks

5.4.1 Open Space Provision

The Structure Plan includes a variety of passive open space areas that have been incorporated to provide the community with areas to walk, cycle, have picnics and to incorporate children's playgrounds and play spaces. The location of open space areas balance the desire to retain natural features including significant bushland and also maximise views from hilltops.

The open space strategy provides a total 15.77ha of open space for the rezoning area, Area A, and 15.81ha for Area B, being the balance of the structure plan precinct.

The location and size of pockets parks balance the need for accessibility, amenity and equity amongst the community. Each community park is a minimum of 0.5 hectares in accordance with Council's requirements and additional park areas have been added connecting to the riparian corridor to create pockets of useable recreational space.

Parks are generally located on hilltops, in areas where there is vegetation to be retained or adjoining key features of the site, including the central riparian corridor.

The Structure Plan also contains two large active open spaces to be used for active sporting purposes. These are located on the flattest land to accommodate playing fields and pitches. A smaller active open space with sports courts is located near the proposed potential primary school for co-use.



Figure 14: Green Space

LEGEND

 Park/Open Space	 Green Link
 Active Open Space	 400m Walking Catchment
 Bushland Park	
 Riparian	
 Basin	

5.4.2 Rezoning Area Provision

A total of 15.77 hectares of open space is provided within the Rezoning Area with an additional 4.54 hectares of riparian lands.

Land use	Approximate Area (ha)
Passive Open Space	5.57
Active Open Space	7.27
Bushland Parks	2.93
Total	15.77

The provision of open space is in accordance with the community needs assessment undertaken within the social infrastructure plan.

Themes can be used as part of open space provision at the more detailed planning stage, including:

- The preservation of view corridors to the Blue Mountains
- Connections to existing areas and the Caddens development to the north
- Creation of a sense of community
- Inclusion and catering to diversity
- Accessibility in new parks and play spaces
- Celebrating the physical attributes of the site, being the sites heritage, views, riparian corridors and pockets of bushland.

5.4.3 Riparian Corridors

The Master Plan includes the revegetation and regeneration of Werrington Creek and Claremont Creek as important riparian corridors within the site. Werrington Creek is centrally located and forms a perfect backdrop to proposed walking and cycling pathways and the collector road through the site. It will also support medium density development adjoining, benefiting from the amenity of the creek. Whilst achieving desired environmental outcomes, this corridor offers significant opportunity for urban design outcomes to promote human interaction and appreciation of the elements which make these

special places. The revegetation of Claremont Creek will form more of an environmental function as this area is remote from the heart of the development.

5.4.4 Bushland

Bushland parks are a key theme of the proposed community due to the clusters of Cumberland Plain Woodland that exist within the site that are proposed to be retained as areas that the community can enjoy, with the potential for some of these areas to be co-located next to new parks with seating and picnic areas. The trees within the retained bushland parks have significant conservation value.

5.5 SOCIAL AND COMMUNITY

5.5.1 Social Facilities and Services

Development of the site will include a new local centre as a focal point of the development and a hub of activity for everyday life. This centre will offer essential services and contribute to the creation of a sense of community.

The social infrastructure report suggests that community facilities may not be needed as part of the development but that a facility could be incorporated into the new centre if required. The area is well serviced by childcare and offers significant amenity to a broad spectrum of the community including young families.

5.5.2 Education

The proposed new community is of sufficient size to sustain a K-6 primary school. The Master Plan locates a K-6 school in the centre of the development, creating a focal point for young families who will be able to walk their children to school. This location is subject to negotiation with the Department of Education.

The community is currently serviced by Orchard Hills Public School and is located in close proximity to Kingswood High School for years 7-12. Penrith Christian School offers a local private school option. There is an opportunity for the existing school to be closed upon the opening of the new school, subject to community needs.



Figure 15: Community Provisions

LEGEND

- School
- ✱ Potential Social Facilities/Services

5.6 EMPLOYMENT LANDS

The Structure plan identifies a local centre with retail employment opportunities within the proposed rezoning area and a larger area of employment lands in a more strategically located position along The Northern Road within the wider structure plan area as identified in the retail assessment study. This area has a connection to the employment activities in the Western Sydney Employment Area via regional road connections. The creation of new jobs and retail opportunities is of significant benefit to the local community.

The local centre will generate jobs and create amenity for the community, with an emphasis on walkability, cycling and access to an expanded public transport bus network that is expected to be generated in response to the increased demand created by the development.

The development will have a strong interface with the Caddens development to the north and it is expected that the road widths and typologies will be of a similar nature. The development has been designed to support a variety of housing types and provide for existing and future housing needs of the community, creating a high quality urban environment that protects the unique features and character of the site including bushland parks and riparian corridors.

The development has been designed to be a safe and welcoming place for the community with passive surveillance to areas of open space and the central riparian corridor and in accordance with best practice for urban design and community development. The new community will generate new housing and job creation in accordance with the principles of sustainability, liveability and productivity.

5.7 HOUSING DELIVERY

The new community will support approximately 1,729 new dwellings in a self-contained residential neighbourhood that complements and integrates seamlessly with the surrounding area and development within the Penrith local government area (LGA).

It is envisaged that the development will include predominately detached housing with the inclusion of large lots near Claremont Creek to manage environmental factors around the riparian corridor, bushland and mitigate potential bushfire risk. The area around the local centre and opposite the Werrington Creek riparian corridor provides opportunities for housing in the form of townhouses and attached housing product (Medium Density) that realises the full potential and amenity offered by the local centre and revegetated riparian corridor with pedestrian and cycling connections.

The rezoning of the land is of significant benefit to meeting the housing targets under Council's Accelerated Housing Delivery Program by creating new housing in well located areas with access to infrastructure and services.

6 MASTER PLAN

6.1 INDICATIVE LAYOUT

Key Land Use Statistics for Rezoning Area:

Land Use	Area (hectares)
Residential Land	64.89
Environmental Living	2.64
Retail Land	2.45
Open Space (Passive and Active)/ Bushland/ Riparian Corridors	20.31
Education	1.5

The Indicative Master Plan for the rezoning area builds on the Structure Plan. It has been designed with a logical and meaningful road network that maximises accessibility and efficiency. The proposed road layout establishes a clear road hierarchy of collector and local roads that have been designed to cater to local traffic, allowing for easy and quick commuting within the precinct and connections to the wider regional existing and future road network to the south.

As with the road network, pedestrian and cycle network within the rezoning area prioritises the movement of pedestrians and cyclists throughout the development. The alignment of the east-west and north-south collector roads provide share-path linkages to open spaces within the site and ensures connections to the local centre are direct and legible.

The residential structure of the rezoning Master Plan includes a variety of housing typologies to allow a diversity of dwelling types with a focus of density and compact housing from the local centre outwards. The majority of the remaining land will be low-density residential with large environmental lots west of Claremont Creek in the eastern part of the site.

Within the Master Plan will be various separate neighbourhoods with differing characteristics shaped by the landscape, topography and locality.



Figure 16: Indicative Master Plan

LEGEND

Subject Site	Open Space (Passive)
Compact Lots	Open Space (Active)
E3 Environmental Living Lots	Werrington Creek Corridor Extension
Potential Public/Private Education Facility	Bush / Open Space
Heritage	Basin Playing Fields
Village Centre	Indicative Basin
Road Closure	Riparian

6.2 CONCLUSION

Orchard Hills North will be a residential community set amongst rolling hills in the rich natural landscape of Western Sydney and offering panoramic views to the Blue Mountains and surrounding areas. The rezoning area development will incorporate a diverse mix of housing types across 1,729 dwellings, focused around a new village centre that forms the focal point of the future community and offers a high level of convenience for residents.

A new primary school is proposed adjacent to the neighbourhood centre (subject to negotiations with the Department of Education), supported by open space to facilitate shared usage. The location of parks and open space areas have been carefully selected to enhance the existing value of the natural landscape, such as hill tops and creek lines, and to retain the significant bushland areas in order to provide the highest level of amenity for future residents.

The urban design for the Master Plan has considered the specialist consultant investigations prepared for the site to formulate a plan that is responsive to the sites topography and existing site factors and taking into account the unique environmental qualities of the riparian lands, native bushland areas and district views.

New parks are proposed in response to the key site features and topography of the site including significant hilltops, areas where significant vegetation is to be retained and adjoining the central riparian corridor.

The resulting master plan will deliver a new residential community unpinned by urban design principles, that are based on creating a new community that is walkable, preserves heritage and view corridors, enhances the natural environment through the revegetation of creekline corridors and creates amenity and a sense of community, through the establishment of a new village centre and relocated primary school (subject to negotiations with the Department of Education) as the focal point and heart of the proposed Orchard Hills North residential community.

