

APPENDIX G

Orchard Hills North: Supporting Technical Documents

G11 Social Infrastructure Assessment

Social Infrastructure Assessment

Orchard Hills North

Client:
Legacy Property

Date:
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Final Report

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1 Executive summary

This study identifies the social infrastructure needs likely to be generated by the Planning Proposal to rezone and develop a section of land in Orchard Hills in the Penrith Local Government Area.

Information regarding dwelling yield has been provided by Legacy Property. The Rezoning Area is forecast to yield approximately 1,800 – 2,000 residential dwellings. It is forecast that this will result in a total population of between 5,040 and 5,760 people residing in the Rezoning Area.¹

Table 1 outlines the likely social infrastructure that would be required to support this population.

Table 1 Summary of social infrastructure requirements

Social infrastructure type	Suggested provision or comment
Community facility	The demand for social infrastructure generated by Orchard Hills North could be accommodated through the following options: <ol style="list-style-type: none">1. Provide an outdoor public multi-purpose community activity space in the form of a contemporary plaza-style space in lieu of a traditional community building. This space should be approximately 500 square metres in area.2. If the Caddens facility is not to proceed, make an offsite contribution to expand/embellish the other nearby existing community facilities in Claremont Meadows, Kingswood, or South Penrith to be expanded or enhanced to meet community needs.
Education facility	This assessment recommends that the new primary school site be between 1.5ha and 2.5ha in size and located adjacent to around 1ha of council-owned open space.
Health care facility	The incoming population in Orchard Hills North will not trigger the need for a standalone community health centre to be provided on the rezoning site and The Department of Health is not looking for outreach services.
Childcare facility	The strong presence of privately operated child care centres as well as Council-run centres in the Penrith LGA indicates that this need is likely to be met through existing capacity and vacancies available in these centres and therefore a standalone childcare centre is not recommended for the rezoning site.

¹ This is based on an average household size of 2.8 for the Penrith LGA and 3.2 for Caddens in 2021 when dwellings are delivered on the site. Data sourced from forecast.id.

Social infrastructure type	Suggested provision or comment
Open space and recreation	<p>Given the variety of elements including native bushland, riparian corridors and steep inclines within the Rezoning Area, the following suggestions are made regarding the provision of passive open space in order to meet Council's rate of provision for passive open space:</p> <ul style="list-style-type: none"> » Seven local parks covering approximately 5ha collectively » Multiple bushland parks covering the existing bushland (approx. 3.0 to 3.3ha collectively). <p>To meet the active open space need, it is recommended that the developer make monetary contributions offsite to a future site that is appropriately sized to accommodate not only the demand generated by the rezoning at Orchard Hills North but also future residential development in the pipeline. The location of this site is to be determined by Council.</p>

2 Introduction

Elton Consulting has been engaged by Legacy Property to undertake a social infrastructure assessment to support a planning proposal to Penrith City Council for a residential development in Orchard Hills. The purpose of the report is to identify social infrastructure requirements for the Orchard Hills North rezoning site. Given the early stage of the project planning process, the social infrastructure analysis will be relatively high level. It provides sufficient information to support a planning proposal and has identified the types of social infrastructure required, approximate sizing and suggested locations (where possible).

The recommendations made in this assessment specifically relate to social infrastructure requirements for the future population within the 146.12 hectare Rezoning Area. There are approximately 116.9 hectares to the west of the Rezoning Area between Kingswood Road and the Northern Road known as the Structure Plan Area. While this assessment has taken the Structure Plan Area into consideration it does not make specific recommendations for its land use.

2.1 Social infrastructure definitions

For the purposes of this study, social infrastructure includes:

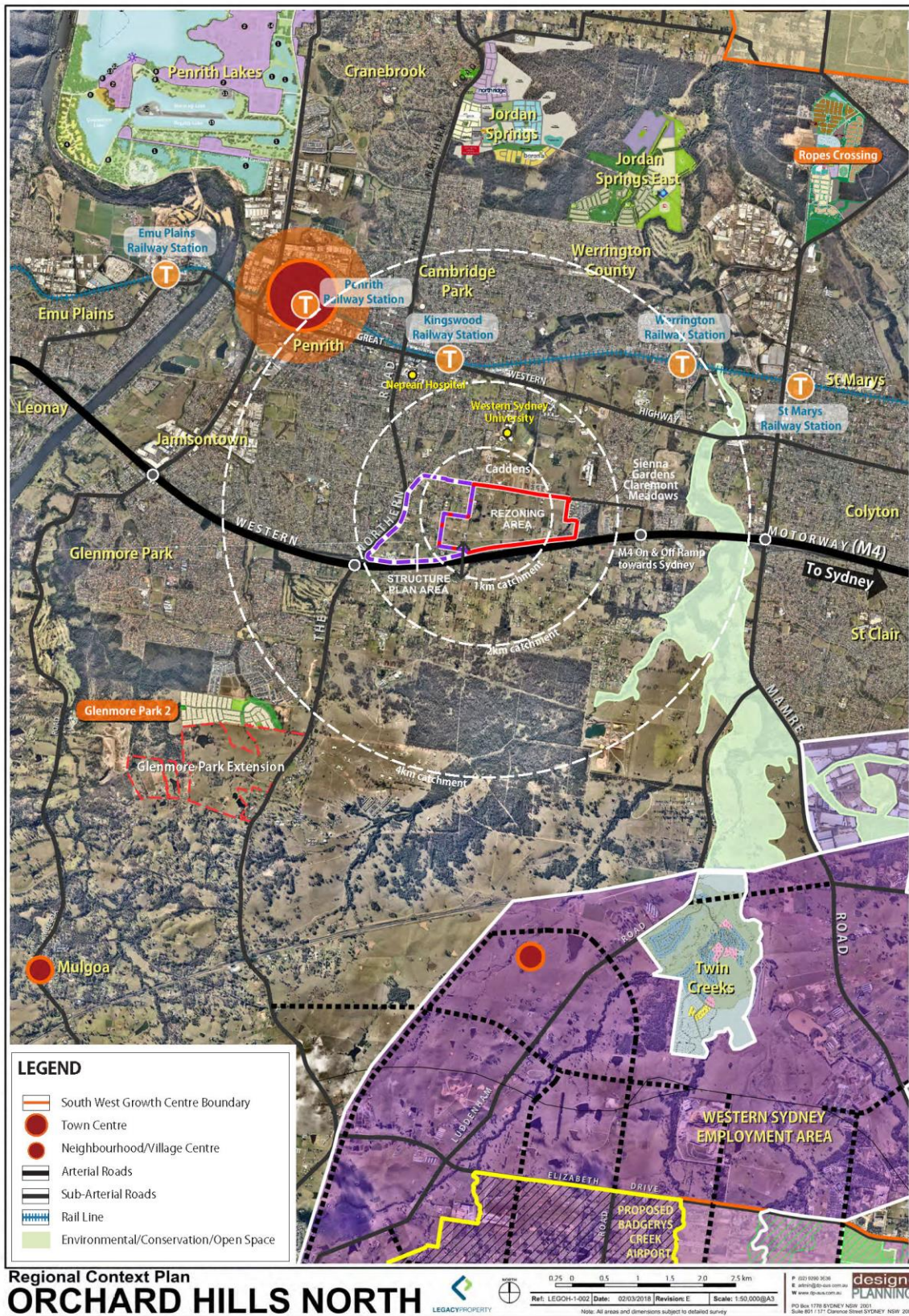
- » Community centres and halls
- » Libraries
- » Child care facilities
- » Education facilities including schools
- » Health care facilities
- » Open space and recreation facilities including active (sporting fields, indoor recreation, indoor and outdoor courts) and passive (parks and trails).

2.2 Orchard Hills North

Legacy Property is proposing to rezone a site in Orchard Hills North, located within the Penrith Local Government Area (LGA). The proposed rezoning area is approximately 146.1 hectares (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.

Orchard Hills North, is well located being north of the Western Sydney Motorway, in close proximity to the University of Western Sydney (to the north), Nepean Hospital (to the north) and to the Penrith City Centre. South of the Motorway is currently mostly Orchard Hills rural lands, Defence Lands and to the south west is Glenmore Park. Further south, will be the Badgerys Creek Airport.

Figure 1 Regional Context



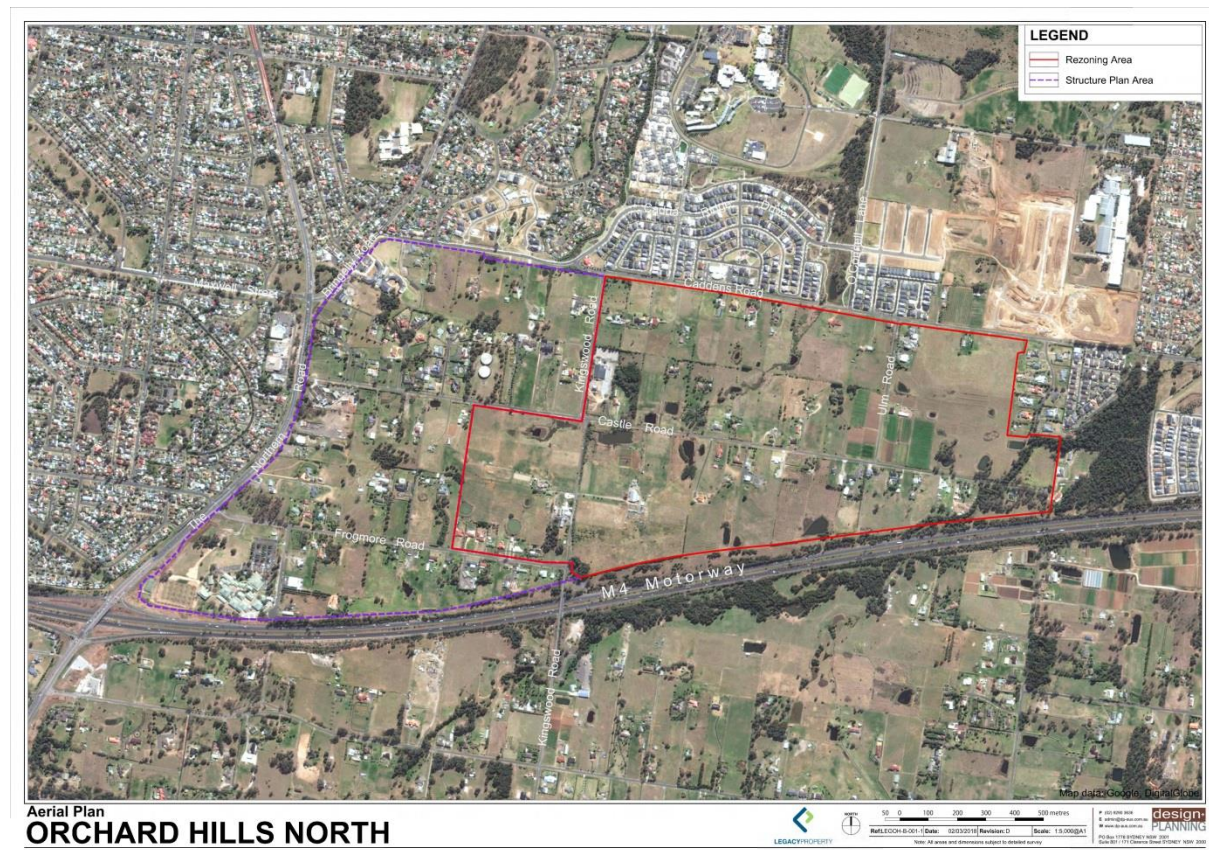
Source: Design and Planning 2018

The rezoning 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
- » 79-101 Kingswood Road, Orchard Hills (school)
- » 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 proposed rezoning area is identified in Figure 1 below

Figure 2 Proposed rezoning area



Source: Nearmap/ Design and Planning 2018

The existing fragmented ownership of the site has historically been a barrier to coordinated planning or development of the area, however Legacy Property has now secured agreements covering the majority of the rezoning area.

Legacy Property nominated the Orchard Hills North site under Penrith City Council's Accelerated Housing Delivery Program (AHDP) in October 2017. In November 2017 the site was endorsed by Penrith City Council as a short-term rezoning opportunity to provide for housing delivery over the next 3-5 years.

2.3 Structure Plan and Rezoning Area

The Planning Proposal (PP) for Orchard Hills North aims to rezone the 146.1ha site from agricultural land to mixed land uses, forming around 1,800-2,000 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. This will facilitate the more holistic planning of future land uses and connections for the entire Orchard Hills North precinct.

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 263.09ha. The Structure Plan considers how the rezoning area (146.1ha) integrates with the balance of the precinct (116.9 ha) 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 majority 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 the land may pre-empt the outcome of this study.

As a result, 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.

2.4 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.

2.5 Vision

Legacy Property's vision is that Orchard Hills North will be a residential community set amongst rolling hills in the rich natural landscape of Western Sydney, offering panoramic views to the Blue Mountains and surrounding areas. The development will incorporate a diverse mix of housing types across 1,800 – 2,000 residential lots, 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 vision 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.

2.6 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.
- » Provide opportunities for a diverse mix of housing types, with medium density housing located around the neighbourhood centre and major open space
- » Create a new neighbourhood centre combined with a relocated primary school to establish a community focal point
- » 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.

2.7 Master Plan and Rezoning description

It is proposed to rezone the site from RU4 Primary Production Small Lots, under Penrith Local Environmental Plan (PLEP) 2010, to part R1 General Residential, B2 Local Centre, RE1 Public Recreation, E2 Environmental conservation and E4 Environmental living in the south eastern corner of the site, as well as provide for appropriate controls relating to minimum lot size, height, heritage items, and visual landscape.

The rezoning of Orchard Hills North will provide between 1,800-2,000 residential lots. It is expected that the site will ultimately provide a broad mix of housing types ranging from larger environmental living lots (2,000m²) to traditional detached residential lots (primarily 300-600m²) and smaller compact and attached housing lots (125-300m²). The proposed neighbourhood centre will provide around

6,000-8,000m² of retail space supported by cycle and pedestrian links with approximately 17.5ha of open space, bushland and riparian corridors.

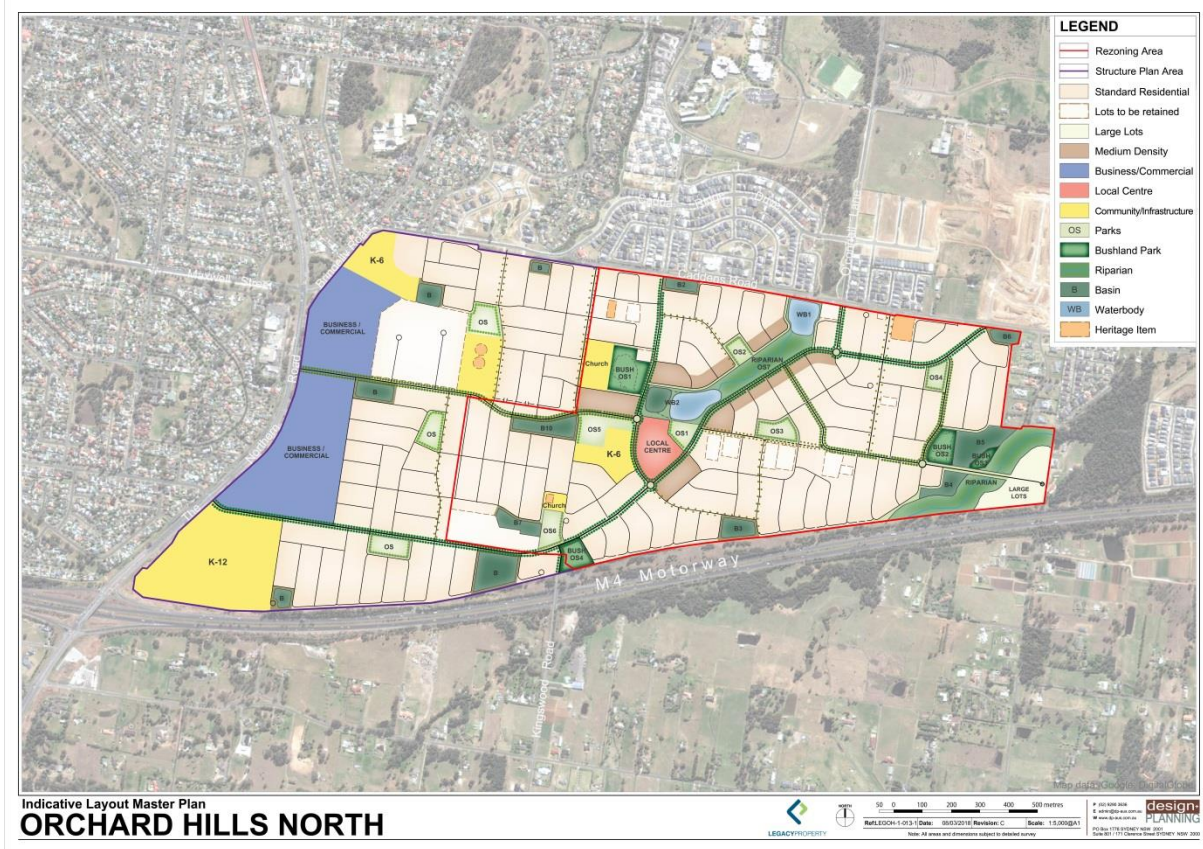
A new/relocated primary school is proposed adjacent to the neighbourhood centre, supported by open space to facilitate share usage. The location of parks and open space areas have been carefully selected to enhance the existing value of the natural landscape, such as hill tops and creek lines, and to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

The 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 in close proximity to the 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 PP
- » Upgrades are currently being undertaken to the Northern Road, which the Orchard Hills site is located east thereof, and gains access thereto. Thus, the rezoning of the land will support the Government's cost of infrastructure and will result in better utilisation of the land
- » 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).

The indicative Concept Master Plan for the site is identified in Figure below.

Figure 3 Concept master plan for Orchard Hills North



Source: Design and Planning 2018

3 Social infrastructure planning approach

The proposed approach to planning for social infrastructure for the Rezoning Area includes the following key principles:

- » **Quality over quantity** – While Penrith City Council currently requires 3.04ha of open space per 1000 people in new release areas (and noting this rate of provision is currently under review), it is the quality of that space that is most important, particularly in the Penrith City LGA. Quality is determined by design (guided by sound principles), quality of materials used, and programming and management which allow more benefit to be gained from relatively efficient use of spaces. Well-planned social infrastructure should maximise Council's value for money rather than increase maintenance costs by duplicating facilities.
- » **Understanding the likely future population** – The estimated occupancy rate for the Rezoning Area is 3.05 (rounded down to 3.0) which has been calculated by taking an average of the rate in Caddens (3.2) and the Penrith LGA (2.8) forecast to 2021. Communities living in urban transformation areas need access to a full range of social infrastructure and services including community meeting and activity spaces, childcare, schools and education facilities, health and medical facilities, support services, sport and recreation facilities and open space.
- » **Appreciation of site context** – Essential to planning in new release areas is understanding and appreciating the site, its existing level of provision (and identified gaps) in social infrastructure, its unique features and characteristics and how it relates to the existing, surrounding communities. In the case of Orchard Hills North, it is important to take account of the topographical characteristics and the existing riparian lands when planning the potential applicability and location of social infrastructure.

Implications for Orchard Hills North

Key trends and principles support social infrastructure that is well located, clustered, multipurpose and flexible. Community facilities are best located in a central town or local centre location where they can then contribute to the sense of place and identity of the future community. While standards provide an important starting and reference point, the identification of social infrastructure requirements for Orchard Hills North should not be purely a mathematical exercise. It should consider the context of the site and the varying and evolving needs of the incoming population.

4 Policy and planning context

The Rezoning and broader Structure Plan Areas are influenced by a number of planning documents that have bearing on social infrastructure planning. As such the Social Infrastructure Assessment is informed by the following key policies and planning strategies. Most notably the Penrith City Council is currently developing a Sport, Recreation, Play and Open Space Strategy that is expected to be released in mid-2018. This Strategy will be closely aligned with the principles of the forthcoming Government Architect's Greener Places guideline.

4.1 Planning strategies

Accelerated Housing Delivery Program 2017

The Orchard Hills North site is one of two sites adopted by Council as part of the Accelerated Housing Delivery Program. The site was listed as 'Suitable for Short Term Development' along with the Glenmore Park Extension project.

The goal of the Program is to provide affordable and diverse housing. This will be achieved through two mechanisms:

- » Fast tracking greenfield developments in order to deliver housing within 3 to 5 years
- » Repurposing land capable of producing 1,000 or more residential lots.

The Program identifies the Western Sydney Airport, the North-South Rail Link, the Western Sydney City Deal, and various transport corridor works as 'game changers' or catalysts for accelerated growth in the area. In response, the Program provides a framework, submission requirements, and assessment criteria in order to streamline the development approvals process. A central aspect of the framework is existing infrastructure and the ability to access and expand these services. The Plan considers the following as important requirements:

- » Roads, sewerage, power, and water
- » Education facilities
- » Public open spaces and recreational facilities
- » Emergency services
- » Health and social services.

The Program ideally wishes to utilise acreage strategically located to urban centres which are well serviced and supported.

Penrith City Council Open Space Action Plan 2007

The Penrith City Council's Open Space Action Plan 2007 provides a strategic approach to future open space management and development. The Action Plan was developed in response to research conducted by the PLANS (People's Lifestyle Aspirations and Needs Study). The Action Plan acknowledges a need for more passive open spaces in a demographic context of an aging population. It is also acknowledged that the quality of current open spaces, both active and passive, could be increased in order to be more accessible and versatile.

PLANS recommended improving the quality of the City's open space and facilities through:

- » Providing large open space areas that can be multi-purposed for a range of different age groups and interests
- » Reviewing the City's smaller open space areas
- » The removal of old playground equipment that does not comply with Australian standards
- » Incorporating the principles of social inclusion and universal design to better reflect the needs of the local communities.

Regarding infill development and development contribution, the Action Plan details Council's preference for embellishment of existing open space areas rather than acquiring additional open space to cater for increased demand. The Plan also states that there is a shortage of active open space in the form of sports fields particularly in the recently developed urban area. Access to outdoor sports facilities was identified as an immediate need.

The Action Plan is underpinned by the following Objectives:

1. Maximise use of existing cultural and recreation facilities
2. Rationalise recreation and cultural resources in the Penrith LGA
3. Provide new recreation and cultural facilities that are undersupplied in the Penrith LGA
4. Encourage community involvement in facility and service provision
5. Facilitate diverse recreational & cultural program development
6. Provide effective and sustainable management, support and resources

Recommendations for open space provision for the Rezoning Area are based on the standards detailed in the document and summarised below. Note that these standards are currently under review by Council.

Table 2 Open space provision in new release areas

Type of open space	Rate of provision
Total local open space	3.04 hectares per 1000 people
Active open space	1.4 hectares per 1000 people
Passive open space	1.64 hectares per 1000 people

Regarding the inclusion of riparian lands in passive open space, the Action Plan states that "if there are passive recreation facilities (i.e. path or shared path) incorporated into the design of these drainage or biodiversity corridors, it is reasonable that the area used by the pathway be included in the passive open space contribution."

Table 3 Penrith City Open Space Network

	Size and amenity in Action Plan
District Park	Greater than 5 hectares. Provides a wide range of recreational experiences. Accessible by public transport, includes car parking, toilet and change room facilities. Provides BBQs and picnic furniture.
Neighbourhood Park	Up to 5 hectares and serves a cluster of suburbs. accessible by bus routes and includes some parking, lighting, landscaped areas, pedestrian and cycleways, playground structures, toilets, shade and picnic facilities.
Local Park	Between 0.5 to 3 hectares and serves a suburb or an area up to 2km in radius. Includes street parking, landscaping, shade, park benches, playground but no toilets.
Pocket Park	Between 0.25 and 1 hectare and caters for local area. Within a 5 minute walk from most households.
Linear Park/Drainage Reserves	Linear open space primarily serves a drainage function but also provides for pathway and cycleway access. They may have basic exercise equipment but do not have formal recreation structures.
Natural Areas	No size criteria.

Penrith City Council Open Space Action Plan 2007

Areas proposed for open space must not be encumbered by any of the following:

- » Power line infrastructure corridors
- » Easements for other underground service infrastructure
- » Flood affected land – active open space must not be located in detention basins
- » Steep gradients or slopes.

The future location of open space must take into consideration the following:

- » The nature and future changes to the demographic and socio-economic profile of the area
- » The social and cultural needs of different communities
- » The condition and 'usability' of the open space based on the physical location, topography, opportunities, and existing other uses such as drainage
- » Access to open space must be within a reasonable walking distance to most households with district and regional open space accessible by public transport.

Penrith City Council Recreation and Cultural Strategy 2004 (reviewed in 2008 and currently under review in 2018)

The Recreation and Cultural Strategy sets out a set out infrastructure facilities and Services Strategies, and a set of recreation and cultural strategies which both have significant overlap. The study was created in 2004 and reviewed in 2008.

At the time Penrith LGA was identified as having a sufficient number of community centres, halls and youth centres with the ability to support art galleries, a performing arts centre and 3 to 4 smaller performing arts centres. Key issues for Penrith that were identified included the need for access to quality and useable open space and the provision of high quality passive and informal active recreation opportunities.

The changing population of the Penrith LGA was also a key issue and its impact on existing social infrastructure and demand for new facilities and open space both active and passive. Mulgoa was identified as high priority for the development of playgrounds.

The next iteration of this Strategy is currently under review and due to be released by mid-2018.

Penrith City District Open Space Section 94 Development Contributions Plan 2007

The Penrith City Local Open Space Section 94 Development Contribution Plan outlines the development contribution plan for the Penrith LGA and is applicable to all residential developments permitted within the City of Penrith Council, including new release areas.

Regarding district open space provision, previous studies conducted by Penrith City Council indicate that in 2007 the existing district open space was at times insufficient in meeting the demand of the population at the time and that it would not be sufficient to meet any future demand.

Any offsite contributions for active open space to accommodate the demand generated from the rezoning will be calculated using the methodology set out in this Plan. When this document was published the contribution rate per person for district open space embellishment was calculated by taking C/P plus any additional indexed increases where:

C = Contribution rate (\$/person) and including 15% design and supervision, and

P = Estimated additional population within the City to 2022.

The contribution rate per person was \$1,495.

Under the *Penrith City Local Open Space Section 94 Development Contributions Plan 2007* the contribution rate per person was \$532 however, this does not apply to new release areas.

Werrington Enterprise Living and Learning Precinct Strategy 2004

The Werrington Enterprise Living and Learning Precinct Strategy (WELL Precinct Strategy) outlines key strategic lands in Penrith City and the wider region. The WELL Precinct Strategy considers the scale, proximity to urban services and infrastructure, transport links and corridors, and co-location with tertiary educational facilities. Overall, the strategy aims to capitalise on infrastructure development in order to achieve joint outcomes between retail, residential housing, and education.

The outcomes for the Precinct are noted in the following objectives:

- » Create quality working, living, learning environments, and employment opportunities through the delivery of a successfully and necessary community which is supported by the interaction of local economies, education, and lifestyle.
- » Incorporate principles of sustainability into the Precinct Strategy but also into the design and built elements of the Precinct.
- » Reduce local car use through the provision of high quality public transport in the Precinct and surrounding areas.
- » Create a vibrant and safe area by encouraging innovative housing which supports the needs of the facilities and local community.

- » Plan a Precinct Centre which utilises existing and proposed services, facilitates, and communities. The Precinct centre will provide retail spaces, entertainment, and social services to the surrounding community.

The Penrith City Council hopes to generate social and economic benefits from the growth of the University of Western Sydney with the Precinct an internationally recognised area for business, residential living, and desired location for international students.

The rezoning at Orchard Hills North will take into account the aspirations of Penrith City Council for the WELL Precinct when planning for future social infrastructure. The current Concept Masterplan includes a local centre that aims to promote community interaction.

4.2 Local Government Policy

Community Plan 2017

The Penrith City Council Community Plan is a ten-year plan on how Council can effectively work with its stakeholders to improve the wellbeing of the community. Penrith City Council aspires to offer the cosmopolitan and cultural lifestyles of an established city whilst still retaining its rural character.

The Community Plan after lengthy consultations with the wider community developed several key outcomes for the area which include:

- » Helping the community find jobs that are close to home and suit them
- » Planning for future growth by understanding the services and infrastructure needed to support a growing city
- » Improving public transportation, roads, and cycle ways
- » Creating public spaces that are safe, vibrant and pleasant
- » Protecting air/water quality and natural areas
- » Supporting the physical and mental health of the community
- » Putting Councils' values of accountability, respect and innovation into action.

Penrith City Council has developed specific strategies that describe how Council will achieve its outcomes over the next 10 years. The Community Plan is an important strategy for those engaging in development within the Penrith LGA.

The Concept Plan for Orchard Hills North indicates that these key outcomes will be met through the rezoning.

Penrith Health and Education Precinct 2011

The Penrith Health and Education Precinct was announced in conjunction with the Economic Development Strategy. The Precinct, located to the east of Penrith City Centre, will include health, education, research and related industries and is predicted to facilitate 13,000 new local jobs and accommodate 15,000 students.

The Precinct will also benefit from the current Nepean public and private hospitals, Western Sydney University Werrington and Kingswood campuses, the University of Sydney Medical School and WSI/Tafe Kingswood.

It is expected that some of the demand generated by the population at Orchard Hills North for health and education services will be met by the Penrith Health and Education Precinct.

Penrith Urban Strategy 2009

Penrith's Urban Strategy contributes to Penrith's overall strategic plan which identifies the long-term aspirations of the community. The urban strategy has a vision of a sustainable city which is diverse, creative, accessible, healthy and embraces its regional and cultural identity.

The Urban strategy looks to manage growth within the city up to 2031 and also transform Penrith into a city that is diverse, healthy, vibrant, accessible, cultural, regional, safe, is attractive for all ages and has a unique identity.

As part of the Urban Strategy Council have developed 8 key sustainability elements that must be considered when there is additional urban development in the area. This document and the sustainability elements within will help inform the private and development sector on current requirements surrounding the location and density of new urban development. This sustainability checklist includes:

- » Residential capacity and diversity
- » Retail and Commercial
- » Community Services and Infrastructure
- » Public Transport
- » Active Transport
- » Environment
- » Open Space and Recreation
- » Affordable Housing.

Glenmore Park, just north of Mulgoa and the future development site is a key growth area. Council has advised that the heritage and values of Mulgoa Valley and Orchard Hills are to be protected. This will be achieved through the creation of buffer zones of the Mulgoa Natural Reserve and the strip of semi-rural allotments on the margin of The Northern Road.

Penrith has been identified as able to accommodate an additional 25,000 dwellings by 2031, with 50 per cent in existing urban areas and the remaining 50 per cent in new release areas. Central to this Urban strategy is the sustainability checklist which will help guide those engaging in development within the Penrith LGA, including development at the Rezoning Area at Orchard Hills North.

4.3 State Government Policy

The Sydney Green Grid – Plan 7 The West District 2017

The Sydney Green Grid – Plan 7 The West District 2017 is one of seven documents developed by the Government Architects Office of New South Wales relating to Sydney's Green Grid. Overall the document considers how to manage, enhance and implement natural systems through the urban environment in order to preserve and protect these systems but also capture ecosystem services to improve the community's quality of life and wellbeing.

Plan 7 focuses specifically on the West District which includes the Blue Mountains, the Hawkesbury-Nepean River, South Creek and their respective floodplains. The Penrith-St Marys area is identified as a strategic centre due to its various transport links and the future role Penrith will play in linking the South-West and North-West Growth Precincts with the Western Sydney Employment Area. The combination of geographical positioning, in regards to transport, connectivity and economic opportunity, and open space located on floodplains and proximity to the Nepean River provide an opportunity to enhance the quality of open space through:

- » Creating and linking pedestrian thoroughfares
- » Developing sports and water activities along the Nepean River
- » Transitioning the M4 into part of the green corridor which connects Sydney
- » The possibility to enhance green corridors along South and Ropes Creek
- » Renewing open space in major public areas such as stations, health and educational institutions.

These opportunities will improve the quality of open space and increase communities' access to green spaces which will help promote healthy lifestyles, protect and preserve ecosystem and improve water and air quality in urban environments.

Greener Places (Draft) 2017

The Government Architects Office is currently developing a draft Green Infrastructure policy called Greener Places. Once finalised, Greener Places will influence and guide renewal and development projects ranging from state to local government. The policy will provide an overarching document which will outline and define the NSW Government's position on Green Infrastructure. Included in the Greener Places supporting documents will be three manuals/toolkits which will focus on open space and recreation, bushland and waterways, and urban tree canopy.

Central to the Greener Places Draft are four primary principles:

- » Integration of Green Infrastructure with urban development and design in order to create spaces which are multi-purpose providing ecosystem services, promote healthy life styles and active living
- » Connectivity through the creation of networks of open space which link green areas (creeks, rivers, open spaces, designed green spaces) together but also to major urban features, such as transport hubs, residential and commercial buildings, town centres
- » Multi-functionality through the ability of green spaces to deliver multiple ecosystem, environmental and other services simultaneously
- » Participation of stakeholders and incorporation of stakeholder feedback, knowledge and experience in development and implementation of neighbourhood, local, district and regional Green Infrastructure policies and actions.

The principles and tool kits will formulate an overarching document which will influence state policy, regional plans and district level implementation.

Better Placed (Draft) 2017

The Better Placed Draft Document is a draft policy designed by Government Architect New South Wales which outlines the NSW Government position on urban design. The document focuses on three urban scales:

- » Focus 1: Cities and Towns
- » Focus 2: The Public Realm
- » Focus 3: Buildings

Overall the document considers how urban design and public space can improve community's quality of life while simultaneously achieving excellent design – functionally, visually and practically. The document outlines seven principles which guide urban design to build places which 'we want', these are:

- » Contextual, 'local and of its place

- » Sustainable, efficiency and durable
- » Equitable, inclusive and durable
- » Enjoyable, safe and comfortable
- » Functional, responsive and fit for purpose
- » Value-creating and cost effective
- » Distinct, visually interesting and appealing.

The document also indicates future guidelines, standards and manuals will be developed in order to ensure and measure design excellence.

In regards to public open space, the document emphasises the need for facilities and spaces to respond to local needs, reflect local heritage and geography, have low impact design, be environmentally sustainable, be climate responsive, inclusive, safe and enjoyable, fit for purpose, multi-use, consider a whole life-cycle approach, and incorporate public art and local flora.

Draft Western City District Plan 2017

The Draft Western City District Plan is part of the wider Our Greater Sydney 2056 (2017) plan which encapsulates the next 50 years of growth within the Western Sydney region. The Draft focuses on four main sections:

- » Infrastructure and collaboration (Goal 2, 3 and 4)
- » Liveability (Goal 2)
- » Productivity (Goal 1)
- » Sustainability (Goal 4).

The Western City District, the third city, is centred upon Badgerys Creek Airport and the area's proximity to Liverpool, Greater Penrith, and Campbelltown-Macarthur. The Draft Western City District Plan shares similar goals and implications for the Orchard Hills site to A Plan for Growing Sydney and Towards a Greater Sydney 2056.

Western Sydney Infrastructure Plan 2017

The Western Sydney Infrastructure Plan is a \$3.6 billion investment program to improve transport corridors in western Sydney. The Plan spans 10 years and primarily focuses on road maintenance and improvement. The two main goals of the plan are to capitalise on the economic benefits of developing the Western Sydney Airport and provide integrated transport solutions for the region.

The Plan anticipates an increase in road infrastructure demand as residential and employment development within the Western Sydney Priority Land Release Areas and Western Sydney Priority Growth Areas become accessible. In response to this, The Plan aims to initiate/complete the following:

- » The Northern Road Upgrade
- » Werrington Arterial Road
- » Bringelly Road Upgrade
- » Proposed M12 Motorway
- » The Local Road Package.

The Western Sydney Infrastructure Plan addresses goals 1 and 3 partially while facilitating goal 1 from the Plan for Growing Sydney document. Considering the locality of the Orchard Hills site to the

Western Sydney Airport and its position with the Western City District, The Plan provides important insights into the future management of this area.

Plan for Growing Sydney 2014

The Plan for Growing Sydney provides a development strategy for the five districts in the Sydney region in order to guide and direct regional development. The Plan is a response to manage and accommodate Sydney's population growth and economic activity over the next 20 years.

Four key goals have been outlined in order to achieve a Sydney which is 'strong global city, a great place':

- » A competitive economy with world-class services and transport (Goal 1)
- » A city of housing choice with homes that meet our needs and lifestyles (Goal 2)
- » A great place to live with communities that are strong, healthy and well connected (Goal 3)
- » A sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources (Goal 4).

The plan also focuses on development strategies to improve the capacity at Sydney's gateways, such as:

- » Port Botany
- » Sydney Airport
- » Western Sydney Airport.

Direction 1.4 of the plan is to 'Transform the productivity of Western Sydney through growth and investment'. Action 1.4.2 recommends utilising the new growth opportunities arising from the Western Sydney Airport along transport corridors to capture jobs and investment in the area. Upgrades to The Northern Road and other existing roads in the area were identified as part of Action 1.4.2.

Goals 2, 3 and 4 are relevant to the Orchard Hills site as they focus on development and the social infrastructure and community services required to support population growth. The site also has strong relevance to The Plan as it is situated within the Western City District and in close proximity to the Western Sydney Airport.

Implications for Orchard Hills North

- » The Orchard Hills North site is situated within a highly strategic growth area considering plans for the Western Sydney Airport and the establishment of a Western City
- » The strategic framework, local government, and state government policies all characterise the Western Sydney region as an area of future population growth, economic prosperity, infrastructure investment, urban growth, and an entertainment and cultural hub.

5 Demographic profile

To understand the current and future social context of the proposed development, key demographic characteristics of the suburbs of Orchard Hills, Caddens, Jordan Springs, and the Penrith LGA have been examined. Based on this profile, forecasts of the future population of the area are made along with observations about their likely need for different kinds of social infrastructure.

The suburb of Caddens has been used as a benchmark for comparison of population given the Orchard Hills North site is located immediately to the south of Caddens Road. Jordan Springs is a recent housing development 9kms from the rezoning site and it is expected that a similar demographic profile could be expected for Orchard Hills North.

5.1 Existing community profile

Table 4 illustrates the population age breakdown of the selected suburb areas around the site based on ABS Census data from 2016.

Table 4 Current population profiles

	Orchard Hills	Caddens	Jordan Springs	Penrith LGA
Population Number (2016)	1,949	1,068	5,111	201,400
Service age groups	%	%	%	%
Babies and pre-schoolers (0 – 4 years)	3.4	10.3	12.9	7.4
Primary Schoolers (5 – 11 years)	7.5	12.2	10.3	9.8
Secondary Schoolers (12 – 17 years)	9.6	6.3	6.5	7.8
Tertiary education and independence (18-24 years)	12.4	12.6	9.3	9.9
Young workforce (25 to 34 years)	10.1	28.1	26.9	15.5
Parents and homebuilders (35 to 49 years)	19.8	20.6	21.5	20.5
Old workers and pre-retirees (50 to 59)	15.7	5.5	6.2	12.3
Empty nesters and retirees (60 to 69 years)	10.6	4.4	4.3	9.7

	Orchard Hills	Caddens	Jordan Springs	Penrith LGA
Seniors (70 to 84 years)	10.1	0.0	1.8	6.0
Elderly aged (85 years and over)	0.8	0.0	0.2	1.2
Cultural Diversity	%	%	%	%
Indigenous	1.4	-	3.2	3.9
Overseas arrivals	0.7	-	25.1	12.2
Speaks another language, and English not well or not at all	1.7	-	4.1	1.9
Country of birth (Top 3)	United Kingdom (3.0)	-	India (7.5)	United Kingdom (3.9)
	Malta (3.0)	-	Philippines (4.1)	New Zealand (2.0)
	Italy (2.6)	-	United Kingdom (2.5)	Philippines/India (1.9)
Dwelling Type	%	%	%	%
Separate house	98.0	-	94.0	80.0
Medium density	1.5	-	0.8	15.2
High density	0.0	-	5.0	3.9
Household composition	%	%	%	%
Couples with children	52.0	46.2	48.7	37.2
Couples without children	27.9	22.7	25.7	21.7
One parent families	8.9	11.5	9.8	14.1
Other families	0.6	5.7	0.4	4.6
Group homes	0.6	2.4	3.0	2.5
Lone person	7.2	11.5	8.7	18.2
Tenure	%	%	%	%
Fully own	48.1	-	6.4	24.8
Mortgage	30.4	-	52.6	38.8
Renting	12.9	-	36.7	28.8

Source: Population.id, December 2017

Compared to the Penrith LGA and the selected comparison sites, Orchard Hills is characterised by a lower proportion of children and high proportions of older people which is indicated by:

- » A lower proportion of residents in the 0-4 and 5-11 service age groups
- » Higher proportions of residents in the 12-17 service age group
- » Higher proportions of residents in the 50-59, 60-69 and 70-84 service age groups.

The area is less culturally diverse with a low proportion of the Aboriginal and Torre Strait Islander communities and lower rates of recent overseas arrivals.

Other important community characteristics which differentiate Orchard Hills from the surrounding area include:

- » No high density dwellings
- » Higher proportions of couples with children
- » Significantly higher proportions of full house ownership (48 percent compared to 6.4 and 24.8).

These differentiating characteristics are important to consider as they indicate a likely significant change in demographic composition at Orchard Hills North and therefore differing future needs for social infrastructure.

5.2 Forecast demographic profile

The following information provides an understanding of the likely characteristics of the projected population for the Rezoning Area based on the adjoining suburb of Caddens (see Table 5). The Rezoning Area will yield around 1,800 dwellings by the time construction is completed.

A dwelling occupancy rate range of 2.8 to 3.2 has been applied to this projection based on the existing occupancy rate at Caddens and the Penrith LGA forecast to 2021 when the first dwellings will be delivered (ABS 2016 Census). This results in a forecast population for the site of between **5,040 and 5,760 people**. The mid-range is an occupancy rate of 3.0 and a total population of around 5,400 people.

Based on the projected age profile for the existing Caddens population, the forecast age characteristics for the Orchard Hills site are shown in Table 5.

Table 5 Preliminary projected age profile for Orchard Hills by 2036

Service age groups	Estimated proportion of population (%)	Estimated number of people
Babies and pre-schoolers (0 – 4 years)	8.7	470
Primary Schoolers (5 – 11 years)	11.4	616
Secondary Schoolers (12 – 17 years)	9.1	492
Tertiary education and independence (18-24 years)	10.1	545
Young workforce (25 to 34 years)	14.8	799

Service age groups	Estimated proportion of population (%)	Estimated number of people
Parents and homebuilders (35 to 49 years)	21.3	1,150
Old workers and pre-retirees (50 to 59)	12.1	653
Empty nesters and retirees (60 to 69 years)	7.7	416
Seniors (70 to 84 years)	4.6	248
Elderly aged (85 years and over)	0.2	11
Total	100.0	5,400

Source: Forecast.id, December 2017

As social infrastructure demand is often life cycle driven (i.e. families with young children require child care) this projected age profile by service age group gives a broad indication of the range of future social infrastructure required to support the projected Orchard Hills North population. These social infrastructure needs will be identified more specifically in Chapter 7.

Table 6 Population projections 2016-2036

Area	Total Aggregate Growth	Proportional Growth (by key age group)					
		<1	1-4	5-19	20-64	65-84	85+
Blue Mountains	8,450	-2%	-2%	6%	-3%	50%	138%
Hawkesbury	17,350	15%	15%	22%	14%	73%	190%
Penrith	65,700	17%	17%	31%	21%	85%	235%
West District	91,500	13%	13%	24%	14%	72%	85%
Greater Sydney	1,740,400	26%	26%	40%	29%	71%	124%

Source: Western District Plan 2017

The Nepean Blue Mountains Local Health District (NBMLHD) Health Care Services Plan proposes a population increase of 28 percent for the NBMLHD with Penrith as the second largest growth area within the NBMLHD. It is expected the future population of the NBMLHD will have high proportions of older people and children and young people. This trend may only be partially present in Orchard Hills as preliminary projects indicate a high proportion of children and young people compared to 2016 proportions while there is an overall decline in older service age groups for the area.

Based on the preliminary projection for Orchard Hills and the NBMLD Health Services Plan, the future population of Orchard Hills North will likely be characterised by:

- » A generally younger population with a higher proportion of young children
- » High proportions of young families with working parents and young married professionals without children

- » A diverse community comprising of people born in England, India, The Philippines and China.
- » An ageing population with a high proportion of people over the age of 65.

Implications for Orchard Hills North

Higher proportions of children, young families and young professionals suggest there will be a demand for educational facilities (primary schools, secondary schools, TAFE and Universities) as well as childcare facilities and organised recreational activities and appropriate spaces.

The area will be culturally diverse and will require spaces for community activities, gatherings and support networks.

There will be demand for aging related services and health care and services.

5.3 Future population and dwellings

It is expected that the majority of the rezoning will comprise medium to low density housing on a range of different lot sizes. The dwelling mix is expected to be diverse, including large environmental living lots, detached residential lots, smaller compact and detached housing.

Table 7 below applies a range of estimated occupancy rates from surrounding suburbs. This is based on an average household size of 2.8 for the Penrith LGA and 3.2 for Caddens in 2021 when dwellings are delivered on the site.

Based on this analysis it is forecast that this will result in a total population of between 5,040 and 5,760 people residing in the Rezoning Area.

Table 7 Average household size across Penrith LGA and Caddens

Year	Penrith LGA	Caddens	Estimated avg. for Orchard Hills North
2016	2.9	3.2	3.0
2021	2.8	3.2	3.0
2026	2.8	3.2	3.0
2036	2.7	3.0	2.9
Total dwellings			1,800
Total estimated population			5,040 and 5,760

Population and household forecasts, 2016 to 2036, prepared by .id , the population experts, December 2017.

6 Social infrastructure standards

In social infrastructure planning, numerical standards have traditionally been used to provide an initial indication of requirements for a given population. They are usually expressed as the number of facilities, places, floor space or land area required for a population of a given size.

Standards can contribute to an assessment of social infrastructure requirements in providing an initial and transparent estimate of the scale of likely requirements. However, the use of standards is heavily conditioned by the following factors:

- » Firstly, the standards to be used need to be adapted to reflect the local context in which they are used, including the composition of the population, travel distances and the availability of existing facilities and services that may not fit into the neat categories implicit in the standards. In areas such as the Penrith City Council LGA where the concept of quality over quantity of social infrastructure is a priority, future planning needs to recognise opportunities for embellishment or upgrading of existing facilities to increase their quality and utilisation, and the ways in which staffing and programming might increase capacity, rather than just increasing floorspace or land area, as the standards suggest.
- » Secondly, contemporary practice in social infrastructure planning suggests that a purely mathematical application of standards is undesirable as a primary means of identifying need. Standards focus just on the quantity or size of facilities required and fail to account for the quality of facilities, the programs, activities and services they provide, or more innovative models of delivery. They rely on numbers of people and do not account for more complex indicators of need such as age, socio-economic status, household structure, health and levels of disadvantage. In this sense they provide a very simplistic and rough estimate of need, which may be useful as an initial indication of the likely scale of future requirements, but which should not be relied upon in isolation.

For these reasons, standards should be applied with some flexibility and caution, and be supplemented by other considerations of need and in relation to existing infrastructure in the area. Importantly, standards should be interpreted in conjunction with objectives and guiding principles for social infrastructure that are based on leading practice research and experience. Many of the standards commonly used were developed prior to current best practice and do not reflect the move towards co-located, flexible, multi-purpose space.

6.1 Suggested standards for the rezoning

In the context of the discussion above, the standards used in section 5 contribute to the assessment of social infrastructure requirements at the rezoning site, along with the other elements of research contained in the following chapters and consultation with Penrith City Council. The proposed standards have been adapted from the sources outlined in the previous section, our experience from projects around Australia and the standards adopted by councils in New South Wales including the City of Sydney.

7 Social infrastructure assessment

7.1 Community facilities

There are several community facilities distributed throughout the residential areas to the north and east of the Rezoning Area.

The Penrith Baptist Church is located on Morello Terrace, set off Caddens Road, on the northern border of the Rezoning Area. The Church has community rooms and conference facilities made available for public use. Regular activities held at the Church include a Men's Shed and Girls Brigade. The Brethren Church is located within the Rezoning Area however its accessibility and function is unclear. It is noted that these church facilities complement but cannot account for all community demand.

The Claremont Meadows Community Centre is located beside Claremont Meadows shopping centre approximately 2kms from the Orchard Hills North site. The Centre provides one medium sized hall with a capacity of 70 people and two meeting rooms with a capacity for 20 people each for hire. The Kingswood Neighbourhood Centre is located around 2.3kms from the Orchard Hills North site and offers a medium sized hall and a meeting room with capacity for 40 people. This large Centre is well-utilised by the community.

A list of identified nearby existing community facilities is shown in Appendix A-1 and a map of these in relation to the site is provided in Figure 4.

Planned facilities

It is understood that the planned community facility in Caddens may now not be provided.

Benchmarks

Penrith City Council has accepted a benchmark for the delivery of community facility space at the Central Precinct at Jordan Springs of 0.08 sqm per 1000 people. This is consistent with analysis of comparative rates of provision from a range of local government areas including Blacktown, Ryde, Liverpool and Hornsby.

Application of this standard for the new population of Orchard Hills North would see a need for up to 400 to 460sqm of community floor space. There are some questions as to the viability of community facilities of this size. Generally community facilities of less than 500 square metres are considered questionable in terms of viability and their capacity to effectively function as flexible, multipurpose spaces. Council has also indicated in discussions that they are facing asset management and operational issues with numerous smaller community facilities distributed widely across the local government area.

Recommended provision

The provision of a relatively small on-site community facility has received a mixed reaction from Council (who would have to own and maintain the facility) as it would add to their asset management burden. Another alternative would be to contribute to the community facility that was planned at the adjacent Caddens development. However, it now appears that the proposed community facility there may not be delivered.

Given this, the demand for social infrastructure generated by Orchard Hills North could be accommodated through the following options:

- » Provision of an outdoor, public, multi-purpose, community activity space in the form of a contemporary plaza-style space in lieu of a traditional community building. This space should be approximately 500 square metres in area. The space could be located in the local centre in close proximity to the supermarket, primary school and adjoining open space. This would be designed for multipurpose use such as outdoor events, community meetings, performances or local market stalls. Landscaped elements may include seating, power, public amenities or audio-visual elements to encourage social gathering. It should act as an informal gathering place with some level of public open space that can accommodate BBQs and seating adjacent to eating areas or cafes. Ideally the car park area is not the dominant feature.
- » If the Caddens facility is not to proceed, consider making an offsite contribution to expand/embellish other nearby existing community facilities in Claremont Meadows, Kingswood, or South Penrith to be expanded or enhanced to meet community needs. This is based on the rationale that these are less than 5km away and could realistically be used by the Orchard Hills North community. Improvements to the quality of community facilities in the surrounding area are likely to increase their utilisation by the future site population.
- » Inclusion of some shared hall space in the new school site accessible and able to be hired by the community.

The timing of the provision of the community meeting space should align with the early delivery of other facilities and services at the local centre. This space will act as the heart of the new neighbourhood and should therefore be accessible from the beginning.

Libraries

The proximity of the Rezoning Area to the Council-run Penrith Library (7.0kms), St Clair Library (8.3kms) and St Mary's Library suggest that these facilities could accommodate the needs generated by the future community. The area is well serviced by these libraries and could accommodate the incoming population. Existing services provided by these libraries include storytelling, a toy library, technology and disability access equipment. The future population range of 5,040 and 5,760 would not trigger the need for Council-run district or regional level library.

7.2 Education facilities

There are several existing primary and secondary schools in proximity to the rezoning area. Within the 2km radius of the rezoning there are two primary schools, one secondary school, and one private K-12 school. To the northeast of the rezoning there is a cluster of tertiary education facilities including the Western Sydney University Penrith Campus and the Nepean TAFE campuses. Table 10 provides a list of nearby education facilities and a map is shown in Figure 6.

Planning for new schools is undertaken by the NSW Department of Education. Current guidelines for planning new schools are under review (pending the release of Education and Child Care State Environment Planning Policy). Predicting where and when a new school is required is complicated by a range of social, economic and land use variables. Demand analysis is undertaken on a case-by-case basis, including consideration of demographic characteristics, enrolment patterns and the size of the private schooling sector. For these reasons, the guidelines are not intended as a minimum standard or benchmark.

Existing capacity

Orchard Hills Public School is located centrally within the proposed rezoning area. This school is a primary school with approximately 113 enrolments at present. For secondary students Orchard Hills is zoned to Kingswood High School which currently has some capacity. It is likely that the school would require expansion as a result of the Orchard Hills North rezoning.

The University of Western Sydney has two campuses in close proximity to Orchard Hills North and the Nepean TAFE campuses in Kingswood and Penrith also service the area. The capacity of these institutions reflects demand rather than set places.

Consultation with the Department of Education indicates that Orchard Hills Public School is currently at capacity. The 1,800 dwellings proposed through the Orchard Hills North rezoning will generate demand for additional primary school capacity. The Department of Education estimates that this rezoning will produce 500 primary age children. This equates to approximately 375 government students.

Recommended provision

Expansion of the existing school site is a potential option. However, consideration of the limitations of the size of the site, and the significant level of expansion required, may hinder its feasibility and as such a new school site may need to be considered.

A new school site could be achieved through an agreement between the Department of Education and the developer involving a combination of land-swap with the existing school site and dedication of additional land by the developer through a Special Infrastructure Contribution.

The School Asset Strategic Plan (SASP)² published in June 2017 acknowledges that:



Schools in NSW must be built on smaller parcels of land to accommodate more students in urbanised areas. The SASP allows schools to be built on 2.5 hectares and 1.5 hectares of land respectively, on the assumption that new schools are co-located with public access, such as council-managed sports grounds or performing arts centres, with development and maintenance costs to be shared between the Department of Education and other users.

This assessment recommends that the new primary school site be between **1.5ha and 2.5ha in size and located adjacent to around 1ha of council-owned open space**. The new primary school

² Audit Office of New South Wales (November 2017). Report on sharing school and community facilities, p. 18.

will need to accommodate the 113 enrolments at Orchard Hills Public School as well as the additional 375 students who may enrol as a result of the rezoning. The maximum enrolment capacities at NSW schools have recently been increased. The primary school maximum is now 1,000 (increased from 640) and the secondary school maximum is now 2,000 (increased from 1,190).

The SASP also acknowledges that school provision is an opportunity for joint and shared use of school facilities with the community. Shared halls, recreation facilities and class/training rooms enhance the social infrastructure offer in communities. The new primary school should also allow for the provision of before and after school and vacation care services to be operated from their site.

7.3 Health care facilities

Consultation with the Department of Health Nepean Blue Mountains Local Health District confirmed that an increase of around 5,400 population in Orchard Hills North will have a noticeable impact on the services at Nepean Hospital and Nepean Private Hospital. In particular the emergency department and the birthing wards were identified as areas likely to be impacted by increased demand.

The design of new hospitals will be configured toward single and twin rooms that inherently require a larger footprint. The number of beds in a ward will therefore be decreased and pressure will mount on the number of available beds. The future population of the Penrith LGA will include young children and adolescents as well as aged people. This will impact on demand for hospital beds across the maternity and aged-related illnesses.

Existing capacity

The Nepean Hospital and Nepean Private are located approximately 4kms north from the rezoning site. Within the 5km radius of the site there are numerous smaller healthcare facilities. The Medical and Fitness Centre located on Bringelly Road near The Northern Road is within a 2km radius of the site. The distribution of these facilities is uneven with clusters to the northwest near Penrith and Kingswood and other centres scattered around Werrington, Werrington County, and Glenmore Park.

It was noted that St Mary's Health Centre is currently at capacity, the Cranebrook Health Centre is at capacity and the Penrith Community Health Centre is currently over capacity. The Penrith Community Health Centre is expected to see some upgrades as part of the Stage 1 Nepean Hospital Redevelopment.

See Figure 7 for a map of nearby healthcare facilities.

Planned

Funding for the Stage 1 Nepean Hospital Redevelopment has been finalised and is expected to be completed in 2022, although the new Stage 1 Redevelopment will not be capable of providing adequate outpatient services. Stage 2 Nepean Hospital Redevelopment has not been announced or funding confirmed. Delivery of Stage 2 is expected to be four to five years after the date of announcement.

Benchmarks

The Nepean Blue Mountains Local Health District Healthcare Services Plan 2012 to 2022 does not provide suggested floorspace areas for new community health facilities. The Central Sydney Local Health District Strategic Plan suggests the provision of one community health centre per 50,000 people, that includes child and family health services, some specialist services and community nursing.

Recommended provision

Application of the 1:50,000 standard means the incoming population in Orchard Hills North will not trigger the need for a standalone community health centre on the rezoning site and The Department of Health is not looking for outreach services.

It is also understood that provision of women's health, drug and alcohol counselling and dietary and nutrition services would be appropriate to service the new population at Orchard Hills North. This need could be met through offsite contributions toward expansion or upgrade to one of the existing over-capacity community health care centres in St Mary's, Cranebrook or Penrith.

The Health District is also interested in planning to mitigate against the health impacts of heat and climate change. There is an expectation that the rezoning will provide acceptable green spaces. In addition, tree planting and green infrastructure planning could be used to mitigate against heat-related stresses on residents. The Nepean Blue Mountains LHD are strong advocates for active transport opportunities, outdoor gyms and play spaces being provided through the rezoning process.

7.4 Childcare centres

Existing capacity

A total of 73 childcare facilities were identified within a 5km radius of the rezoning site. Of these 73 facilities, 11 were within a 2km radius of the centre of the Rezoning Area. The location of childcare services is evenly distributed across most of the nearby urban areas. Many of these facilities are run from residential addresses while some take the form of out of school hours care provided by nearby schools. See Figure 5 for a map of existing childcare facilities.

Benchmark

The standard typically used for the provision of childcare centres is 1 place per 3 children aged 0 to 4 years old (based on 2016 ABS Census data). This includes centre-based long day care aimed primarily at 0 to 4 year olds conducted in a purpose built and licenced child care centre. Childcare may also include pre-schools for 3 to 5 year olds, which only operates during school hours.

The Department of Planning and Environment's Draft Child Care Planning Guideline 2017 provides advice on floorspace requirements for all new child care centres in NSW. The typical total site area required for a child care centre with 100 spaces is 2,363sqm³ inclusive of parking, landscaping, toilets, administration areas etc. Key elements of this calculation include a rate of 7sqm of unencumbered outdoor space per child and 3.25sqm of main activity space per child.

Recommended provision

Based on the population profile detailed in section 5.2, it is anticipated there will be approximately between 440 and 500 0 to 4 year olds living in Orchard Hills North by 2036. This equates to a maximum demand for between 146 and 167 childcare places, or 156 childcare places as a mid-point, across two medium to large (70+ places) centres each 1,772sqm in size. The approximate total site size required would be 3,544sqm.

The strong presence of privately operated child care centres as well as Council-run centres in the Penrith LGA indicates that this need is likely to be met through existing capacity and vacancies available in these centres and therefore a standalone childcare centre is not recommended for the rezoning site.

³ Based on a single storey facility.

7.5 Social infrastructure maps

The following maps indicate the total potential site area inclusive of the Rezoning Area and the Structure Plan Area.

Facility information listed on the following maps has been collected from desktop Google searches and from Council's website.

Figure 4 Community facilities

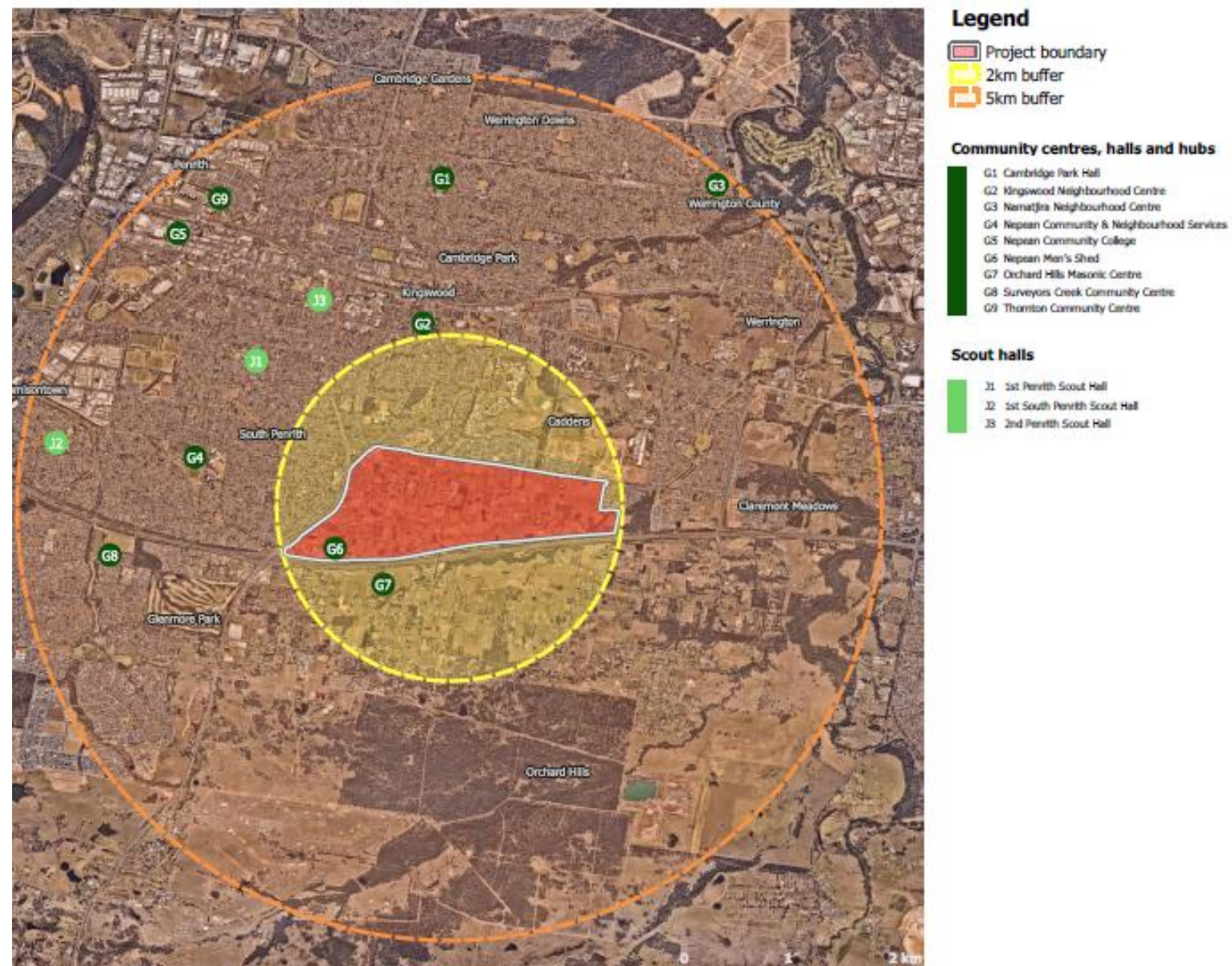


Figure 5 Childcare facilities

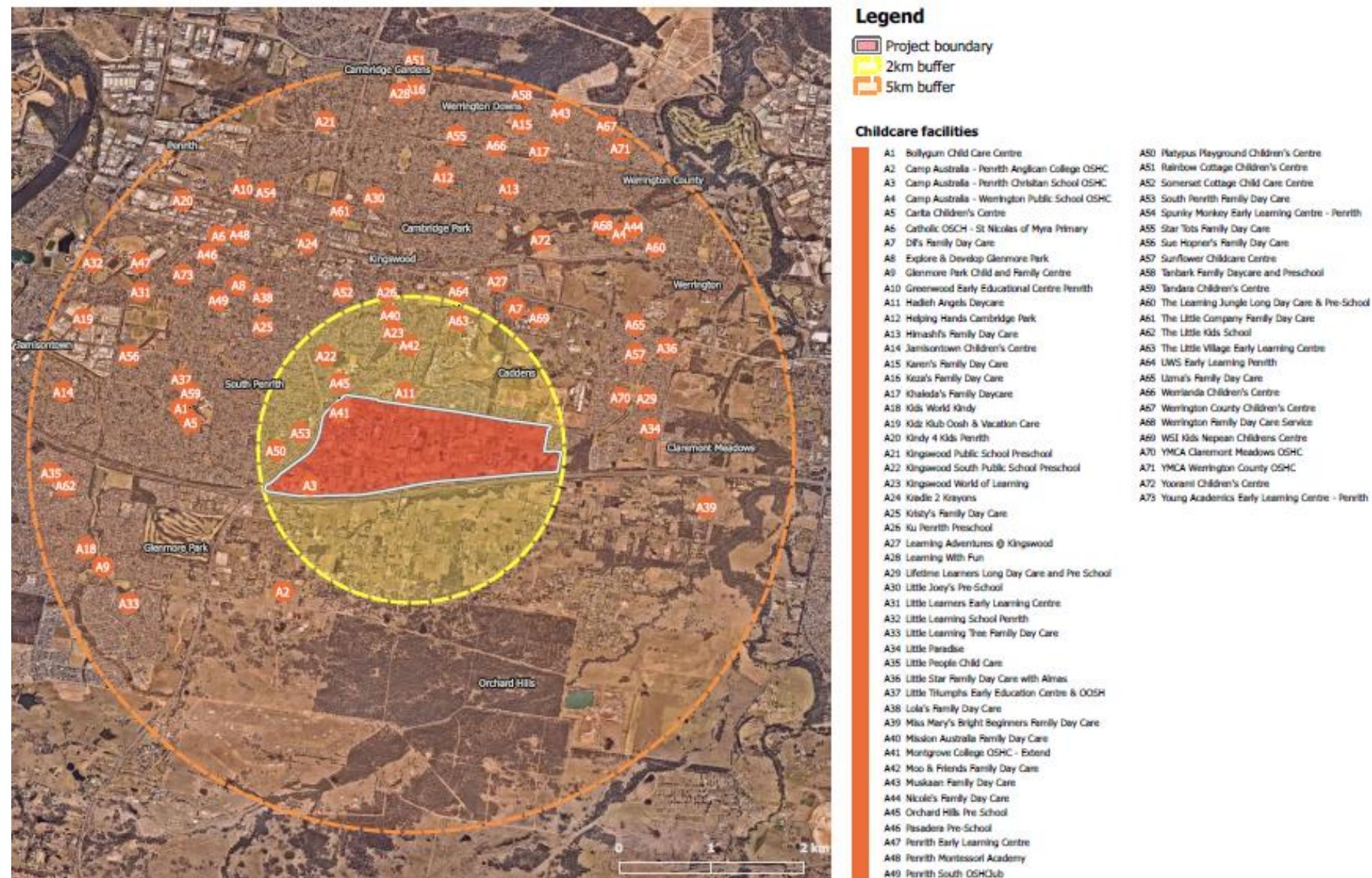


Figure 6 Education facilities

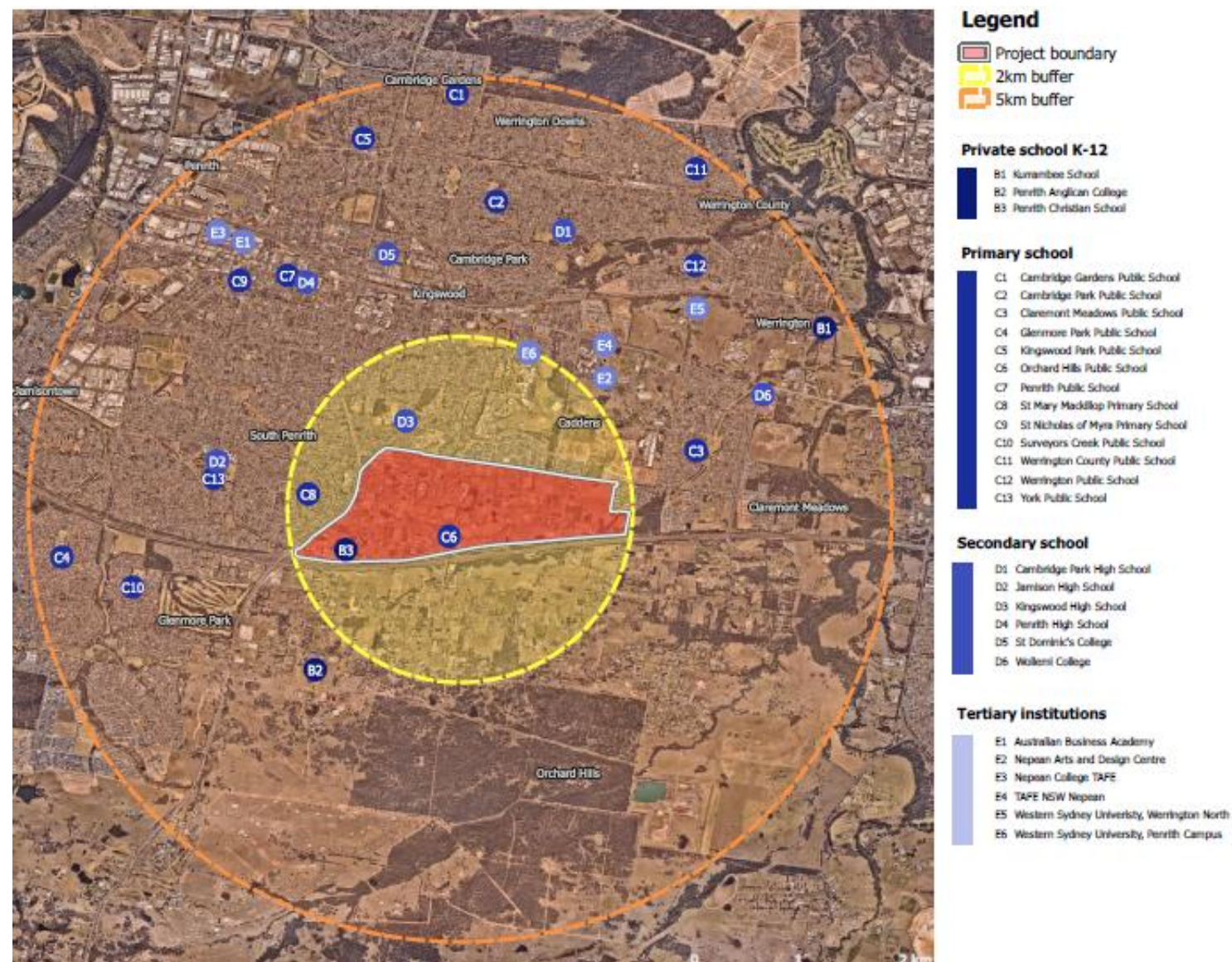
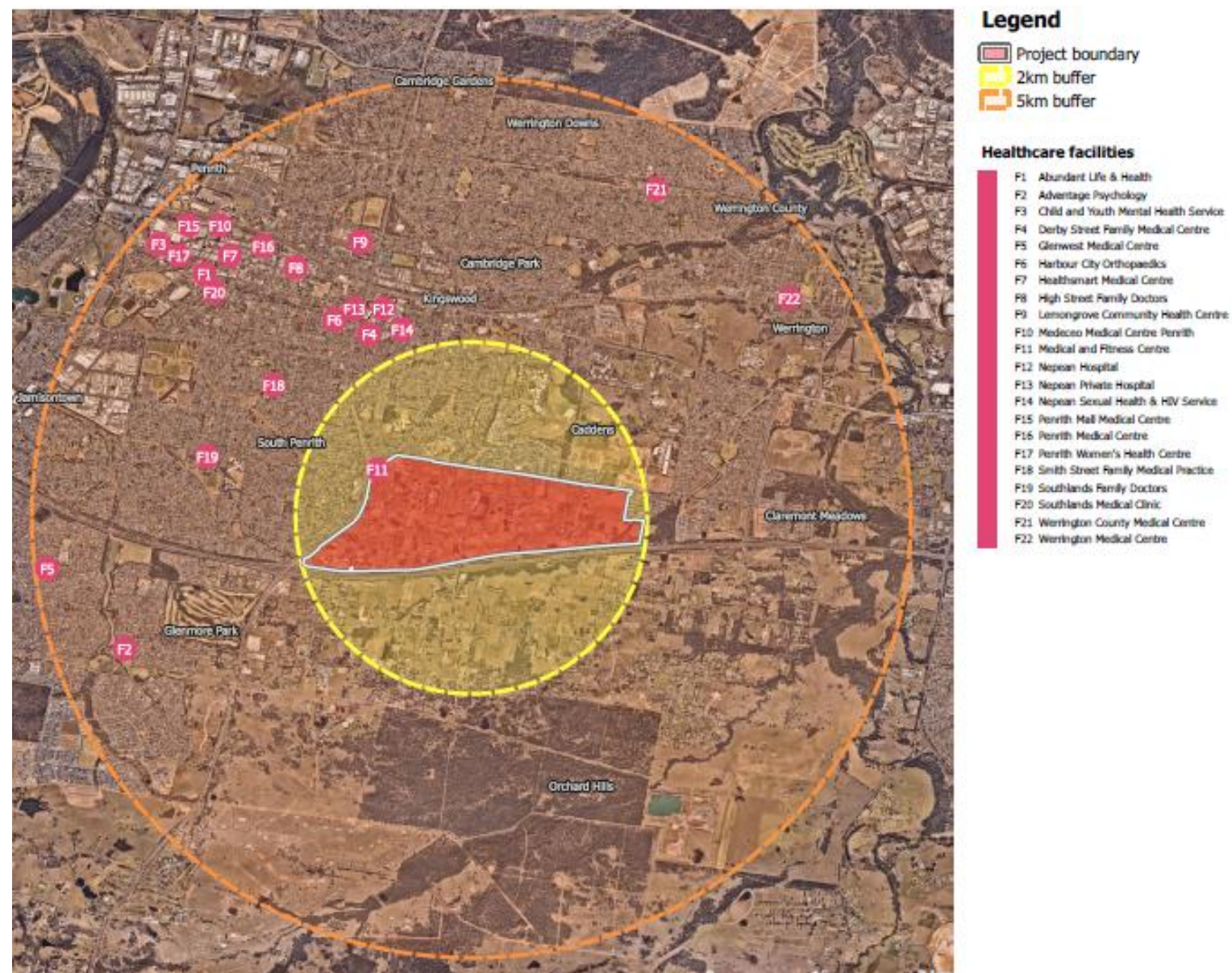


Figure 7 Healthcare facilities



7.6 Open space and recreation

Access to open space for both active and passive leisure and recreation pursuits is regarded as critical to physical and mental wellbeing and is seen as a key component of a healthy and sustainable community. Open space is important for many reasons and is used by different people and different population groups for a wide range of leisure and recreation activities.

For this study, open space is divided into natural, passive and active recreation facilities.

- » **Natural park space** is spaces that encourage people to explore and appreciate areas of environmental protection, biodiversity or heritage conservation. Exposure to natural areas has been found to decrease stress levels. It typically does not involve any built facilities with some exceptions for example bush walking trails or landing for kayaking access to a river.
- » **Passive recreation** facilities are spaces that encourage people to exercise, meet with others, relax or play. It includes unstructured activities such as walking, running, cycling, ballgames, dog walking and climbing. These spaces are generally considered the best way to promote good health in planning new urban development areas.
- » **Active recreation** facilities are spaces that also encourage people to exercise, but typically in a more organised way. It includes sports facilities such as pools, courts, fields and other structured activity areas.

A variety of lot sizes is proposed for the Orchard Hills North site. For residents who live in dwellings on smaller lots where private open space such as backyards may be limited, there is likely to be a heightened need for people to access good quality public open space close to where they live.

Existing

There are currently no existing public open space facilities located on the site. Nearby open space includes the Western Sydney University Kingswood Campus, Roger Nethercote Park and Rotary Park.

Appendix A-3 outlines the existing public open space facilities that are located nearby the Orchard Hills North rezoning. See Figure 8 for a map of existing open space and recreation facilities.

Planned

There are two known planned public open space areas in the vicinity to the rezoning at Orchard Hills North.

- » Active open space planned for Caddens Hill, a new residential development on the northern side of Caddens Road. Provision includes one playing field, some playspace and an amenity building. The distance to the centre of the rezoning is approximately less than one kilometre.
- » Council's Open Space Action Plan notes the future use of the Gipps Street Community Park site as a district level sporting precinct that could provide passive and active open space including a mixture of sports fields, structured parks and bushland. It has also been previously proposed that the site could house a skate park facility. As part of the development of the Sport, Recreation, Play and Open Space Strategy Council are reviewing the status of the Gipps Street Community Park master plan.⁴

⁴ Importantly, any monetary contribution to the Gipps Street Community Park site would need to be considered in addition to the funding estimated for the population when the master plan was developed.

Benchmark

As a result of the PLANS research (detailed in section 4.1) Penrith City Council acknowledges that public open space and facilities in the LGA need improvement. The provision of public open space will therefore be based on a qualitative approach rather than the traditional quantity-based approach employed thus far.

Penrith City Council is currently developing a Sport, Recreation, Play and Open Space Strategy that will be informed by the Principles of Green Infrastructure detailed in the Government Architect's Greener Places schema.⁵ Greener Places sees nature as a driver for high performing and quality design of urban environments.

Councils current rate of provision for open space in the Penrith LGA is 3.04ha per 1000 persons. This rate assumes a breakdown of:

- » 1.4ha/1000 for active open space
- » 1.64ha/1000 for passive open space.

Application of this rate to an approximate population of between 5,040 and 5,760 requires the following amounts of open space within the Rezoning Area:

- » Passive open space: between 8.3ha and 9.4ha
- » Active open space: between 7.1ha and 8.1ha
- » Total open space: between 15.3ha and 17.5ha.

It is understood that Council is seeking to adopt a percentage-based rate of provision for open space rather than a numerical calculation in line with the forthcoming Greener Places Guideline. As a percentage of net developable land (76ha), application of the above rate of provision for total open space represents between 20.1% and 23.0%. The Department of Planning and Environment's 2010 Guideline suggests 9% of a development for local/district provision of open space is reasonable.

Given an analysis of the context and setting specific to this rezoning, it is recommended that a range of park sizes is provided that aligns with the concept of a hierarchy of play spaces.

Recommended provision – passive open space

Given the variety of elements including native bushland, riparian corridors and steep inclines within the Rezoning Area, the following suggestions are made regarding the provision of passive open space in order to meet Council's rate of provision for passive open space:

- » Seven local parks covering approximately 5ha collectively
 - > One 'anchor' style centrally located park adjoining the primary school and local centre (approx. 1.26ha)
 - > Two medium sized local parks (approx. 0.75 – 0.81ha)
 - > Four pocket parks (approx. 0.5 – 0.68ha)
- » Multiple bushland parks covering the existing bushland (approx. 3.0 to 3.3ha collectively)
 - > Providing high natural conservation value attributed to the preservation of the Cumberland Plain Woodland
 - > Must be publicly accessible and give people the ability to walk through or sit quietly on a bench.

Riparian lands are not included in the calculation for open space due to their encumbered nature however, some riparian land could be activated for passive use.

⁵ Government Architect of NSW. 2017. Greener Places (Draft).

Recommended provision - active open space

Application of Council's current standard would require between 7.1ha and 8.1ha of active open space to be provided on site. The current structure plan does not provide open space for the purposes of sporting fields or multipurpose courts. The primary reason for this is the challenging topography of the existing site that would require extensive cutting and filling. The secondary reason is the proximity to the planned sporting facility at Caddens which is within the acceptable distance for Orchard Hills North residents to travel for organised sport (<5kms driving).

Sporting fields are often best planned at a district level. The provision of single fields provided in isolation has less utility as an organised sports facility. The provision of sports fields within topographically challenging areas such as the Rezoning Area is unlikely to adequately service the need of the incoming population.

It is therefore recommended that the developer make monetary contributions offsite to a future site that is appropriately sized to accommodate not only the demand generated by the rezoning at Orchard Hills North but also future residential development in the pipeline. The location of this site is to be determined by Council.

Comparison with Concept Master Plan

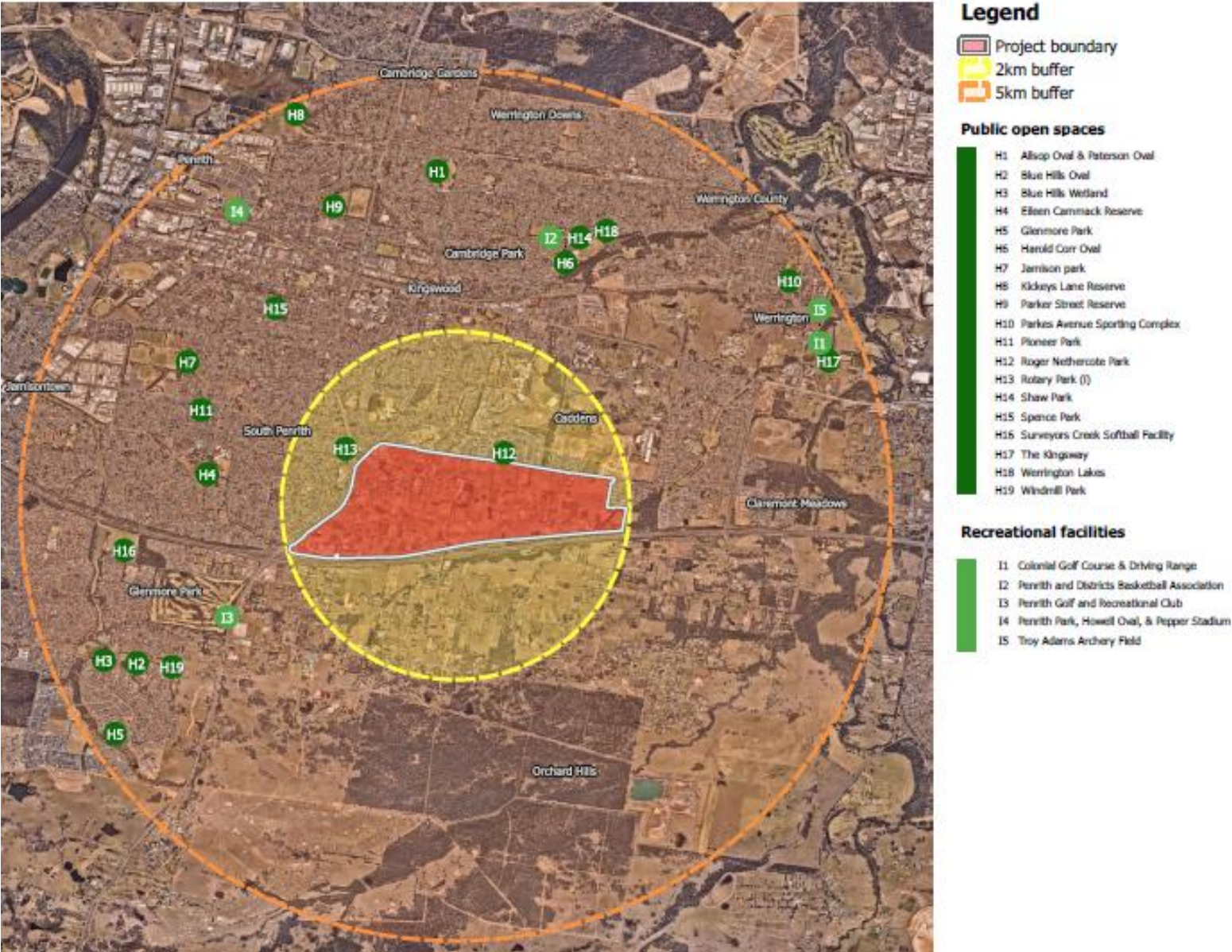
The Concept Master Plan (refer to section 2.7) indicates a range of open spaces within the Rezoning Area. There is 8.82ha of passive open space provided onsite which consists of local park space and natural bushland. This is consistent with Council's current requirement. The Concept Master Plan does not allow for the provision of active open space for the reasons stated above.

The design and provision of local park space should not only consider the four defining Greener Places Principles that relate to the design and planning of green infrastructure but also the more specific needs of an ageing population. The key Greener Places Principles include:

- » Integration – combine green space with urban development and grey infrastructure to create more multi-purpose infrastructure that promotes healthy active living
- » Connectivity – create a network of high quality open spaces that connect town centres, public transport hubs, creeks, employment and residential areas
- » Multi-functionality – the ability of green spaces to deliver multiple ecosystem, environmental and other services simultaneously
- » Participation – an open and inclusive planning process that incorporates the knowledge and needs of diverse parties.

Specific design features to consider include accessible off leash dog areas and opportunities for innovative design of outdoor exercise areas that provide exercise equipment with moveable parts so that older people and people with lower fitness levels can use them for cardiovascular exercise. It is also beneficial to co-locate community exercise areas with child playspaces so parents can work out while having full visibility of their children using the playground.

Figure 8 Public open space and recreation facilities



8 Conclusion

This assessment has considered the social infrastructure and open space requirements likely to be generated as a result of the rezoning.

The residential development is expected to yield approximately 1,800-2,000 low and medium density dwellings with a resultant population of around 5,400 people. This population is expected to have similar characteristics to those of the adjoining suburb of Caddens to the north.

Overall, the incoming population will require the provision of various social infrastructure, in line with local government priorities for the Penrith LGA and best practice benchmarks. These are outlined in the following table.

Table 8 Summary of social infrastructure and open space requirements

Social infrastructure type	Suggested provision or comment
Community facility	<p>While the new population would generate demand for between 400sqm and 460sqm of community facility space, the provision of an on-site facility has received a mixed reaction from Council (who would have to own and maintain the facility) as it would add to their asset management burden.</p> <p>It is therefore recommended that the demand for social infrastructure generated by Orchard Hills North be accommodated through the following options:</p> <ul style="list-style-type: none"> » Provision of an outdoor public multi-purpose community activity space in the form of a contemporary plaza-style space in lieu of a traditional community building. This space should be approximately 500 square metres in area. » If the Caddens facility is not to proceed, make an offsite contribution to expand/embellish the other nearby existing community facilities in Claremont Meadows, Kingswood, or South Penrith to be expanded or enhanced to meet community needs.
Education facility	<p>It is important to note that while expansion to the existing school site is a potential option, consideration of the limitations of the size of the site and the significant level of expansion required may hinder its feasibility and as such a new school site may need to be considered.</p> <p>It is therefore expected that a new school site could be achieved through an agreement between the Department of Education and the developer involving a combination of land-swap with the existing school site and dedication of additional land by the developer through a Special Infrastructure Contribution.</p> <p>This assessment recommends that the new primary school site be between 1.5ha and 2.5ha in size and located adjacent to around 1ha of council-owned open space.</p>

Social infrastructure type	Suggested provision or comment
Health care facility	The incoming population in Orchard Hills North will not trigger the need for a standalone community health centre to be provided on the rezoning site and The Department of Health is not looking for outreach services.
Childcare facility	The strong presence of privately operated child care centres as well as Council-run centres in the Penrith LGA indicates that this need is likely to be met through existing capacity and vacancies available in these centres and therefore a standalone childcare centre is not recommended for the rezoning site.
Open space and recreation	<p>Based on Council's current rate of provision for open space in the Penrith LGA of 3.04ha per 1000 persons (with a breakdown of 1.4ha/1000 for active open space and 1.64ha/1000 for passive open space) the total open space requirement for the Rezoning Area would be between 15.3ha and 17.5ha.</p> <p>Given the variety of elements including native bushland, riparian corridors and steep inclines within the Rezoning Area, the following suggestions are made regarding the provision of passive open space in order to meet Council's rate of provision for passive open space:</p> <ul style="list-style-type: none"> » Seven local parks covering approximately 5ha collectively <ul style="list-style-type: none"> > One 'anchor' style centrally located park adjoining the primary school and local centre (approx. 1.26ha) > Two medium sized local parks (approx. 0.75 – 0.81ha) > Four pocket parks (approx. 0.5 – 0.68ha) » Multiple bushland parks covering the existing bushland (approx. 3.0 to 3.3ha collectively) <ul style="list-style-type: none"> > Providing high natural conservation value attributed to the preservation of the Cumberland Plain Woodland > Must be publicly accessible and give people the ability to walk through or sit quietly on a bench. <p>Due to the topography of the site and the difficulty in providing active open space, this study recommends that to meet the active open space need, the developer make monetary contributions offsite to a future site that is appropriately sized to accommodate not only the demand generated by the rezoning at Orchard Hills North but also future residential development in the pipeline. The location of this site is to be determined by Council.</p>

Appendices

A Existing social infrastructure

A Existing social infrastructure

A-1 Existing community facilities

Table 9 Existing community facilities

Facility Name	Type	Approximate distance from site (km)
Penrith Baptist Church	Church with community meeting rooms	1.5
Nepean Men's Shed	Community Centre	2.0
Claremont Meadows Community Centre	Community Centre	2.0
Kingswood Neighbourhood Centre	Community Centre	2.3
Orchard Hills Masonic Centre	Community Centre	3.0
1st Penrith Scout Hall	Hall	3.0
2nd Penrith Scout Hall	Hall	3.2
Nepean Community & Neighbourhood Centre	Community Centre	3.2
Cambridge Park Hall	Hall	3.7
South Penrith Community Centre	Community Centre	4.0
Surveyors Creek Community Centre	Community Centre	4.0
1st South Penrith Scout Hall	Hall	4.5
Namatjira Neighbourhood Centre	Community Centre	4.6
Thornton Community Centre	Community Centre	4.6
Nepean Community College	Community Centre	4.9
St Marys Senior Citizens Centre	Community Centre	6.0
Penrith City Library	Library	7.0
Surveyors Creek Community Centre	Community Centre	6.8
Werrington Youth Centre	Youth Centre	8.0
St Clair Library	Library	8.3
Our Library @ Mt Druitt Hub	Library	12.2

A-2 Existing education facilities

Table 10 Existing education facilities

Facility Name	Enrolment					Notes
Primary	2012	2013	2014	2015	2016	
Cambridge Gardens Public School	284	307	325	354	375	Government K-6
Cambridge Park Public School	426	465	474	495	519	Government P-6
Claremont Meadows Public School	421	432	467	500	528	Government K-6
Glenmore Park Public School	614	594	633	648	661	Government K-6
Kingswood Park Public School	120	116	139	132	145	Government P-6
Orchard Hills Public School	81	77	77	86	102	Government K-6
Penrith Public School	403	400	395	397	391	Government K-6
St Mary Mackillop Primary School	399	414	405	400	408	Non-Government K-6
St Nicholas of Myra Primary School	184	209	220	203	196	Non-Government K-6
Surveyors Creek Public School	434	482	489	516	534	Government K-6
Werrington County Public School	330	355	367	401	405	Government K-6
Werrington Public School	405	396	370	387	393	Government K-6
York Public School	523	565	559	577	578	Government K-6
Secondary School	2012	2013	2014	2015	2016	
Cambridge Park High School	567	566	578	612	655	Government 7-12
Jamison High School	995	1016	1006	992	999	Government 7-12
Kingswood High School	749	784	759	719	710	Government 7-12
Penrith High School	927	926	931	939	951	Government 7-12
St Dominic's College	1067	1022	1027	1004	1023	Non-Government 5-12
Wollemi College	108	139	150	154	161	Non-Government 7-12
Private school K-12	2012	2013	2014	2015	2016	
Kurrambee School	109	108	109	107	107	Non-Government
Penrith Anglican College	1277	1290	1266	1236	1214	Non-Government
Penrith Christian School	621	665	707	710	687	Non-Government

Sourced from <https://www.myschool.edu.au/> 20/12/2017

A-3 Existing open space and recreation

Table 11 Existing open space

Facility Name	Description	Notes
The Western Sydney University Kingswood campus	2 outdoor soccer fields, one synthetic, one grass	
Allsop Oval & Paterson Oval	2 full size fields	Flood lights
Blue Hills Oval	Cricket pitch plus 2 full size fields	No flood lights
Blue Hills Wetland	Large wetland connected to long riparian corridor with walking path	
Eileen Cammack Reserve	2 full size fields, 1 half size field, and 2 mini fields	Flood lights
Glenmore Park	1 full size field, running track, batting cage, 2 baseball/softball areas	
Jamison Park	9 full size fields, 39 hard courts, cricket pitch, off lead dog area, batting cage.	Flood lights
Hickeys Lane Reserve	3 full size fields	Flood lights
Parker Street Reserve	4 full size fields, athletics track	Flood lights
Parkes Avenue Sporting Complex	2 full size fields, 1 cricket pitch, 1 hardcourt, 4 tennis courts, 1 small field	Flood lights
Pioneer Park	Public open space	No facilities
Roger Nethercote Park	Public open space with playground, barbeques, and setting	
Rotary Park (i)	Public open space with outdoor exercise equipment	
Shaw Park	Cricket pitch backing onto nature reserve	
Spence Park	Public open space with playground	
Surveyors Creek Softball Facility	8 softball fields and a club house	Flood lights
The Kingsway	Numerous full size fields (10) and two half size fields	Flood lights
Werrington Lakes	Public open space with walking tracks and cricket pitch and adjoins Harold Corr Oval which has one full size field and an athletics track	
Windmill Park	Public space with playground and picnic areas	

