

Social Infrastructure Assessment for Vineyard Precinct Stage 1

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Executive Summary

This report considers the community facilities, human services and open space that will be required to support the population of the future Vineyard Precinct – Stage 1, within the North West Priority Growth Area (NWPGA). The report has been prepared for the Department of Planning & Environment (DP&E), as one of the technical studies needed to support planning for Vineyard Precinct.

The report contains eight sections:

- » Section 1 provides an introduction and background to the study and describes the development context, the study scope and study process
- » Section 2 describes the policy context to the provision of social infrastructure through a review of key State and local government documents. These policies and objectives provide the guiding framework for the community facilities and open space strategy recommended in the report
- » Section 3 examines the social context of the Vineyard precinct. It discusses the pattern of development in the area and characteristics of the existing population. The social context of development in surrounding areas is then used to identify issues which may be relevant when considering future growth in the area
- » Section 4 examines the availability of existing services, facilities and open space in and around the Vineyard precinct and their capacity to absorb demand likely to be generated by future residents. The assessment has shown that, other than a few childcare centres, there are no facilities within the precinct at present. However, there is a wide range of services, facilities and open space located in the surrounding area. Key facilities with spare capacity which could be available to the future Stage 1 Vineyard population, at least in the short term, include high schools, independent schools and aquatic facilities. Most other types of facilities have limited capacity to absorb demands likely to be generated by Stage 1 development at Vineyard.
- » Section 5 sets out the expected dwelling yields and future Stage 1 population of the Vineyard Precinct. About 77% of new dwellings are expected to be low density or environmental living housing and 23% to be medium density dwellings. This development mix would result in around 2,400 dwellings and a population of around 7,400 residents when complete. The characteristics of the new population would be broadly similar to those of other new development areas in north western Sydney.
- » Section 6 provides an assessment of the community facilities and services likely to be required for residents of Stage 1 of the future Vineyard precinct, based on Department of Planning standards and recent policies of Hawkesbury City Council. The analysis shows that the residential population will warrant local facilities including a primary school (or provision within schools in adjacent precincts to take children from this precinct), a moderately sized community centre planned to enable future expansion, childcare centres and medical centres. Social infrastructure needs must also take into consideration plans for future services and facilities in areas located close to the precinct as the North West Priority Growth Area develops.
- » Section 7 examines the likely open space and recreation requirements of the precinct. It considers some general trends in the demand for open space and recreation and presents Department of Planning & Environment and City of Hawkesbury standards for the provision of

open space and recreational facilities. The analysis concludes that the forecast population for Stage 1 will create demand for:

- » About 21 ha of public open space within the precinct
- » Passive local open space which meets Council requirements in relation to size and distribution
- » Two double playing fields
- » Provision of outdoor sports courts for tennis and netball in off-site complexes
- » Linear open space along the creek corridors to provide walking and cycle trails that provide recreation opportunities and linkages to key destinations.

Section 8 draws together the findings and recommendations for the required facilities and open space outlined above.

1 Introduction

This report presents an assessment of the social infrastructure, including community facilities, human services and open space, that will be required to support residential development within Stage 1 of the Vineyard Precinct. The report has been prepared by Elton Consulting for the Department of Planning & Environment (DP&E) as one of a number of technical studies to support the precinct planning process.

1.1 Background

In 2006 the NSW Government announced plans outlining the future of land releases in the North West and South West Priority Growth Areas of Sydney to accommodate continuing population growth across the metropolitan area. The North West Priority Growth Area (NWPGA) (formerly known as the North West Priority Growth Area – NWGG) comprises 16 precincts across Blacktown, The Hills and Hawkesbury Local Government Areas, totalling approximately 10,000 hectares (ha) that will accommodate around 70,000 new dwellings and 180,000 people, once fully developed.

Vineyard Precinct, along with Riverstone East Precinct, was announced for release in March 2013 and is one of the last of the precincts within the North West Priority Growth Area to be rezoned under the Priority Growth Areas State Environmental Planning Policy (October 2006). The original 2006 Structure Plan for the NWPGA identified a target of 2,500 new dwellings, and a population of around 7,000 people, for the entire Vineyard Precinct. This precinct is now being released in two stages, with this Social Infrastructure Assessment referring to the Vineyard Precinct Stage 1.

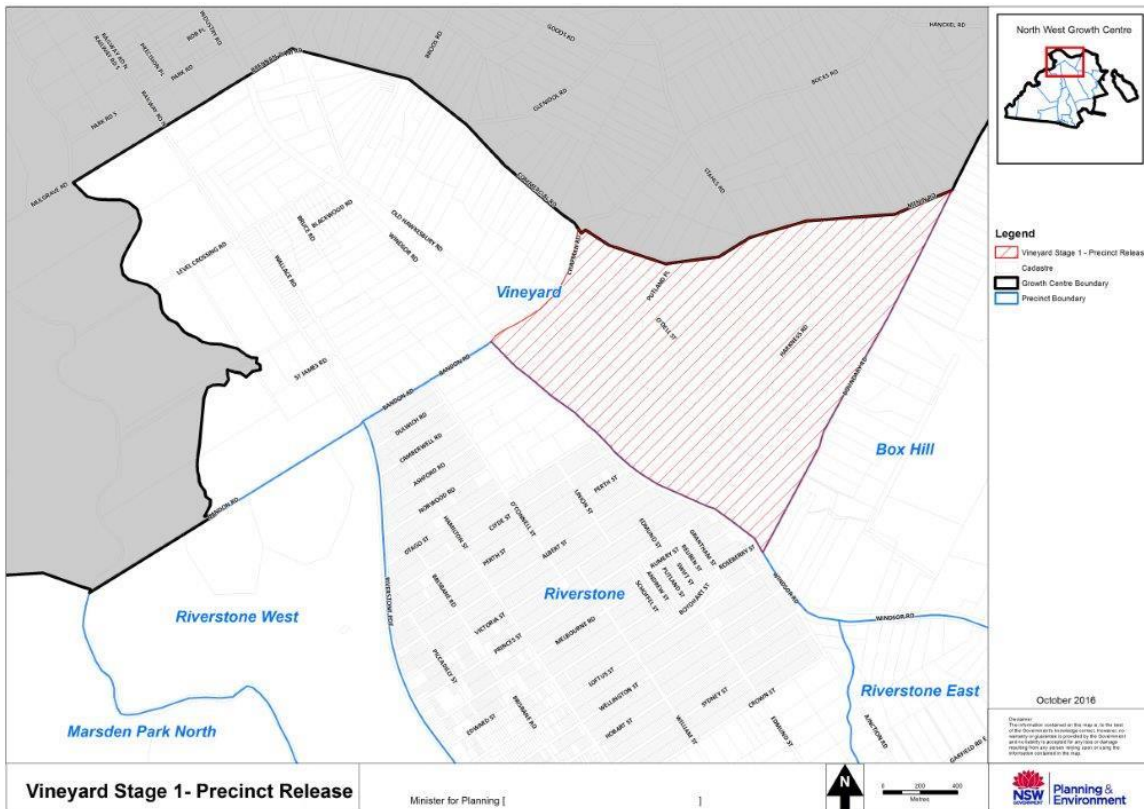
Vineyard Precinct is the only precinct to be located in the Hawkesbury Local Government Area (LGA). The total precinct has an area of approximately 590 ha.

Under the guidance of DP&E, planning for Vineyard has involved the preparation of:

- » An Indicative Layout Plan (ILP) to guide planning for Stage 1 of the Precinct
- » An amendment to State Environmental Planning Policy (Sydney Priority Growth Areas) 2006 to facilitate the formal rezoning
- » A Section 94 Contributions Plan.

These plans are supported by a number of specialist technical studies.

Figure 1 Vineyard Stage 1 precinct boundaries



Source: DP&E

1.2 Development context

Vineyard Precinct is the most northerly of the North West Priority Growth Area Precincts, lying at the southern edge of Hawkesbury Local Government Area. Its northern boundary is defined by transmission lines in the vicinity of Mulgrave Road, Park Road South and Brennans Dam Road. The north eastern boundary continues along Commercial Road and Menin Road to the eastern boundary, formed by Boundary Road. The south-eastern boundary is defined by Windsor Road, while Bandon Road forms the south-western boundary. The Eastern Creek corridor forms the western boundary. Stage 1 of the Vineyard Precinct (the subject of this report) lies to the east of Chapman Road and to the north-east of Windsor Road, as shown in Figure 1. Stage 2 lies to the north and west of Bandon Road and Chapman Road.

The Vineyard precinct is characterised by longstanding agricultural and rural residential uses, with some light industrial land uses typical of rural fringe activities, such as truck repairs. The population of the entire precinct has been relatively stable since the 1990s, at around 900 people.

Key features of the Vineyard precinct include:

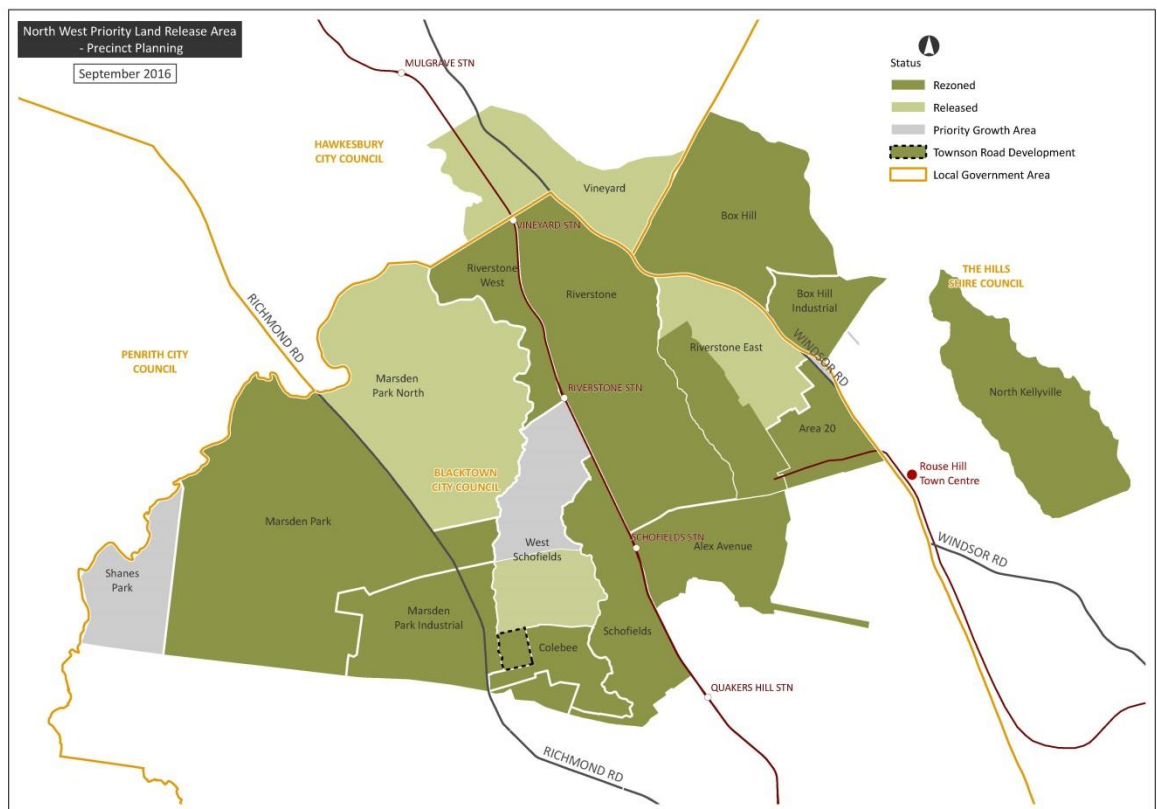
- » Its bi-section by Windsor Road, linking with Windsor to the north-west and Rouse Hill and the city to the south-east
- » The Richmond Railway Line linking Hawkesbury with the rest of the metropolitan rail system
- » Its flood-prone lands associated with Eastern Creek (west of Windsor Road) and Killarney Chain of Ponds (east of Windsor Road), along with large stands of native bushland along the creeklines and on many private properties and a series of small dams serving agricultural uses.

- » In addition to the transmission line easement on the northern boundary, transmission lines are located near the precinct's western boundary north of Bandon Road. A transmission line easement also runs southwest to northeast from Riverstone Sewage Treatment Plant (in Riverstone Precinct) towards the precinct's north eastern Commercial Road boundary.

To the south lie the NWPGA precincts of Riverstone West and Riverstone, while the Box Hill Precinct adjoins its eastern boundary. These precincts have now been rezoned for urban development and are set to experience significant residential and employment growth over the next 20 years. To the north lies Oakville, which is likely to remain as a rural residential area for the foreseeable future. To the north-west lies an industrial area and the small settlements of Mulgrave and McGraths Hill, which are separated from Windsor by South Wianamatta Creek, flood-affected land and sewage treatment works. Vineyard is also separated from the residential areas of South Windsor and Bligh Park to its west by Eastern Creek and South Wianamatta Creek.

The centre of the Vineyard Precinct is approximately 7kms from the two closest centres, being Windsor to the north-west and Rouse Hill to the south east, both outside the Priority Growth Area boundaries.

Figure 2 Locational context – Vineyard precinct within the North West Priority Growth Area



Source: DP&E

1.3 Scope of this study

This study provides specialist advice to support the preparation of the Precinct Plan for Vineyard Stage 1, with regard to:

- » Demographic analysis and forecasts of the size and nature of the future population within Stage 1 of the Precinct

- » The community facilities, human services and open space (ie social infrastructure) which will be required to meet the needs of the future Vineyard Stage 1 community, at the local, district and regional levels
- » Identification of spatial and locational criteria for recommended social infrastructure and their application in the draft ILP for Stage 1, taking into account changing community expectations and contemporary leading practice principles
- » Implementation strategies for the delivery of social infrastructure
- » Opportunities for integration of open space with conservation, recreation, drainage, education and other infrastructure outcomes, and linkages to networks in the surrounding area
- » Contributions towards the iterative development of the Stage 1 ILP and other planning documents.

1.4 Study process

Preparation of this report has involved the following tasks:

- » Discussions and meetings with representatives of the Department of Planning & Environment (DP&E)
- » Review of existing plans, policies and background studies from Hawkesbury City Council, the former Priority Growth Areas Commission and DP&E
- » Analysis of the social context of Vineyard, including demographic analysis of the surrounding district population (using 2011 ABS census data for the local area)
- » An assessment of the existing community facilities and open space in the Vineyard precinct and surrounding areas and detailed understanding of the facilities to be provided in the surrounding areas through the Priority Growth Areas planning process
- » Discussions with representatives of Hawkesbury City Council and relevant State Government agencies about existing services, future requirements of the forecast population and delivery arrangements
- » Identification of other social planning matters that have emerged during the research and are considered to contribute to positive social outcomes.

2 Policy framework

A range of policies have been examined to provide context and guidance for the planning and delivery of social infrastructure for the Vineyard Precinct.

These policies also provide the criteria against which the Indicative Layout Plan for the Precinct may be reviewed. More broadly, the policy review has also identified the social objectives directed at ensuring that the communities created within the Precinct will be socially sustainable.

The policy review has considered:

- » *A Plan for Growing Sydney*
- » *State Environmental Planning Policy (Sydney Region Priority Growth Areas) 2006*
- » *The Priority Growth Areas Development Code*
- » The strategic and social planning policies of Hawkesbury City Council.

A brief outline of relevant issues contained in these policies is presented below.

2.1 A Plan for Growing Sydney (NSW Government, 2014)

A Plan for Growing Sydney contains a number of directions and actions aimed at accelerating housing supply and improving housing choice and affordability to meet Sydney's changing needs and lifestyles, in both urban renewal and greenfield precincts.

In relation to the delivery of greenfield housing supply (Direction 2.4), the Plan proposes that greenfield housing development will continue to be primarily focused in the North West and South West Priority Growth Areas, to become known as Priority Growth Areas. There is also a focus on infrastructure investment and co-ordination to enable the delivery of infrastructure at the local level to support housing development.

Further relevant directions identified in *A Plan for Growing Sydney* include:

- » Create healthy built environments
- » Plan for education and health services to meet Sydney's growing needs, including assisting education providers to plan for new school sites
- » Undertake long-term planning for social infrastructure to support growing communities.

The Hawkesbury LGA forms part of the West Sub-region. Priorities for this sub-region include:

- » Accelerate housing supply choice and affordability and build great places to live
- » Support Penrith as the key strategic centre for the sub-region and major centre for health and education infrastructure.

2.2 The Priority Growth Areas SEPP

State Environmental Planning Policy (Sydney Region Priority Growth Areas) 2006 provides the statutory planning framework for the Priority Growth Areas and establishes the broad planning controls for their development. In particular, it identifies areas of open space and environment conservation to be protected, areas that are flood prone or major creek lands and transitional lands that need to be further assessed in the precinct planning process.

The objectives of the SEPP include to:

- » Enable the establishment of vibrant, sustainable and liveable neighbourhoods that provide for community well-being and high quality local amenity
- » Provide controls for the sustainability of land in those areas that have conservation value
- » Provide for the orderly and economic provision of infrastructure in and to those Priority Growth Areas.

The SEPP also provides objectives for Public Recreation: Regional and Local Zones, which includes the following relevant objective:

- » To enable the land to be used for regional open space or recreation purposes that are consistent with the protection of its natural and cultural heritage values.

2.3 The Priority Growth Areas Commission (GCC) Development Code

The *Priority Growth Areas Development Code* provides the basis for the planning and design of precincts and neighbourhoods within the Priority Growth Areas, and provides a guide to the incorporation of best practice standards. The *Development Code* contains a large number of objectives to guide the planning and provision of community facilities and open space. They include:

- » Achievement of quality design outcomes
- » Infrastructure investment to keep pace with development
- » A range of housing types to suit the needs of all members of the community
- » Planning to enable residents to walk to shops for daily needs
- » Easy access to town centres with a full range of shops, recreational facilities and services, along with smaller village centres and neighbourhood shops
- » A range of land uses to provide the right mix of houses, jobs, open and recreational spaces.

Specific objectives of the *Development Code* address particular elements and include to:

- » Increase housing choices
- » Provide facilities and services at a local level, including parks, libraries, shops, schools, and health facilities
- » Improve walking and cycling pathways, especially between residential areas and shops and schools
- » Integrate existing infrastructure
- » Provide, protect and maintain a range of open space opportunities throughout the entire precinct

- » Provide a range of commercial and retail opportunities
- » Enhance safety, maximise surveillance and minimise opportunities for crime
- » Utilise public places and public buildings to promote community identity.

Specific Development Code objectives with regard to community facilities include to:

- » Provide community facilities within walking distance of residential neighbourhoods and transport nodes
- » Provide access to a wide range of social and community facilities catering for different social groups and age groups
- » Create good access to new areas of open space and community facilities
- » Improve access to existing parks and recreational facilities
- » Minimise the impact of access ways on the environmental qualities of public open space
- » Provide good, but unobtrusive, access.

The Code also provides objectives in relation to the location, co-location and multiple use of community services and facilities in order to:

- » Facilitate efficient use of resources and services through maximising opportunities for joint, shared or multiple-use of open space and community facilities
- » Ensure that adequate social, cultural and community facilities are appropriately located in relation to public open spaces
- » Facilitate the viability of social facilities by means of appropriate location and distribution
- » Maximise accessibility and convenience of social facilities and services through co-location
- » Facilitate social and community facilities that meet the future requirements of the population
- » Provide for the social needs of future communities
- » Enable adequate land to be made available for the provision of social infrastructure
- » Facilitate the timely provision of community facilities and services
- » Locate community facilities within the centres and neighbourhoods
- » Create opportunities for the optimal use of land and resources, educational and community facilities.

The *Development Code's* objectives relating to public open space aim to balance the dual function of the undeveloped land for both recreational purposes and stormwater management systems. In addition the land needs to be accessible and useable by the public for a wide range of activities. Specific open space objectives include to:

- » Integrate stormwater management and water sensitive urban design with networked open space
- » Provide a balance of useable and accessible open space with neighbourhood and district stormwater management
- » Protect recreational uses
- » Provide an interconnected network of open spaces
- » Integrate public open space into the urban structure to maximise land use efficiency
- » Facilitate the provision of public open space of an appropriate quality and quantity

- » Facilitate the provision of public open space and its development as part of the subdivision process
- » Provide a diverse mix of open spaces and community facilities designed to cater for a range of uses and activities
- » Facilitate the provision of sporting and recreation facilities that can meet the needs of future communities
- » Provide amenity to residential areas
- » Avoid pressure to existing open space systems in surrounding areas.

Additional open space objectives with regard to urban spaces and connections include to:

- » Provide public open space that is pleasant, safe and usable both during daytime and at night
- » Integrate open space with the mix of uses in the town centre to form a focal point
- » Provide residents with accessible passive and active recreational opportunities
- » Provide open space that promotes local character and identity
- » Provide play spaces which are designed and located to be safe and convenient and to assist in childhood development
- » Retain existing stands of remnant vegetation and to associate them with passive recreational facilities
- » Provide open space for a diversity of interests catering for a wide range of users.

The *Development Code* also contains a set of Precinct Development Parameters which provide some guidance in establishing benchmarks and thresholds for the planning of open space and social infrastructure in precincts. These are discussed further in Sections 6 and 7 of this report.

2.4 Hawkesbury City Council Policies

2.4.1 Hawkesbury Community Strategic Plan 2013-2032

The Hawkesbury *Community Strategic Plan* is a high level plan that outlines the key community aspirations, and sets the essential direction for future Council activities and decision making.

This plan is divided into five themes, with each supported by a vision statement, directions, strategies, goals, and measures to assist Council and the community achieve its objectives.

The themes are:

- » Looking after People and Place
- » Caring for Our Environment
- » Linking the Hawkesbury
- » Supporting Business & Local Jobs
- » Shaping our Future Together

The vision is for a community in which the area's character is preserved and lifestyle choices are provided with sustainable, planned, well serviced development, within strongly connected, safe and friendly neighbourhoods.

For this study, key strategies and goals include:

- » Population growth is matched with the provision of infrastructure and is sympathetic to the rural, environmental, heritage values and character of the Hawkesbury
- » Development is supported by appropriate physical and community infrastructure
- » Hawkesbury has friendly neighbourhoods, connected communities and supported households and families
- » Necessary physical infrastructure and human services will be upgraded to meet contemporary needs and expectations
- » A safer community will be provided through planning, mitigation and response.

2.4.2 Hawkesbury Residential Land Strategy 2011

The purpose of the *Residential Land Strategy* is to guide future residential development within the LGA and ensure it is sustainable and meets the needs of the Hawkesbury population. The Strategy provides a planning framework to ensure equity in access to a range of facilities and services, to encourage increased diversity in housing stock and to promote a range of lifestyle areas. It considers how Hawkesbury will accommodate targets set for additional dwellings, focused primarily around existing centres and corridors, while preserving the unique natural environment of the LGA and addressing constraints associated with flooding, native vegetation and bushfire risk.

The Strategy examines land capacity across the LGA and identifies areas for investigation for future residential development. Vineyard has not been considered in detail as it is noted as being subject to the NWGC Strategy.

Of most relevance for this study, the Residential Land Strategy proposes directions with regard to:

- » Open space and recreation: future urban development should maximize use of existing recreation assets and focus on areas with existing facilities; centres should provide a level of recreation facilities which meet the needs of the local community. The Strategy identifies indicative benchmarks for open space and recreation facilities to identify current and future required levels of provision
- » Community services and facilities: Future community facilities are encouraged to be located in town centres, villages, small villages and neighbourhood centres. The Strategy also provides indicative benchmarks for a range of community facilities to identify likely future requirements.

2.4.3 Hawkesbury Section 94 Contributions Plan 2008

This Plan sets out Council's approach to the provision of community facilities and open space to meet an increase in demand generated by new development. It also contains important information about standards and benchmarks and proposed levels of provision to be applied across the City of Hawkesbury.

This information is discussed further in Sections 6 and 7.

2.4.4 Hawkesbury Regional Open Space Strategy 2013

The *Hawkesbury Regional Open Space Strategy* (Clouston Associates and OneEighty Sport & Leisure Solutions for Hawkesbury City Council, 2013) is the guiding strategic document by which Council will plan and manage its recreational open space.

The strategy examines the quality and quantity of existing open space, identifies community needs and demands and proposes an implementation plan that includes actions to enhance the City's recreation and open space provision to meet the future needs of the community. These include:

Focusing on the Basics First

- » Providing more shade, seating, paths, planting and play
- » Providing for basic kickabout areas in local parks
- » Ensuring that sports parks also provide for passive recreation and spectator amenity
- » Meeting changing trends in sport by greater facility flexibility and adaptability
- » Addressing flood and climate change impacts through design and planning

Improving Access and Connectivity

- » Better connecting residential areas to the park system by cycle and walking routes
- » Improving access to and onto the rivers and creeks
- » Improving universal access for all ages
- » Promoting more walking and cycling through enhanced off road facilities

Making More of What's There

- » Reviewing all open space for opportunities to consolidate, acquire and rationalise all with the focus on improved recreation access, quality and diversity

Drawing on the City's Unique Character, Identity and Heritage

- » Placing the river at the heart of the city's open space and recreation network

Developing Partnerships

- » Liaising with adjoining LGAs and NPWS on mutually beneficial open space and recreation opportunities

The Strategy identifies the need for a number of additional studies and development of action plans to address specific community needs. These plans will be of interest to the on-going planning and programming of open space in the Vineyard Precinct:

- » Sport Plan – including a hierarchy of sports reserves across the LGA, functions and facilities to be applied to new reserves and retrofitted in existing reserves
- » Children's Play Plan – will outline a hierarchy of play spaces and facilities
- » Skate and BMX Plan – will provide a direction for the provision of these facilities
- » Youth Plan – will involve consultation with a broad range of youth groups to gain a clearer picture of youth recreation interests and needs
- » Walking and Cycling Plan – to provide direction for the integration of all aspect of recreation fitness and commuter cycling and walking and strengthening connections between open spaces
- » Recreational Corridor Network Plan – to promote and provide direction for the connectivity of open space across the LGA.

3 Existing social context

It is important to understand the social context of any new development, to ensure that its planning takes account of and is responsive to the surrounding social conditions and that it will integrate, both physically and socially, with the surrounding areas.

This chapter presents an overview of the social context for development within the Vineyard Precinct as a whole. It considers the characteristics of the population currently living in and around the precinct. The availability of existing community facilities, human services and open space that could address some of the needs of the future new Stage 1 population are considered in the following chapter.

3.1 The district social context

The Vineyard Precinct is located on the northern periphery of the NWPGA. It will provide the interface between the urban development which is set to occur in the Priority Growth Area precincts of Riverstone, Riverstone West and Box Hill which adjoin to the south, the rural residential area of Oakville to the north, and the historical township of Windsor to the north-west.

Key features of the adjoining Priority Growth Area precincts include:

- » The Riverstone Precinct will accommodate around 9,000 new dwellings and around 27,000 residents. Residential development will mostly take the form of low density areas, with some medium to higher density residential areas along Schofields Road. The precinct will also provide a new railway station, new roads, 3 new primary schools, a high school and a community hub.
- » Riverstone West Precinct, located west of the Richmond Rail Line between Riverstone and Vineyard stations, has been rezoned for business and industrial development, with potential to support around 12,000 jobs for residents of Sydney's north-west.
- » Box Hill and Box Hill Industrial Precincts provide for 9,600 dwellings and almost 30,000 residents. The areas contain more than 130 ha of employment land, which is expected to create around 16,000 jobs.
- » Town centres will be developed in Box Hill, Alex Ave and Cudgegong Road Station (Area 20) Precincts, in addition to some redevelopment of facilities within the existing Riverstone town centre. The Major Centre for the Priority Growth Area will be the Rouse Hill Regional Centre, which will provide higher order commercial, service and recreational functions.

The recent and proposed growth within these precincts and the related planning processes have important implications for the planning and delivery of social infrastructure and open space for the Vineyard Precinct. Rapid population growth in Priority Growth Area precincts to the south and east will place strain on services and facilities provided by Blacktown City Council and The Hills Council. It is important that growth within the Vineyard Precinct does not add to those demands.

Social issues associated with the rapid rate of urban development occurring in this area are likely to include:

- » The potential for the new community to be drawn more towards precincts to the south and east (Riverstone and Box Hill) than to Windsor and other parts of Hawkesbury, and hence the potential to seek provision of human services in neighbouring Council areas, if there is under-provision locally. This could arise because of distance from facilities and services within

Hawkesbury (primarily located in Windsor) and the proximity to, and similarities with, new residential precincts within the Priority Growth Areas. There may also be differences in the quality of new services and facilities available in the Priority Growth Area precincts, compared with those older facilities in other parts of Hawkesbury LGA.

- » The potential for there to be a shortage of local employment opportunities, coupled with relatively poor public transport services. Many residents of outer suburban areas spend considerable time commuting to work outside the region. Time spent commuting can restrict time available for family life, recreation and for involvement in community life. This demonstrates a need for facilities and activities that are locally based.
- » Newcomers can be separated from established support networks and may experience isolation and dislocation. This indicates a need to foster social support networks and services.
- » The relatively high cost of new housing creates financial stress for many households. There is a need for social and recreational opportunities that are affordable.
- » There is a need for strategies to promote integration of new and existing communities, to foster community cohesion and identity and help ensure that the change process does not strain social harmony.

3.2 Social profile of the area

The population of this part of North Western Sydney has changed significantly over the past 20 years. Land within the region has previously been used for agricultural and rural residential purposes; however significant population growth across western Sydney and a demand for new housing has seen many of these existing uses change in favour of new urban development. A demographic profile has been prepared in order to understand the existing demographic characteristics of the Vineyard area, so as to understand how the precinct will change with anticipated urban development.

The Vineyard precinct is not accurately captured by any ABS Census of Population and Housing geographies. For the purpose of describing the current population, characteristics of two small (SA1) areas (SA1 1130101 and 1130103), which cover most of the precinct, have been examined. The total population of these two small areas was approximately 800 people at the time of the 2011 census, while the population of the entire precinct is estimated to be around 900 people.

Characteristics of the Vineyard population from the 2011 Census are identified in Table 1, through comparisons with the profiles for Hawkesbury LGA and Greater Sydney. Those of greatest significance have been highlighted.

Table 1 Vineyard Demographic Profile

Indicator	Vineyard (approximate area)	Hawkesbury LGA	Sydney
Population (2011)	900	62,352	4,391,676
Age groups (%)			
0-4	5.4	6.8	6.8
5-11	6.4	10.0	8.7
12-17	6.4	9.3	7.4
18-24	9.7	10.1	9.5
25-54	33.3	40.8	43.8
55-64	14.7	11.4	10.8
65 and over	24.2	11.6	12.9
Median age (yrs)	47-49	36	36
Household type (%)			23.7
Family household	60.0	77.2	73.1
Lone person	38.0	20.4	22.6
Group household member	2.0	2.4	4.3
Average household size (no. people)	2.4	2.8	2.7
Family household structure (%)			
Couples with children	44.0	49.4	48.9
Couples without children	43.5	32.5	33.5
Single parent families	11.0	17.0	15.7
Other family	1.5	1.0	1.9
Cultural diversity (%)			
Aboriginal or TSI heritage	1.4	2.6	1.2
Overseas born	19.4	12.6	34.2
Speaks language other than English at home	13.8	5.3	35.5
Most common non-English speaking ancestries	Maltese, Italian	Maltese, German	China, India
Median household income (\$)	See Note 1	1385	1447
Labour force status persons aged 15+ (%)			
Employed full-time	60.1	62.0	38.2
Employed part-time	29.2	27.6	16.5
Unemployed	2.8	4.6	3.5
Employment Industry (%)			
Professionals	10.0	15.2	25.5
Clerical and administrative workers	14.6	15.4	16.2
Managers	15.4	12.6	13.3
Technician and trade workers	19.6	18.8	12.2
Sales workers	9.4	8.9	9.0
Machinery operators and drivers	8.3	8.5	13.0
Labourers	11.0	9.4	7.3
Community and personal service workers	7.2	9.6	8.8
Housing types (%)			
House	60.8	85.8	60.9
Semi-detached house	25.2	9.3	12.8
Apartment	0.0	3.7	25.8
Other	14.0	1.2	0.5
Housing tenure (%)			
Fully owned	58.0	29.9	30.4
Being purchased	21.3	42.5	34.8
Rented	14.3	24.9	31.6
Other / not stated	6.3	0.7	0.8
Dwelling status (%)			
Occupied private dwellings	91.3	92.8	92.8
Unoccupied private dwellings	9.0	7.2	7.2
Same usual address as 5 years ago	68.1	61.9	56.7

Note: 1 – Median household income for SA1 1130103 is \$640 per week. Median household income for SA1 1130101 is \$1,038 per week

Source: Australian Bureau of Statistics Census 2011

From this table, key features of the Vineyard population include:

- » **An ageing population:** Vineyard has a relatively large proportion of people in all age cohorts over 55 years compared with Hawkesbury LGA and Sydney. These factors contribute to the **relatively high median age** of 47-49 years
- » Associated with this is the relatively **small proportion of children and young people**, compared with Hawkesbury and Sydney.
- » **A high proportion of single person households** and a smaller proportion of family households
- » Associated with the above, Vineyard has a **relatively high proportion of couple households without children**, and a smaller proportion of couple households with children than Hawkesbury and Sydney. There are also relatively fewer single parent family households
- » **Moderate levels of cultural diversity:** Vineyard has higher proportions of people born overseas and households where a language other than English is spoken at home than Hawkesbury LGA. However cultural diversity is significantly lower than Sydney. Maltese and Italian are the main non-English speaking cultural groups
- » **Lower median household income** than Hawkesbury and Greater Sydney, with particularly low median household income in the SA1 1130103 catchment
- » **Low representation of professionals** and a slightly higher proportion of technicians and trade workers than Hawkesbury
- » **A mixture of low and medium density housing:** A sizeable proportion of the housing stock is made up of semi-detached / attached housing, when compared with Hawkesbury LGA
- » **Very high levels of home ownership** and lower levels of dwellings being purchased or rented than both Hawkesbury LGA and Sydney.

The rezoning and future growth of this precinct will significantly change the demographic characteristics of this rural residential area. Forecast characteristics of the incoming population in Stage 1 are outlined in Section 5 below, and are likely to include a predominance of families with children, particularly young families. There is also expected to be greater levels of cultural diversity. This will change the nature of the social infrastructure required to service this area. It also points to a need for processes to support the existing population during the change process and to assist in the integration of new and existing populations, through information, community engagement and community development processes.

4 Existing community facilities and open space

Existing community facilities, services, open space and recreation opportunities in and around the Vineyard Precinct have been identified and examined to assess their availability, capacity and accessibility for the incoming population.

4.1 Community facilities

Consistent with its small population and semi-rural character, existing social infrastructure within the Vineyard precinct is currently very limited. The Vineyard population relies on local and district facilities such as schools, childcare services, medical services, community centres and places of worship in the adjacent and nearby settlements of McGraths Hill, Windsor, South Windsor and Riverstone. Figure 3 shows the locations of existing facilities.

Schools

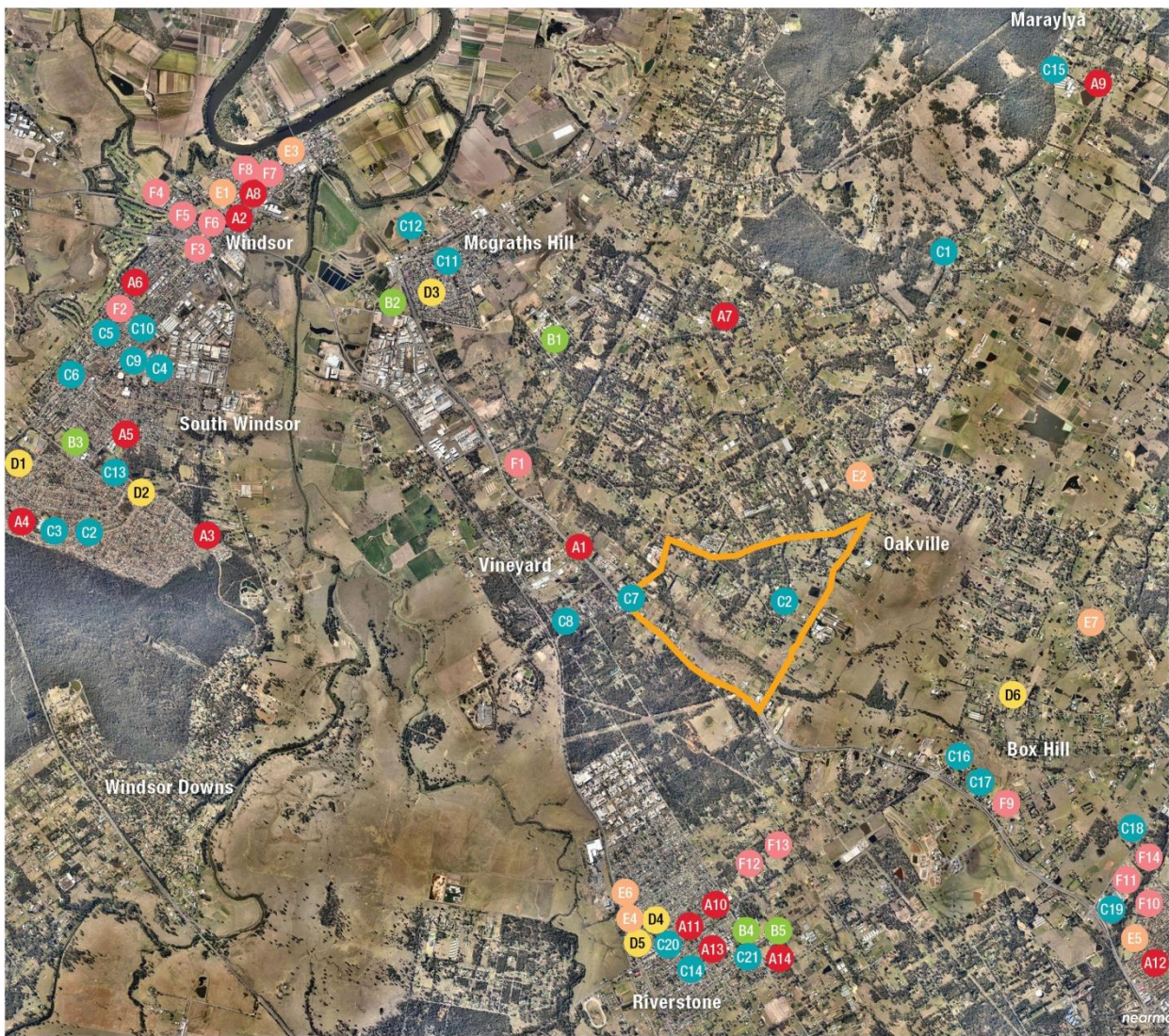
There are no primary schools within the Vineyard Precinct. Vineyard Public School lies just outside the precinct boundary, across Bandon Road, in Riverstone Precinct. Vineyard Public School is a very small school on a small site, with only 36 students in 2014. Although it currently has some spare capacity, this school will clearly not be big enough to meet demand generated by residential development within Vineyard.

Table 2 shows the enrolment history and capacity of local schools. While some nearby schools currently have some capacity (eg Riverstone, Windsor Park), others such as Oakville Public School and Rouse Hill Public School are at or close to 100% utilisation.

The closest government high schools to Vineyard Precinct are Windsor High School and Riverstone High School. Enrolments at these facilities have fluctuated over time, with both showing significant spare capacity at present that would be available to absorb new students.

Typical of many fringe residential areas, there are many independent (non-government) schools near the Vineyard precinct. The closest are Arndell Anglican College in nearby Oakville and Norwest Christian College in Riverstone. Both are combined primary and secondary schools with growing enrolments. Both occupy large sites with room for expansion as demand increases.

The Catholic Education Office has advised that there is currently significant capacity for primary school students at St Johns Primary School, Riverstone within existing facilities and for expansion on the site in future, if required.



 Vineyard Stage 1 Precinct boundary

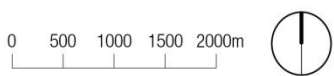


Figure 3 Social infrastructure near Vineyard

PRIMARY SCHOOLS

- A1 Vineyard Public School
- A2 Windsor Public School
- A3 Windsor Park Public School
- A4 Bligh Park Primary School
- A5 Chisolm Catholic Primary School
- A6 Windsor South Primary School
- A7 Oakville Public School
- A8 St Matthews Primary School
- A9 Maraylya Public School
- A10 Casuarina School
- A11 St Johns Primary School
- A12 Rouse Hill Public School
- A13 Riverstone Public School
- A14 The Ponds School (Special School)
- B1 Arndell Anglican College (K-12)
- B4 Norwest Christian College (K-12)

HIGH SCHOOLS

- B1 Arndell Anglican College (K-12)
- B2 Windsor High School
- B3 Bede Polding College
- B4 Norwest Christian College (K-12)
- B5 Riverstone High School

CHILD CARE

- C1 Oakville Pre-School
- C2 Oakville Playschool
- C3 Bligh Park Pre-School
- C4 Greenhills Childcare Centre
- C5 Windsor Pre-School
- C6 Gumleaf Cottage Childcare Centre
- C7 Fit Kidz Learning Centres
- C8 Vineyard Children's Early Learning Centre
- C9 Macquarie Street Kindergarten
- C10 Windsor Presbyterian Preschool Kindergarten
- C11 Mcgrath's Hill Children's Centre
- C12 Mcgrath's Hill Learning Centre
- C13 ABC Learning Centre
- C14 Riverstone Public Pre-School
- C15 Maraylya Early Learning Centre
- C16 Country Bear Childcare Centre
- C17 Spunky Monkey's Early Learning Centre
- C18 Rouse Hill Pre-School Kindergarten and Long Day Care Centre
- C19 Playdays Pre-School and Long Day Care Centre
- C20 The Riverstone Childrens Centre
- C21 Norwest Christian College Long Day Care
- C22 Captain Bligh Pre-school

LOCAL COMMUNITY FACILITIES

- D1 Bligh Park Neighbourhood Centre
- D2 Tiningi Community Centre
- D3 McGraths Hill Community Centre
- D4 Riverstone Neighbourhood Centre
- D5 Riverstone Branch Library
- D6 Box-Hill Nelson Community Hall

EMERGENCY SERVICES

- E1 Windsor Police Station
- E2 Oakville Fire Station
- E3 Windsor Fire Station
- E4 Riverstone Fire Station
- E5 Rouse Hill Fire Station
- E6 Riverstone Police Station
- E7 Box Hill – Nelson Rural Fire Service

PLACES OF WORSHIP

- F1 Vineyard Church
- F2 Christian Israelite Church
- F3 Hawkesbury Church
- F4 St. Matthew's Anglican Church Windsor
- F5 Windsor Catholic Church
- F6 Catholic Church
- F7 Seventh Day Adventist Church
- F8 The Potters House Christian Church Windsor
- F9 Church of the Nazarenemore
- F10 Seventh Day Adventist Reform Movement of Australasia
- F11 Mile End Community Church
- F12 Christian Brethren Riverstone
- F13 Uniting Church in Australia
- F14 Norwest Uniting Church

Table 2 Schools near Vineyard and historic enrolments

School	Site size (ha)	Student enrolments			2014 Utilisation %
		2010	2012	2014	
Government					
Primary schools					
Vineyard Public School	1.784	60	32	36	70%
Windsor Public School		222	201	190	
Windsor Park Public School	2.981	280	264	233	83%
Bligh Park Public School		390	395	361	
Windsor South Public School		167	153	145	
Oakville Public School	4.047	418	432	458	100%
Maraylya Public School		84	110	111	
Casuarina School (Special School)	1.206	25	36	42	100%
Rouse Hill Public School	3.112	876	865	807	100%
Riverstone Public School	2.995	294	269	268	71%
The Ponds School (Special school)		n/a	n/a		
High schools					
Windsor High School	8.052	485	490	468	54%
Riverstone High School (7-10)	9.594	330	335	316	48%
Independent non-government					
Primary schools					
Chisholm Catholic Primary School		475	515	535	
St Matthews Primary School		192	225	264	
St Johns Primary School		139	115	107	
Combined schools					
Arndell Anglican College (K-12)		754	841	887	
Norwest Christian College (K-12)		361	389	395	
High schools					
Bede Polding College		1195	1192	1185	

Source: www.myschool.edu.au, accessed 1 June 2015 and Department of Education advice

Community centres, libraries and cultural facilities

Although there are currently no community facilities within Vineyard Precinct, there are several within close proximity. These include:

- » McGraths Hill Community Centre – This small centre provides a hall space which is capable of accommodating 120 people, and a meeting room for up to 10 people, available for community hire
- » Box Hill-Nelson Community Hall – The hall offers capacity for up to 100 people, available for community hire
- » Riverstone Neighbourhood Centre – offers a diversity of activities such as recreational and leisure classes, education programs, community groups (i.e. men’s shed and a community gardening group), health and wellbeing services (i.e. counselling services) and emergency relief and assistance for low income individuals and families. The Centre offers a hall and a variety of meeting rooms for community hire.

- » Bligh Park Neighbourhood Centre, Sirius Road, Bligh Park – The Neighbourhood Centre, located adjacent to the Bligh Park Shopping Centre, provides a hall capable of accommodating 80 people, hosts play groups, dance and fitness groups and social groups of varying sizes
- » Tingingi Community Centre, Colonial Drive, Bligh Park – The Centre provides seating capacity for up to 150 people in the main hall. Additionally, a separate meeting room provides seating capacity for up to 30 people. The facility is used for training courses, playgroups, dance groups and martial arts groups.

The nearest libraries to Vineyard precinct include:

- » Hawkesbury Central Library – The Central Library is based at Windsor, with a branch also at Richmond. A full range of services are available including books, newspapers, magazines, CDs and DVDs, internet based services, research facilities and online databases. The Library has been sized in accordance with State Library guidelines and has capacity to accommodate at least some of the future population growth within the LGA.
- » Riverstone Branch Library – Also in reach of the precinct, this branch library provided by Blacktown City Council is located in the Marketown Shopping Centre and offers technological facilities (internet, computer and printing services) as well as a variety of activity spaces.

The Deerubbin Centre in Windsor is the major cultural facility for Hawkesbury Council, accommodating the Central Library, Hawkesbury Regional Gallery and a number of community meeting, seminar and studio rooms.

Child care facilities

There are several child care facilities located within the Vineyard Precinct, many offering long day care. These include Vineyard Children’s Early Learning Centre, Fitzkidz Learning Centre and Oakville Playschool. Some primary schools in nearby precincts also offer childcare services, including Riverstone Public Pre-school and Norwest Christian College Long Day Care.

A review of www.mychild.gov.au indicates that there are vacancies at many of these centres across most days of the week. However, these few centres are not likely to be able to accommodate the childcare needs of all new residents.

Health and medical services

No medical services are currently located within the precinct, although there are a number of General Practices (GPs) located nearby, such as in McGraths Hill (McGraths Hill Medical Centre) and in Windsor (Windsor Family Practice, The Johnston Street Medical Centre and South Windsor Medical Practice). Additional medical centres are located at Riverstone.

Public health services for residents of Vineyard are provided by Nepean Blue Mountains Local Health District and include hospitals, community health services, early childhood health centres and specialist services.

The nearest hospital to Vineyard Precinct is the Hawkesbury District Health Service in Windsor, operated by Catholic Healthcare. The 127 bed hospital provides both private health care and public patient services under a contract that expires in 2016. This facility also provides an emergency department and a variety of community and allied health services to people living in Hawkesbury LGA. However, some critical services (eg mental health services) are not provided at this hospital, while others have been moved to Nepean Hospital near Penrith. Transport services to this and other medical facilities within the LGA are very limited for those without cars.

Public hospitals are also located in Blacktown and Mount Druitt, approximately 13 kilometres south of the site. However, Nepean Hospital in Penrith (23 kms to the south-west along The Northern Road) is designated as the major tertiary facility providing district level specialist care to the Hawkesbury LGA. Nepean Hospital is the main facility to offer outpatient services and only source

of rehabilitation services within the Nepean and Blue Mountains Local Health District (NBMLHD). Some outpatient services are also available through the recently established University of Notre Dame clinical school, at Hawkesbury Hospital in Windsor.

In addition to these facilities, The Hills Private Hospital and Norwest Private Hospital at Bella Vista also service residents of this area:

- » Norwest Private Hospital is located in Bella Vista and provides accommodation for 216 patients, along with operating theatres, an emergency department, intensive care unit, coronary care unit and special care nursery. Outpatient services are also provided and include chemotherapy, an infusion centre and renal dialysis services.
- » The Hills Private Hospital is a 96 bed rehabilitation and mental health facility which offers both in-patient facilities and a day program of activities.

A community health centre serving the Vineyard area is incorporated into the Hawkesbury District Health Service at Windsor. Other community health centres are located at Blacktown Hospital and at Mount Druitt and Doonside. A district level community health facility is planned for the Rouse Hill Town Centre as part of an integrated health care centre.

A review of NBMLHD's *Asset Strategic Plan 2013-2023* and feedback from discussions with the Local Health District indicates that the key planning considerations for health facilities for Hawkesbury LGA include:

- » Within the next 20 years Hawkesbury Hospital will reach capacity as the area's demographic is ageing (65+ age group), requiring specialist services and more beds. The Hospital in its current form will have limited capacity therefore to meet the needs of a growing population within the Priority Growth Area.
- » Hawkesbury City Council has projected an increase of around 5,000-6,000 new dwellings for the LGA outside the Vineyard Precinct, predominantly around Windsor, Richmond and existing towns. Planning to accommodate and serve the changing needs arising from the increased population and the ageing demographics will need to occur through expansion of current facilities.
- » Public transport services to both Nepean and Hawkesbury Hospitals are highlighted as being inadequate.

Key issues likely to continue to be of concern across the NBMLHD in future include:

- » Inadequate public transport services providing access to health facilities
- » Relatively high and increasing proportions of the population with mental health and drug and alcohol problems
- » The prevalence of obesity
- » The need for facilities for the ageing population.

Service planning will need to take into consideration the wide disparity in demographic characteristics, lifestyles and health outcomes between urbanising and rural parts of the District, as well as the size and characteristics of the growth precincts such as Vineyard. Public transport access to existing hospitals and new local medical centres will be essential as the area develops over time.

Tertiary education

Western Sydney Institute of TAFE operates colleges at Richmond (co-located with UWS) and within the Nirimba Educational Precinct at Schofields. The Richmond campus offers courses in Information Technology, Business and Administration Services, General Education, Animal Care, Equine Studies, Sustainable Agriculture, Aquaculture, Floristry, Horticultural and Environmental

Studies. Nirimba campus specialises in building and construction, but also offers courses in logistics, information technology, child studies, business services, community services and music and entertainment studies. Other TAFE colleges are located at Blacktown, Mount Druitt, Castle Hill and Baulkham Hills.

However, TAFE is increasingly delivering courses from other sites, including workplaces and outreach programs within the community. Courses are currently being offered at Riverstone Neighbourhood Centre, for example.

The nearest university campus is the UWS campus at Richmond, which offers courses in environmental health, forensic science, nursing, medical science, natural science (environmental, agricultural, horticultural) and secondary school science teaching. Other UWS campuses, each with their own specialities, are found across western Sydney at Blacktown, Parramatta, Westmead, and the UWS Colleges at Nirimba campus and Westmead.

Aged care services

Community aged care services for the Hawkesbury LGA are delivered from Peppercorn Place at Windsor. These include centre based meals, social support programs and community transport for aged, disabled or isolated residents. These services are operating at capacity and will require additional recurrent funding for staff and programs to expand to meet the needs of the growing Hawkesbury population.

Hawkesbury Seniors' Leisure and Learning Centre at Richmond hosts a number of groups and programs that provide people over the age of 50 with a range of recreational and educational activities. Programs include the Beaches Seniors' restaurant, which provides meals and a venue for social interaction for socially and geographically isolated people, a seniors' activities group, which offers a variety of indoor and outdoor sporting activities, social outings and events, and a seniors' gym.

There are no residential aged care facilities within Vineyard or nearby suburbs. The nearest facility is located in Quakers Hill, more than 5 kms distant.

Youth services

A number of youth services are currently operated in the Hawkesbury LGA. City-wide youth services are run by Council from Peppercorn Place in Windsor. The Bligh Park Youth Service offers activity programs, drop in, school holiday programs and outings. A youth club is also operated by Ebenezer-Pitt Town Uniting Church. From an accommodation perspective, Turning Point Youth Accommodation Service provides medium to long term accommodation for homeless youth in the Hawkesbury area.

None of these services operate near Vineyard. In addition, existing youth services are targeted at the wider LGA population and are unlikely to have capacity for large numbers of new residents of Vineyard precinct without additional resources for staffing and programs.

Family services

Family support services operated by Hawkesbury Council through Peppercorn Place include early intervention and prevention services, family and parenting programs, community capacity building, early childhood education and family day care services. These services will be accessible to the incoming population of Vineyard.

Emergency and justice services

The closest ambulance stations to the Vineyard Precinct are at Richmond (a 5 ambulance facility) and Riverstone (a 4 ambulance facility).

The nearest police stations are the new Hawkesbury Police Station at Windsor and Riverstone Police Station (Railway Terrace, Riverstone).

Local courthouses are located at Blacktown, Mount Druitt and Parramatta and smaller courthouses operate full-time at Windsor and 3 days per week at Richmond. District court facilities are also located at Parramatta.

Permanently staffed fire stations are currently located at Kellyville and Schofields, and these operate alongside 'retained' stations (ie staffed by on-call fire fighters) at Riverstone and Windsor. Much of the North West Priority Growth Area remains under control of the Rural Fire Service, with RFS stations at Oakville, Bligh Park and Wilberforce.

Places of worship

There are a large number of places of worship located within 5 km of the precinct. Facilities range in religious standing and size, and details of their level of usage are not publicly available. It is considered that the diversity of religious facilities available in the local area surrounding Vineyard will cater to the needs of much of the incoming population. Any additional requirements for religious facilities will likely be met as demand increases, and existing facilities reach upper capacity.

4.1.1 Summary of existing capacity

In summary, the Vineyard precinct contains no local community facilities and services, other than three small childcare centres, that could meet the needs of the future population. The only facilities in the surrounding area with any useful spare capacity are Windsor High School and Riverstone High School, and some of the independent schools.

This low level of provision will be inadequate to absorb the very considerable new demand likely to be generated by the future population of Vineyard. As a result, a range of new facilities and services will be required. Vineyard will also contribute to demand for district and regional facilities and services, located outside the precinct boundaries.

Assessment of capacity in existing social infrastructure also needs to take account of the very substantial new development proposed for the wider area. Any spare capacity identified now in facilities and services in The Hills or Blacktown LGAs is likely to be taken up by future population growth in adjoining Priority Growth Area precincts, which may occur prior to development in Vineyard. In particular, it cannot be assumed that spare capacity identified now in the Riverstone area will be available to the Vineyard population in future.

Requirements for new facilities and services are considered in Section 6.

4.2 Open space and recreational facilities

4.2.1 Regional open space and recreational facilities

There is a range of significant regional level open space serving the wider north-west sector that will be available to meet the needs of the whole NWPGA, including Vineyard Precinct Stage 1. This regional open space includes a number of national parks/ nature reserves, regional parklands and regional level sporting facilities.

National parks/ nature reserves

Scheyville National Park is a 920 hectare site that is situated approximately 5 kilometres north-east of the Vineyard Precinct. Managed by the NSW National Parks and Wildlife Service, the park

offers a range of facilities and recreational activities including picnic facilities, guided tours, walking and horse-riding trails as well as history walks through the park's heritage Camp Precinct. Within the northern section of the park is Longneck Lagoon, a significant reserved freshwater wetland. Longneck Lagoon Environmental Centre, which provides environmental education programs to schools in Western Sydney and offers camping and other recreational activities to these school groups¹.

There are a number of nature reserves situated within 10 kilometres of the Vineyard Precinct, the closest of which is **Windsor Downs Nature Reserve** at Windsor Downs, approximately 5 kilometres from the Vineyard Precinct.

Other nature reserves within easy reach of the Vineyard Precinct include:

- » Colbee Nature Reserve
- » Castlereagh Nature Reserve
- » Cattai National Park
- » McGraths Hill Wetland
- » Pitt Town Nature Reserve.

Regional parklands

Rouse Hill Regional Park, located approximately 4km south-east from the Vineyard Precinct is a major park of 42 ha that includes picnic areas, playgrounds, pathways, car parking, open spaces and natural vegetation. The park, managed by the NSW National Parks and Wildlife Service will be important open space to the new communities of the NWGC.

- » The park's key facilities (picnicking facilities, picnicking grounds, playground and on-site carparking) are currently at capacity most weekends of the year and beyond capacity in summer months. The capacity of the park is further limited by the site's lack of connection to sewer and water, although this can be addressed as the necessary infrastructure is extended to serve proposed residential development within the Riverstone East Precinct.
- » To date, only one-third of the overall planned park has been established. The other, larger section of the park consists of two parcels of privately owned land to the north of the existing park. This land has been zoned for future regional park, but will need to be purchased from the current landowners. It is estimated that it would take approximately 4 to 5 years to develop this new section of the park so that it is operational
- » The expanded park (together with the regional park on the former ADI site at St Marys) will be key open space amenity for the future population of the NWGC.

The Western Sydney Parklands is located approximately 8.5km south of the Vineyard Precinct, commencing south of the M7 motorway. The Western Sydney Parklands, managed by a Trust, totals 5,280 hectares and stretch 27 kilometres from Quakers Hill to Leppington in the south west of Sydney. The Parklands include a diversity of recreation, sport, cultural, environmental and farming facilities. Recreation facilities include picnic facilities and a major walking and cycle track the length of the Parklands.

A number of major sporting facilities are also located in the Western Sydney Parkland, including:

- » Blacktown International Sportspark
- » Western Sydney International Dragway

¹ Long Neck Lagoon Education Centre, website, <http://longneck.drawstring.com.au/>, accessed 18 February 2014

- » Eastern Creek International Karting Raceway
- » Sydney International Equestrian Centre
- » Sydney International Shooting Centre.

These facilities are significant, higher order facilities serving the greater Western Sydney Region.

To the north of the Vineyard Precinct is **Governor Phillip Park** which has a concrete boat ramp enabling boats, kayaks and canoes to be launched into the Hawkesbury River. The ramp has a wide catchment, used by residents from across the wider north-western Sydney region.

Other regional level facilities in the north-west region include three horse racing tracks (Hawkesbury Race Club, Richmond Race Track and Riverstone Trotting Track), two show grounds (Hawkesbury and Blacktown) and one ice rink (Sydney Ice Arena in Baulkham Hills).

Regional open space, sport and recreation facilities are illustrated in the following map (Figure 4).



Figure 4: Regional open space, sport and recreation facilities near Vineyard

4.2.2 District level open space and recreation facilities

There are no existing district level open spaces or recreational facilities within the Vineyard Precinct. However, there are a number of facilities in surrounding areas. These are illustrated in Figure 8 and discussed in the following sections. Additional detail is provided in Appendix 1.

Outdoor sport and recreation facilities

There are fifteen outdoor sport a recreation facilities within a 7 kilometres radius of the Vineyard Precinct that may be relevant to the planning for the sport and recreation needs of the new community. These include:

- » 13 facilities providing playing fields
- » 4 facilities providing netball courts (including 2 competition netball venues – Mileham Street Netball Complex and Kellyville Netball Complex)
- » 3 facilities providing tennis courts
- » 2 facilities with baseball field/s
- » 1 facility with BMX track (Colbee Park at McGraths Hill)
- » 2 facilities with grass athletics tracks (overlayed on sports field) and athletic field event amenities.

The closest facility to Vineyard Precinct Stage 1 is **Vineyard Park**, which adjoins the precinct to the north. The park includes a sports field with a synthetic cricket pitch, amenities block and a small off-street parking area. The sports field and amenities block however are in poor condition and there is little buffer between the park and Windsor Road (a major thoroughfare). Its location (directly adjacent to the precinct) suggests the option to upgrade and extend Vineyard Park to meet the needs, in part, of the new Vineyard Stage 1 population. However, its siting under transmission lines presents a significant issue. Sites under transmission lines are not favoured for the development of open space (a view shared by Hawkesbury City Council) and cannot be considered as part of the open space allocation for the Vineyard Precinct.



Figure 5: Vineyard Park

Other facilities in close proximity to the precinct include:

- » Colbee Park – located approximately 1.2 kilometres north of the precinct, this is a well maintained active open space consisting of two multipurpose sports fields with amenities building, co-located with baseball field and separate amenities building

- » Oakville Reserve – located approximately 1 kilometre north-west of the precinct, this is a well maintained active open space consisting of one multipurpose sports field, amenities building and picnic facilities.



Figure 6 Colbee Park

Additional detail is provided in Appendix 1.

Indoor sporting and recreation facilities

The closest indoor sports and recreation facilities to the Vineyard Precinct are the Hawkesbury Indoor Stadium to the north-west and the Riverstone Sports Complex to the south-east.

The Hawkesbury Indoor Stadium in South Windsor is owned by Hawkesbury City Council and managed by the YMCA. It is a large complex that contains six indoor multipurpose sports courts and a gymnastics training facility.

The Riverstone Sports Complex, located in Riverstone, is owned and managed by the Riverstone Community Church and includes indoor soccer courts.

There are a small number of other indoor facilities provided in neighbouring LGAs; however, these are a considerable distance from the precinct. They include:

- » Bernie Mullane Sports Complex in Kellyville
- » Blacktown Leisure and Aquatic Centre in Stanhope Gardens
- » Emerton Leisure Centre in Emerton
- » Castle Hill RSL Gymnastics Club in Castle Hill.

Additional detail is provided in Appendix 1.

Aquatic facilities

The closest aquatic facilities to the Vineyard Precinct are the Hawkesbury Oasis Aquatic and Fitness Centre in South Windsor and the Riverstone Swimming Centre in Riverstone.

The Hawkesbury Oasis Aquatic and Fitness Centre is owned by Hawkesbury City Council and managed by the YMCA. It includes indoor 25 metre pool and leisure pool and outdoor 50 metre pool. Hawkesbury City Council also owns and operates the Richmond Pool in Richmond. This is an outdoor facility that includes 50 metre pool and separate leisure pool.

The Riverstone Swimming Centre includes an outdoor aquatic facility consisting of 50 metre pool, leisure pool, program pool and children's pool. It is the only aquatic facility currently within the North West Priority Growth Area. The *Section 94 Contributions Plan No. 20 – Riverstone and Alex*

Avenue Precincts (Blacktown City Council, 1 December 2010) observes that the Riverstone Swimming Centre is a small rural outdoor pool that will not be able to accommodate the leisure needs of the incoming population of the North West Growth Precincts and funds are required to redevelop the centre.



Figure 7 Riverstone Swimming Centre

Other aquatic facilities in surrounding areas include:

- » Blacktown Aquatic Centre, Stanhope Gardens
- » Annangrove Aquatic and Leisure Centre, Annangrove.

Other district sport and recreation facilities

Other sport and recreation facilities in the wider district include:

- » 6 golf facilities
- » 2 bowling clubs
- » 4 equestrian facilities.

The nearest skate facilities to the precinct are:

- » Rooty Hill Skatepark (Blacktown LGA)
- » North Richmond Skatepark (Hawkesbury LGA).

These facilities are both a considerable distance from the precinct.

4.2.3 Local parks

There are no local parks within or in close proximity to the Vineyard Precinct. There are two bushland reserves adjacent to the Vineyard Precinct; however, these do not provide usable open space. They are:

- » Deeimba Reserve (on Commercial Road) to the north
- » Florence Reserve (on Windsor Road) to the south.

4.2.4 Summing up

The *Hawkesbury Regional Open Space Strategy* concludes the following in relation to open space provision in the Oakville/Vineyard/Mulgrave area:

- » Distribution is highly scattered and diversity is very limited
- » The majority of open space has a sports based use
- » Local open space provision (especially for passive recreation) is very low
- » Sports reserves lack amenity
- » With the exception of the nearby Scheyville National Park, open space in these townships is very limited.

Hawkesbury City Council also reported the following in relation to capacity and provision gaps relating to existing open space and facilities in the LGA:

- » Netball facilities are at capacity as there is a very high demand for this type of facility in the area
- » There is currently an 'oversupply' of aquatic facilities in the LGA, with capacity to accommodate population growth at existing facilities
- » The Hawkesbury Indoor Stadium, the LGA's only indoor sports facility, is at capacity and would need augmentation to meet the needs of a growing population
- » There is high demand for and limited supply of sports fields for training purposes for most sports
- » The majority of sports fields in the LGA are on drainage easements. There is a need for additional sports fields on non-floodprone land
- » There is a gap in the provision of unstructured recreational activities for young people.

The Precinct is readily accessible to many regional and district open space and sporting facilities in the surrounding area. However, there is no local open space or decent sporting facilities within the precinct at present. As a result, new parks and local sports facilities will be required within the precinct as the population grows.

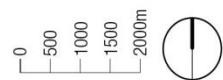


Figure 8: District and local open space, sport and recreation facilities near Vineyard

5 Population forecasts

Planning for the future development of the Vineyard Precinct is being undertaken in stages. This chapter considers the future population of the Vineyard Precinct Stage 1, in terms of its size and broad demographic characteristics.

5.1 Development scenario

Key features of the Vineyard Precinct Stage 1 include:

- » Lands to the north of Windsor Road and east of Chapman Road are considered to be a discrete community, separated from lands to the west of Bandon and Chapman Roads (Stage 2) and generally more oriented towards the future Box Hill community and its town centre
- » Significant natural and infrastructure constraints limit the total developable area. In particular, Killarney Chain of Ponds and its associated floodplain limit the potential for most uses in Stage 1 lands immediately to the north east of Windsor Road
- » A net developable area of 163.7ha for residential development.

SGS Economics and Planning has examined housing demand for the Vineyard Precinct, including market demand and other factors likely to influence the future demand and supply of different dwelling types within the Precinct. The analysis was used by DP&E to develop the proposed mix of dwelling types in Stage 1 as shown in Table 3.

When the proposed dwelling and density mix is applied to the net developable area, the resultant maximum yield is approximately 2,400 dwellings.

Table 3 Proposed dwelling mix and forecast dwelling yields

Density	Density range to be applied (dw/ha)	% of total dwellings (approx)	Estimated maximum number of dwellings
Environmental living	2	4	93
Low density	15-18	73	1,470-1,764
Medium density	20-30	23	380-570
Total dwellings (approx.)		100%	2,400

Source: DP&E, SGS June 2014. *Housing Study for Vineyard Precinct* and SGS November 2016. *Draft Update Housing Report*

The table suggests that around 77% of dwellings planned for Stage 1 of this precinct will be detached houses in either low density or environmental living formats. The remaining 23% of dwellings are expected to be medium density.

A draft Indicative Layout Plan (ILP) has been prepared for Stage 1 on the basis of these yields.

5.2 Projected population

Average occupancy rates have been applied to the dwelling yields shown in Table 3 based on the proposed dwelling types, data from the 2011 ABS Census for Hawkesbury LGA and advice from DP&E. This results in an average occupancy rate of 3.08 persons per household and an estimated total population for Stage 1 of the Vineyard Precinct of 7,400 residents.

It is noted that these dwelling yields and estimated population may now be significantly higher than the 2,500 dwellings and 7,000 residents initially estimated in the Priority Growth Area Structure Plan for the entire Vineyard precinct.

5.3 Age and household characteristics

Forecasting age or household characteristics of a future population requires consideration of factors such as dwelling size and mix, market price and segment, experience in similar nearby areas and the influence of other factors particular to the site.

The *Housing Study for the Vineyard Precinct* (SGS 2014) examined population and household characteristics for the Hawkesbury LGA. In relation to household characteristics, the study found:

- » Historically, housing sales and demand in the area have been relatively weak compared with elsewhere in the LGA and Sydney averages. The strongest demand is for one bedroom dwellings, with less interest in apartments
- » Real estate agents advise that there is strong interest from investors in the area, although the lack of local infrastructure detracts from its appeal
- » There is strong demand for a wide range of housing types including 3-4 bedroom homes and vacant land, yet few available. There is also interest in duplexes and apartments, but few on the market
- » The main buyer groups are families moving from The Hills district looking for more 'bang for their buck', as well as overseas investors, first home buyers and people upsizing or downsizing
- » Homes near stations, homes with backyards for privacy and homes that have been renovated are most in demand
- » There appears to be an increasing acceptance of smaller lot detached housing as a result of increasing housing prices across Sydney
- » However, Vineyard is not typical of Hawkesbury LGA in terms of housing prices. Prices are lower here than elsewhere in the LGA.

Evidence of the demographic characteristics of people who have recently moved into Hawkesbury LGA shows the following picture (SGS, June 2014):

- » Two thirds of new residents are aged under 40 years, compared with only 56% aged under 40 years in Sydney. Most incoming residents are of working age
- » Incomes of residents moving to the area are slightly less likely to be over \$104,000 pa than the Sydney average. The proportion of medium and lower income residents is similar to Sydney averages. However, the median personal income of migrants to the LGA is almost 50% higher than the LGA average, indicating a relatively more affluent cohort moving into the area than at present
- » Projections based on existing household characteristics indicate that there is likely to be little change in the types of households living in the LGA in future. The proportion of one parent families is expected to increase (from 10% to 15%) between 2011 and 2046. Couples with

children will remain the most prevalent household type (reducing from 44% to 42% of all households), and couples with no children are expected to reduce from 23% to 19% over this time period.

Residents in this area are expected to share characteristics of populations of recent land releases in other nearby parts of north western and western Sydney. Some common features of residents of these new release areas include:

- » Households will usually move into the area from within a 5-10 km radius
- » A high proportion of first home buyers
- » There is likely to be a general predominance of young families with young children and couples who have not yet started a family
- » Most adults will be in the 25-49 years age cohorts
- » There will be a small but significant number of single person households
- » There will be some older people wanting to live close to children and grandchildren
- » Larger numbers of home owners
- » Increasing family sizes over time, as couples have children.

Other projected population characteristics are expected to be as follows:

- » Predominantly middle income households, in keeping with housing being affordable to better off first-time buyers. A large proportion of household income is likely to be devoted to housing cost however, which may restrict the spending of residents on non-essentials and services
- » High levels of workforce participation, with two working parents in many families, and consequently high levels of commuting and a need for child care
- » High levels of car ownership
- » High levels of mortgaged home ownership. However, depending on general economic and investment conditions, up to 20% of the dwelling stock is likely to be privately rented, with a higher figure for medium density homes
- » Increasing cultural diversity. Hawkesbury LGA currently has a relatively low proportion of people born overseas or speaking languages other than English compared with Greater Sydney. The proportion of residents from other cultures is therefore likely to increase in time to more closely resemble the ethnic diversity of western Sydney or Sydney as a whole.

A number of other demographic trends in the wider population will have an impact on future demography of the area. These include trends such as:

- » Smaller households and declining occupancy rates
- » Increasing numbers of people choosing not to have children
- » The later age at which people do have children
- » Increasing numbers of people choosing to live alone
- » Higher incidence of relationship breakdown, with consequent demands for short-term and temporary accommodation and housing for blended families
- » The ageing of the population, increasing life expectancy and growing numbers of people in the oldest age cohorts
- » Changing lifestyle trends, including increasing numbers of people working from home and the extent to which housing forms will attract particular lifestyle groups.

As land release areas develop over time, the peaks in the age distribution associated with a predominance of young families tend to reduce and the population will become more diverse in terms of age and household type. The proportion of the population who are young children and young adults will decline as the population ages and the proportion of older children with older parents grows. The proportion of the population aged 55+ will also increase considerably as the area matures and older people are attracted to the area to be near family, or to downsize to a smaller home.

In this way, the population profile is likely to come to more closely approximate that of an established area with a variety of age and household characteristics, rather than a traditional new release area with particular age concentrations.

6 Community facility requirements

This chapter considers the community facilities and human services that will be required to meet the needs of the future Vineyard Stage 1 population, estimated to reach around 7,400 people over the next 10-15 years. Open space, sporting and recreation facilities are considered in the following chapter.

6.1 Approach to planning social infrastructure

In social infrastructure planning, facilities and open space resources are commonly considered at three levels:

- » Local neighbourhood level services and facilities - generally provided for a population of about 5,000–15,000 people to meet everyday needs, and including community centres, childcare centres, primary school, local park and doctor's surgery
- » District level services and facilities - more specialised services which operate on a broader district catchment of about 15,000 – 50,000 people, and including libraries, sporting facilities, high school, community health centre, family support services, emergency services
- » Sub-regional and regional level services - Major facilities for a population of over about 100,000 people, and including hospitals, tertiary education, major cultural facilities.

Social infrastructure is provided by a wide variety of agencies, including all levels of government, non-government organisations and the private sector. At this precinct planning phase, the strategy for social infrastructure provision needs to focus on the facilities which may have significant land requirements, to ensure that sufficient land is identified in appropriate locations to meet future need. This focuses particularly on facilities and services provided by local government and State Government agencies (such as schools). Services provided by the Commonwealth Government (eg employment services, some family services, veterans' services,) have land requirements that are likely to be relatively modest, and most likely will use available commercial office space within designated centres. Such sites can be identified in subsequent detailed levels of planning.

Sites for facilities provided by the non-government and private sectors are usually acquired through the private market and will need to be considered at a later stage of development as demand is established. At the same time, it is recognised that some types of private / non-government facilities may have significant land requirements. These include private schools, private hospitals and medical services, churches, private childcare services, commercial gym and fitness facilities, residential aged care facilities and entertainment facilities such as cinemas, hotels and restaurants. The Precinct Plan will need to allow sufficient scope and flexibility to accommodate such uses as demand emerges.

6.2 Standards of provision

Standards and benchmarks, expressed as a recommended rate of provision per number of people, are commonly used in social infrastructure planning to provide initial guidance to the number of facilities likely to be required for a population of a given size.

For this assessment, consideration has been given to the standards for local and district level community facilities contained within the Priority Growth Areas Development Code and

Hawkesbury City Council documents (*Residential Land Strategy*, 2011 and *Section 94 Contributions Plan*). These standards, outlined in Table 4, provide a starting point for assessing future community social infrastructure needs. Also shown in Table 4 are preliminary estimates of need for facilities within the Stage 1 of the Vineyard precinct when these standards are applied. These preliminary estimates have then been adapted to the likely characteristics of the precinct and subjected to more detailed analysis, taking into consideration the availability of existing facilities, their capacity to absorb new residents, more recent trends in planning for social infrastructure and the likely characteristics of the incoming population.

Indicative requirements based upon application of the available standards are outlined in the table below.

Table 4 Community facility benchmarks and infrastructure estimates, Vineyard Precinct Stage 1

Type of facility	GCC benchmarks (no. per population)	Hawkesbury City Council indicative benchmarks*	Estimated requirements Vineyard Stage 1 (2,400 dwellings; 7,400 pop'n)
Education			
Primary schools	1:2,000 new dwellings (approx)	1: 2,000-2,500 dwellings	1 primary school
High schools	1:6,000 new dwellings (approx)	1: 6,000-7,000 dwellings	Does not meet threshold
Health and Social Welfare			
Community Health Centre	1:20,000 people	1: 10,000 residents	Does not meet threshold
Public hospital	2 beds:1,000 people	2-3 beds: 1,000 residents	15-22 beds
Aged Care	1:10,000 (centre)		Dependent on growth of population aged 70+
High Care (Nursing home)	40 beds:1,000 people 70+ years	44 beds:1,000 people 70+ years	
Low Care (Hostel) places	48 beds:1,000 people 70+ years	44 beds:1,000 people 70+ years	
Community care spaces		40 beds:1,000 people 70+ years 25 beds:1,000 people 70+ years	
Youth Centres	1:20,000 people	1:20,000 people	Does not meet threshold
Childcare facility / long day care	1 place:5 children 0-4 years	1 place: 10 children 0-4 years	1-2 large centres
Family day care		1 place: 200 children 0-5 years	
Occasional care		1 place: 100 children 0-5 years	1-7 places
After school care facility / OOSH	1 place:25 children 5-12 years	1 place:80 children 5-12 years	
Vacation care		1 place:75 children 5-12 years	
Culture			
Branch library	1:33,000 people	1:20,000 - 30,000 people	Does not meet threshold
District Library	1:40,000 people		Does not meet threshold

Type of facility	GCC benchmarks (no. per population)	Hawkesbury City Council indicative benchmarks*	Estimated requirements Vineyard Stage 1 (2,400 dwellings; 7,400 pop'n)
Arts and Cultural facilities	1:30,000 people		Does not meet threshold
Community services			
Local (small)	1:6,000 people	1:5,000-10,000 people	1 local centre
Neighbourhood / District	1:20,000 people	1: 30,000	Does not meet threshold
Community Service Centre	1:60,000 people		Does not meet threshold

* Source: *Residential Land Strategy, 2011*, Hassell

Note: The GCC Development Code does not specify rates for provision of Emergency Services

Taking account of the benchmarks for provision, the outcomes of discussions with Hawkesbury City Council and the relevant State Government agencies and current leading practice in the provision of community facilities, the recommended provision for each type of facility / service for the Precinct is considered below. Facilities have been considered in terms of those which are provided by local government, those provided by State Government agencies, and those provided by the private and non-government sectors.

6.3 Local government community facilities

6.3.1 Community centre

A population of 7,400 residents in Vineyard Stage 1 will be large enough to support a local level community centre, which would provide spaces for:

- » Community activities, programs and classes, such as playgroups, fitness groups, art and craft classes and after school programs
- » Meetings of local organisations and community groups
- » Accommodation for community services and the delivery of sessional and outreach services
- » A base for community development activities and events
- » Leisure and support activities for young people and for older people
- » Adult education classes and training courses
- » Hire for corporate or private functions, such as birthday parties.

A community centre can be a critical facility in areas of new development, providing activities and services that promote social interaction and the development of community networks and which support the health and well-being of residents. Community centres also provide a source of community information and a base for community development initiatives that foster community identity and sense of belonging.

Consideration of the needs of the Vineyard residents for a community centre in Stage 1 has incorporated information about existing provision in the wider area and plans for community facilities in the neighbouring precincts of Riverstone and Box Hill.

Council's *Residential Land Strategy* (2011) adopts an indicative rate of provision for local community facilities of 1 facility per 5,000 - 10,000 residents, which would suggest a need for at least one small neighbourhood centre in Vineyard. However, discussions with Hawkesbury City

Council have indicated that this approach has led to its current oversupply of small, under-utilised centres, reflecting the area's dispersed rural settlement pattern and development history. For these reasons, Council has expressed some reluctance to see another such small facility developed in Vineyard.

As discussed in Section 4, the closest community facility to Vineyard is the McGraths Hill Community Centre, located about 3 kilometres along Windsor Road to the north. However, this facility provides only a simple community hall and small meeting room for hire, and will not be adequate to meet the variety of social, leisure, learning and support needs of a population of 7,400 people.

To the south, Blacktown City Council has plans to develop a district level community hub within the town centre of Riverstone. However, this facility has been planned to serve the populations of Riverstone and Alex Ave Precincts, forecast to reach around 45,000, and it will not have capacity to service Vineyard Precinct as well, especially as it lies within a separate LGA. At present The Hills Shire Council has not proposed any community centres for the Box Hill Precinct, forecast to have a population of around 30,000 people. Thus there will be no community centres to the south which might meet the needs of Vineyard Stage 1 residents.

For these reasons, it is felt that a community centre should be provided within the Vineyard Precinct, as there will be no alternative facility to address the needs of this area. A community centre should be a multi-purpose centre with a range of flexible spaces capable of meeting multiple needs and delivering a range of activities and services.

Proposing a community facility in Stage 1 of Vineyard Precinct requires careful consideration of a range of locational and sizing issues:

Locational principles

Location of a community centre should be guided by the following criteria. Community facilities should be:

- » Central to their catchment population and easily accessible by the majority of their users
- » Visually prominent, with a main street location and presentation to the street
- » Accessible by public transport, and located to maximize access for pedestrians and cyclists
- » Located to enhance a sense of community, vibrancy and local civic identity, and to help create a focal point or hub for the community. This includes places where people already have cause to congregate, rather than on standalone sites, for reasons of safety, accessibility and convenience. Shopping centres and schools are recognised as the key destinations where people tend to congregate within a neighbourhood. Locations within or adjacent to commercial centres also add to the activity level and critical mass needed to create a vibrant mix of activities and lively centre. This is consistent with the *Hawkesbury Residential Land Strategy* that community facilities should be located within centres.
- » Located to provide a high level of safety and security, particularly at nights and weekends. This is most usually associated with high levels of activity and casual surveillance, as well as lighting and proximity to public transport
- » Where possible, located adjacent to open space to allow for larger outdoor community events, spill-over activities and children's play. Locations adjacent to outdoor recreation facilities such as tennis or netball courts can also provide a leisure focus as well as space for community activities
- » Located to ensure access to safe and convenient parking, including shared parking with surrounding land uses where appropriate.

Sizing and design

In terms of the size of the proposed community centre, it is noted that Council's *Section 94 Contributions Plan* (2008) adopts an indicative rate of provision for local community facilities of 0.3 m² per person. This suggests a need for a new facility of around 2,200 m² would be appropriate for the forecast Stage 1 population. However, a facility of this size is considered excessive in comparison with other facilities in the Hawkesbury and nearby local government areas, and would produce a centre which in practice would be bigger than Council is likely to want to manage and maintain.

Based upon our experience and levels of provision for new community centres in other Priority Growth Area councils such as Blacktown and Liverpool, we would suggest a more realistic rate of provision to be around 60m² - 80m²/1,000 people. This would suggest a facility of around 500-600m² would be suitable for the Stage 1 population, which is large enough to incorporate:

- » A variety of flexible spaces suitable for a range of social, leisure and cultural activities. These typically include a hall suitable for large gatherings and events, together with some additional meeting and activity rooms of different sizes, such as:
 - > Office space for a community development worker, and for other human service providers
 - > Rooms for sessional or outreach health and welfare services such as baby health clinic, counselling or family support services
 - > A room for children's activities which opens onto an enclosed garden. This might be used for child-minding for parents attending centre activities, for playgroups, and for before and after school or vacation care
 - > Spaces suitable for activities for young people, usually a multi-purpose room rather than one designated just for young people, but one which may open onto an outdoor barbecue or recreation area (eg half-court basketball hoop)
- » Kitchen suitable to support private functions such as birthday parties
- » Plenty of storage to meet the needs of a variety of user groups
- » Adjacent outdoor space with children's play equipment and barbecue, to provide for spill over social events and activities for children.

A facility of this size will require a site area of up to 3,000m² to allow for parking, setbacks and some outdoor space.

Taking these factors into consideration, the following issues need to be weighed up in planning for a community centre within Stage 1 of the Vineyard Precinct and its location on the draft ILP:

- » While the size of the Stage 1 population is sufficient to warrant a small, new community facility, community facility planning should ideally take into consideration the future population of the entire Vineyard precinct. Details of a Stage 2 ILP design, population size and timing are all unknown at this stage, yet residents of Stage 2 will need access to a community centre and the population may be insufficient to justify another small stand-alone facility. For this reason, planning for Stage 1 needs to consider the future Stage 2 population in its sizing and location and potentially plan for a larger community facility, possibly developed in stages, to enable it to cater for the (as yet unknown) combined population.
- » The precinct is split between two discrete residential areas (Stage 1 and Stage 2), and Windsor Road, Chapman Road and the corridor provided by Killarney Chain of Ponds and associated floodplain provide barriers to easy access between the two residential areas. In addition, the Stage 1 ILP proposes a village centre on the precinct's eastern boundary rather than in a more central location that might constitute a community "heart" for the two residential communities. This will create challenges in satisfying the locational criteria for community facilities described

above. A location on the eastern side of the Stage 1 precinct, adjacent to the proposed eastern village centre in the draft Indicative Layout Plan (ILP), would place the community centre on the LGA boundary, and so would not provide a central and accessible location for either the bulk of the Stage 1 population, or future Stage 2 residents. In addition, Council may be reluctant to invest in a facility on the fringe of Hawkesbury LGA that will, in practice, be used as well by the population of Box Hill Precinct.

- » While there are opportunities for Council to cover the costs of acquiring land for a community centre through development contributions, there is at present, under current Section 94 "rules", no funding sources for the construction of a community facility itself. This could leave Council with a parcel of land that it is unable to use.

Given the above considerations, and in recognition that plans for Stage 2 are not known, we recommend that a site for a community centre should be located in Stage 1. As Council has expressed reluctance to manage small facilities, it is recommended that it be designed in stages, with the option of expanding the facility once details of the Stage 2 population are clear. The Stage 1 ILP identifies an indicative site of 6,000m² for mixed use / social infrastructure adjacent to the proposed village retail centre on Commercial Road. While not ideal, this size is more than adequate for a community facility and this location would have some benefits for the Stage 1 residents. However, Council will need to further consider the suitability of this location and the longer term needs of the precinct population, before committing to acquiring this specific site.

6.3.2 Facilities and services for older people

As discussed in the previous chapter, the proportion of older people expected to be attracted to Vineyard will not be high, particularly in the early stages of settlement. Nevertheless, there will still be a number of older people remaining living in the area, and it will be important that their needs are met in order to ensure that they do not become isolated in an otherwise child and family oriented community.

The social, leisure and recreational needs of older people living in Stage 1 may be met through mainstream services and facilities for the whole community, and through programs and activities for older people delivered within the proposed multi-purpose community facility. Leading practice now steers away from providing age-specific buildings, such as senior citizens centres, which can only be used by specific sections of the population and which thereby run the risk of being under-utilised for much of the week or as the population changes. Instead, the usual practice now is to provide multi-purpose facilities which have flexibility to incorporate activities for different target groups as required.

6.3.3 Facilities for young people

Within Vineyard Precinct Stage 1, there will be a need to provide "things for young people to do" at the local level, given likely limited public transport services and distances to facilities and services in Rouse Hill, Windsor and Riverstone.

As for older people, leading practice now steers away from providing separate facilities just for young people, on the grounds of their under-utilisation for much of the time while young people are at school or work.

At the local neighbourhood level, the needs of young people for space for social and leisure activities in Vineyard Stage 1 may be met through activities available within the proposed community centre, as well as through a well-designed public domain, and the open space, sporting and recreation facilities described in the following chapter.

6.3.4 Libraries and cultural facilities

A district level library is provided by Hawkesbury City Council within the Windsor town centre to serve the LGA. Council staff have advised that this library will be able to meet the needs of Vineyard Precinct Stage 1, and at this stage, Council has no plans for its expansion. Some augmentation of library resources will be required to maintain existing standards of provision. However, it is noted that under current Section 94 arrangements, contributions cannot be levied for either library buildings or library resources.

Needs for cultural facilities will be met through existing facilities available in Windsor (ie the Deerubbin Centre with library, regional gallery and community arts spaces) and elsewhere in the LGA.

6.4 State Government social infrastructure

6.4.1 Government schools

The Department of Education's *School Safety and Urban Planning Advisory Guidelines* (June 2014) set out the following criteria for the provision of schools in areas of new greenfield residential development:

- » One primary school per 2,000 to 2,500 new dwellings;
- » One public high school per 6,000 to 7,500 new dwellings (ie catchment of three primary schools)
- » One school for Specific Purposes (special needs students) per 17,000 new dwellings.

The Department's Planning Advisory Guidelines also advise as follows:

- » Primary schools and Special Purpose schools require a site area of approximately 3 ha. There may be opportunities to reduce the site size to a minimum of two hectares if joint use of open space facilities can be negotiated
- » High schools require a site of approximately 6 ha, although there may be some scope to reduce this to a minimum of four hectares if schools are co-located with community sporting fields.

Locational guidelines for government schools include:

- » Schools should be located relatively central to their residential catchment (within approximately 1.6kms by road for a primary school)
- » Schools should be located on local distributor or collector roads to alleviate noise and traffic problems and promote the safety and welfare of students
- » It is preferable to locate schools along existing or proposed bus routes to avoid duplication of bus traffic
- » High schools should be located at a distance from commercial centres, especially where liquor outlets may be located
- » Co-location with other community facilities is encouraged.

Urban design features to ensure safe and accessible schools should include:

- » Sites should have a substantially regular shape
- » Has two to three street frontages to reduce traffic congestion
- » Separation of bus and car traffic at the kerbside

- » Main site access should not be located opposite a T-intersection
- » Footpath, kerb and guttering along school road frontages
- » Lay-by areas adjacent to schools for picking up and dropping off students and bus lay-by for pick-up and drop-off
- » Road width and turning circles to enable safe and convenient bus and private vehicle access
- » All vehicles to enter and leave a site in a forward direction
- » Desirable to be adjacent to a community playing field
- » Allows for security and privacy through visibility and appropriate surrounding development
- » Is not overly overshadowed by surrounding development
- » Site should allow for other socially inclusive uses such as election days, community markets, emergency meeting points etc.
- » Considers future form and structure of centres, towns and future development.

Land for schools should not be located within:

- » Land mapped as bushfire prone or a site that requires an Asset Protection Zone
- » Land mapped as being within 1 in 100 year flood levels
- » Land that has significant level changes or requires significant cut and fill
- » Contaminated land audited as unsuitable for schools uses, with high soil erosion and/or stability concerns or mapped as high probability of acid sulphate soils occurring
- » Land that supports endangered ecological communities, threatened or endangered flora and fauna or sensitive ecological areas
- » Land identified as a site of cultural significance or subject to Native Title claim or identified as an archaeological site.

Schools should not be sited immediately adjacent to:

- » Developments that are likely to result in significant health issues associated with noxious emissions or the like
- » Land where children would pass through riparian corridors, creeks and bushland
- » Land in close proximity to special uses such as correction centres, electricity substations, mobile phone towers, sewage treatment plants, sewage systems, high voltage transmission lines, waste disposal facility, waste or resource management facility, water recycling facility, water supply system, wind farms and the like
- » Inappropriate retail and commercial development and restricted premises
- » Development with potential undesirable impacts or risks such as hazardous or offensive development, high noise or vibration generating development, mining and extraction industries.

Primary school

Application of the Department of Education thresholds to the 2,400 dwellings planned for Vineyard Precinct in Stage 1 would suggest a need for one new primary school. However school planning also takes account of capacity in nearby schools and opportunities to augment existing schools or those already proposed in the surrounding area, rather than provide new schools in every new development.

Advice from Department of Education representatives includes the following:

- » Planning for a school in Stage 1 can be undertaken independently of planning for Stage 2 due to different locations, timing and other considerations
- » In Stage 1, primary school children may be accommodated in either Oakville Public School, 4 kms to the north, or new schools within the Box Hill Precinct to the east. While Oakville School is currently at 100% utilisation it occupies a large site with potential for expansion
- » In the longer term consideration will be given to developing a new primary school within the north-eastern (Stage 1) part of Vineyard Precinct, or on a site beyond the Priority Growth Area boundary, once Oakville School has reached full capacity
- » The Department of Education has expressed a preference that Indicative Layout Plans not specify a definitive site for this potential primary school, as its needs cannot be confirmed at this stage, and school site identification in ILPs has resulted in site acquisition difficulties in other precincts. For this reason, the ILP has identified a site for a school as 'indicative' only, to provide greater flexibility. This site should have an underlying residential zoning.

High school

Vineyard Precinct Stage 1 will not be large enough by itself to warrant the provision of a new high school, nor is the combined population of Stage 1 and Stage 2 expected to create a population large enough to warrant a high school. However, Stage 1 development will contribute to high school demand in the wider area.

In the short term, high school students from Vineyard Precinct will be accommodated within the existing Windsor High School or Riverstone High School. In the longer term, students in Stage 1 of the precinct may be directed to the proposed new high school in Box Hill Precinct.

Schools provide a vital role in the building of social networks and community identity. School facilities such as halls and classrooms can also be made available for community use, subject to approval by school principals. In this way, use of school halls can complement the facilities provided in council community centres, expanding the range of activities and programs available to a local community.

Independent schools are discussed in Section 6.5 below.

6.4.2 Higher education

The higher education needs of Vineyard residents will be met through existing TAFE and University facilities and through private training colleges. Western Sydney Institute of TAFE has no plans to build new facilities within the North West Priority Growth Area and few upgrades are expected to existing colleges. Major changes to the TAFE funding model from 2015 have seen greater competition for course delivery, increasing specialisation amongst TAFE campuses, greater flexibility in where courses are delivered (eg at workplaces) and changes to use of TAFE buildings and sites. The need to deliver courses within workplaces and demand for outreach classes, may increase the need for rooms to be available within community facilities. However, these classes would also require specialty equipment, and are not likely to be suitable for multi-purpose shared use facilities.

UWS campuses at Nirimba Education Precinct and Richmond will continue to serve the Priority Growth Area Precincts, as will other university campuses and private colleges across Sydney. In the longer term, these facilities will absorb demand likely to be generated by Vineyard Precinct Stage 1.

Accommodation for other lifelong learning activities (eg community colleges, evening classes, U3A) can be provided through other types of facilities such as community centres and schools, without the need for purpose-built facilities. These needs should be considered in the design of such facilities.

6.4.3 Public health services

The future population of Vineyard Precinct Stage 1 will not be large enough to justify provision of any community health or hospital facilities within the precinct, but will instead rely on those in the wider region. While the Hawkesbury *Residential Lands Strategy* benchmarks suggest that a community health centre would be warranted for around 10,000 people, in practice a much larger population (50,000+) is required to support a new community health centre in the current fiscal climate.

As noted in Section 4, Hawkesbury LGA, and hence Vineyard Precinct Stage 1, forms part of the Nepean Blue Mountains Local Health District (NBMLHD). The Nepean Blue Mountains Local Health District *Healthcare Services Plan 2012-2022* has been based on population growth forecasts for the District to 2021, although it recognises that significant further growth will occur through to 2036 and beyond. These projections take account of forecasts for Vineyard Precinct Stage 1. The *Healthcare Services Plan* identifies how health care services and facilities will be increased to meet demands generated by a growing and ageing population in the District.

Nepean Hospital in Penrith is designated as the major tertiary level facility providing higher level in-patient and out-patient care, specialist services and rehabilitation services for the District. The *Healthcare Services Plan* identifies a variety of strategic service developments for Nepean Hospital to assist it to respond to projected population growth to 2022, including new ambulatory and short-stay models of care, a new clinical centre, enhanced cancer centre, obstetrics centre and emergency department, and expanded mental health services.

The Hawkesbury LGA is also served by a district level hospital at Windsor, the Hawkesbury District Health Service. This facility, run by Catholic Healthcare, operates a private 127 bed hospital which also provides public patient services under a contract that expires in 2016. It provides medical, surgical, maternity, emergency, palliative, intensive and coronary care and diagnostic services, and a variety of community and allied health services, to people living in Hawkesbury LGA.

Key planning considerations for health facilities for Hawkesbury LGA include:

- » Within the next 20 years Hawkesbury Hospital will reach capacity as the area's demographic is ageing (65+ age group), requiring specialist services and more beds. The Hospital in its current form will have limited capacity therefore to meet the needs of a growing population within the Priority Growth Area.
- » Hawkesbury Council has projected an increase of around 5,000-6,000 new dwellings for the LGA outside the Vineyard Precinct, predominantly around Windsor, Richmond and existing towns. Planning to accommodate and serve the changing needs arising from the increased population and the ageing demographics will need to occur through expansion of current facilities.
- » Public transport services to both Nepean and Hawkesbury Hospitals are currently inadequate.

Subject to contract negotiations in 2016, it is envisaged that "the future role of Hawkesbury Hospital will be enhanced to include new and expanded models of care and services, with potential capital implications" (p.7.5 of Healthcare Plan). The Plan notes that if these service enhancements are not delivered by Hawkesbury Hospital, increased capacity will be required at Nepean and Springwood Hospitals to meet the shortfall. The service development requirements identified for Hawkesbury Hospital to 2022 include:

- » Enhanced emergency department
- » New ambulatory procedures centre for day surgery
- » New sub-acute rehabilitation service, aged care and palliative beds
- » Improved mental health services

» Improved chemotherapy service.

Community health services are also delivered to Hawkesbury LGA by the Hawkesbury District Health Service and they will need to be expanded in line with projected population growth and the identified priorities of the NBMLHD. These priorities include further development of drug and alcohol services, mental health services, oral health services, primary care and community health services across the District and the establishment of a new community dialysis service in the North West Growth corridor.

6.4.4 Emergency and justice services

The ways in which emergency services (including police, fire, rural fire, and ambulance) plan to service the northern precincts of the North West Priority Growth Area will determine how the Vineyard Precinct Stage 1 is serviced.

Fire & Rescue

Fire & Rescue NSW (FRNSW) monitor and assess resource needs across the North West Priority Growth Area as precincts are released. Negotiations also occur between FRNSW and the Rural Fire Service, as jurisdictions and responsibilities change with population growth over time.

Vineyard Precinct Stage 1 will be serviced by existing permanent (24/7 staffed) fire stations at Kellyville and Schofields, the 'retained' (ie on call) stations at Riverstone and Windsor, and new stations planned for the Box Hill Precinct. No new facility will be required within Vineyard. The timing and resourcing / staffing of each of the stations will be subject to the timing of local development and funding allocations through State budgetary processes.

Police and justice facilities

Police services within Vineyard Precinct will be met through the newly completed Windsor Police Station within the Hawkesbury Local Area Command. This facility is designed to meet the needs of this growing area, including Vineyard Precinct Stage 1.

Advice from the Attorney General's Department indicates that any plans for expansion of court facilities are likely to focus on larger facilities in major centres (such as Mount Druitt, Blacktown, Parramatta), as part of a new 'hub and spokes' model and an increasing focus on online services. There are no plans to expand court facilities in this region, and the future role of smaller courthouses such as those at Windsor and Richmond will be clarified through a strategic planning process.

Ambulance service

The Ambulance Service is reviewing the strategic plan and modelling undertaken in 2010 to update for changes in population and to test a new model of service provision across Sydney. Rather than the previous approach of serving a response area of around 80,000 residents from 12 car (ambulance) stations, the new model is likely to involve a network of larger 'depot' style facilities capable of accommodating up to 40 ambulance vehicles, and smaller, satellite 'standby' facilities with room for 2 ambulances, a meals room and shed.

Within the North West Priority Growth Area, this may involve 1 depot and 3 standby facilities of around 5,000m² and 1,000m² respectively. It is unclear at this stage whether the depot would be located at a new site at Blacktown or Quakers Hill, or within industrial zones such as Box Hill, but the Riverstone and Castle Hill facilities are expected to become standby facilities, and Richmond is unlikely to change. No ambulance facilities will be required within Vineyard Precinct Stage 1, which will be serviced from this network of ambulance facilities.

6.5 Private / non-government sector facilities

6.5.1 Neighbourhood shopping

The draft ILP for Vineyard Precinct Stage 1 shows that residents will have access to a village retail centre proposed at Boundary Road, on the precinct's eastern boundary.

As well as a supermarket and a variety of shops and commercial services for local everyday needs, this 0.8ha centre would also be likely to include places for informal meeting and gathering, such as cafes, restaurants and outdoor civic spaces.

The plan also shows a 0.6ha site for mixed use / social infrastructure provision adjacent to the village centre. The specific use of this site is not yet known, although it could be used for a community centre, as discussed above.

6.5.2 Childcare facilities

A number of different forms of childcare and activities for young children are generally provided in a community, including long daycare, family daycare, pre-school, occasional care and playgroups. Additionally, services to support families with young children may be provided. It is not appropriate at this stage of the planning process to try to anticipate need for the specific types of childcare services. Instead, leading practice encourages planning of flexible multi-purpose childcare centres, which can provide a mix of services or adapt as precise needs are identified.

The provision of childcare has changed substantially in recent years, associated with shifts in government regulation and funding policy, such that the private sector is now the provider of the majority of childcare centres in Australia. As such, the provision of childcare in most new developments is now left largely to market forces. In common with the provision of childcare in most new developments, childcare in Vineyard Stage 1 will be provided by private sector providers, as demand develops.

As a broad indication of need, based on the GCC benchmarks outlined in Section 6.2 and an assumption that around 8% of the population could be aged 0-4 years, at full development Vineyard Stage 1 could be expected to generate a need for at least 120 childcare places. The number of childcare centres required will depend upon the size of each centre in terms of number of childcare places. There is no standard size of centre. However, for reasons of cost efficiencies, there is a trend to provide larger centres (80+ places), where local demand justifies this. This would suggest 1-2 childcare centres would be required in Stage 1.

It is not necessary that precise requirements for childcare are identified at this rezoning stage. Childcare centres are a permitted use within residential areas and do not necessarily require land to be designated at the master planning stage. However, there can be benefits in identifying sites for childcare centres within neighbourhood and district centre hubs, even if these are ultimately developed by private operators, for the following reasons:

- » To ensure some childcare is provided in central and conveniently accessible locations, and to reinforce the role of the hub as the focal point for the community
- » To locate childcare adjacent to complementary land uses such as schools and community centres
- » To help avoid childcare centres locating inappropriately in residential areas with amenity impacts on adjoining residents (particularly in terms of traffic congestion)
- » To encourage the provision of multi-purpose children's services which incorporate a mix of long daycare, pre-school, occasional care and out of school hours care for primary school children

- » To allow for government / community sector provision of childcare for sections of the population not profitable for the private sector, such as children aged 0-2 years, children of shift workers and those with special needs.

Planning for childcare will also need to address the need for out of hours school care (OHSC) for primary school aged children. Such need is usually met through multi-purpose childcare centres, through before and after school programs co-located within schools or through vacation care programs in community centres. Most councils provide spaces within multi-purpose community facilities to accommodate children's services, particularly for services like playgroups, before and after school care and vacation care.

6.5.3 Private schools

Providers of independent schools undertake detailed demographic and feasibility assessments before committing to new release areas. They also tend to acquire their sites through market processes, rather than necessarily acquiring sites designated in master plans.

Demand for private schools reflects the socio-economic and religious profile of an area as well as the availability of private schools in the surrounding area. As noted in Section 4 there are no private schools within the precinct, although several are located in the surrounding area and these have some spare capacity.

The Catholic Education Office has plans to expand existing facilities and construct new schools across the North West Priority Growth Area and has advised that this will provide the capacity to accommodate a large growth in students in future. Construction is underway to expand Terra Sancta School (years 7-10) at Schofields, a K-12 school is planned for Terry Road, Box Hill, and there is room to expand St Johns primary school at Riverstone to cater for 840 students (currently 115) if required. St Joseph's primary school within the Nirimba Education Precinct at Schofields has the potential to cater for up to 600 students (currently 230). In addition, the Catholic Education Office is in the process of purchasing a large 8ha site at Marsden Park, near the intersection of Richmond Road and Garfield Road for a K-12 school. There are no plans for site acquisition within the Vineyard precinct.

6.5.4 Medical services

A population of around 7,400 people will generate a need for about 5 local general practitioners, based on a Western Sydney benchmark of one GP per 1,500 people. The proposed village retail centre will provide sufficient commercial space for local medical centres, which are also a permitted use within residential areas.

Commercial space within the village shopping centre will also be suitable for local services such as dentists and allied health services.

6.5.5 Welfare and support services

As discussed in the previous chapter, the Vineyard population is expected to be reasonably affluent and active, and demand for welfare and support services will be modest. However, given the experience of nearby release areas (particularly in relation to stress associated with the high cost of housing, both parents needing to work and long commuting times), there may be some need generated for family support services.

A key need of welfare and support services in the area is for affordable office accommodation. Such services are best located in major centres where they are accessible by public transport. In Hawkesbury LGA, welfare and support services serving Vineyard would be best located in the Windsor town centre. Alternatively, residents could access services in nearby Riverstone town

centre, Rouse Hill town centre or in the proposed Box Hill town centre. The village retail centre in Vineyard Stage 1, while providing for some commercial uses, is unlikely to contain office accommodation due to its limited size. Also it will not be sufficiently central to the district and regional catchment to provide a good location for such services.

6.5.6 Places of worship

As well as providing places of worship, churches can provide an important base for community development, youth, volunteer and welfare support activities in new communities, and are important in building community spirit and identity. Churches may also provide halls and other spaces which can be utilised for community activities by the general community. For these reasons, it is important that places of worship can be established within the Vineyard Stage 1 area.

The acquisition of sites for places of worship is generally left to market forces, according to their ability to purchase sites, and it is difficult to specifically identify sites in the precinct planning process. However, the relatively high cost of zoned and serviced sites, particularly in central, accessible locations, often precludes places of worship from establishing in new communities.

At the same time, it is recognised that not every religious organisation needs its own facility, and that such organisations may also utilise other community facilities for their meetings, (such as community centres and schools), particularly as these are often not used by others when demand for space for religious activity is at its highest (for example on a Sunday morning for most Christian denominations).

The following issues should be taken into consideration in the future planning of places of worship within the Vineyard Precinct Stage 1:

- » Places of worship can contribute significantly to community identity and activity. They should be located close to other types of community facilities to create synergies and help provide a focal point for the community (eg located within centres).
- » Places of worship need to be readily accessible and visible, and located so as not to impact on adjoining residential areas.
- » Given the limited utilisation of such facilities across the week, it is important that opportunities for shared or joint use be explored with other types of facilities, or multiple church groups, in the interests of making the most efficient use of land resources. This includes shared provision of parking and meeting/activity space.
- » The design and placement of churches and other places of worship can offer significant urban design benefits in terms of providing iconic buildings, landmark features, community identity and way finding.

The draft ILP for Vineyard Stage 1 does not need to identify specific sites for places of worship. It will be important, however, that consideration be given to the issues raised above regarding churches and other places of worship as detailed planning of the precinct gets underway and the Development Control Plan is prepared.

6.5.7 Residential aged care

In the longer term, some provision will also need to be made in the area for residential aged care facilities (previously known as hostels and nursing homes). These facilities are funded by the Commonwealth Government according to planning benchmarks based on numbers of people aged 70+. As these numbers cannot be forecast at this early stage of planning, (and as the planning benchmarks are regularly changed in line with policy shifts) it is not possible to predict precise needs now.

Residential aged care facilities are permitted uses within residential neighbourhoods (in keeping with the principle of integrating, rather than segregating older people and people with a disability) and so may be provided within any of the proposed residential areas, without the need to identify sites at this stage. Sites for these facilities are purchased through market processes and do not need to be identified at the rezoning stage. Site criteria include proximity to shops, services, community facilities and public transport, and so such facilities should be located close to district and neighbourhood activity centres.

6.5.8 Leisure and entertainment opportunities

Entertainment and leisure facilities such as restaurants, cinemas, clubs and pubs are provided on a commercial basis according to market demand. It is anticipated that the village retail centre in Vineyard Stage 1 will provide facilities such as cafes and restaurants, but that residents will rely on the town centres at Windsor, Riverstone, Rouse Hill and Box Hill for a wider range of leisure and entertainment opportunities, consistent with their status as town centres. The new population of Vineyard Stage 1 will contribute to demand for these types and facilities and help enhance their viability.

Cultural facilities such as spaces for performing and visual arts are provided on a regional basis for large population catchments. Existing facilities will have capacity to absorb the modest demand likely to be generated by residents of Vineyard Precinct Stage 1.

6.6 Delivery arrangements

At this stage, planning to enable rezoning has only been undertaken for Stage 1 of the Precinct. The only community facilities that may potentially be located within Stage 1 are a primary school and a community centre. While the Stage 1 ILP identifies an indicative site for a primary school, the Department of Education has advised that its needs for a site in this area cannot be confirmed at this stage. The location of a future school in the area will also be influenced by the extent of future development to the north, beyond the Priority Growth Areas boundary. A school in this area will not be required in the short-medium term and the Department does not want to commit to acquiring a specific site until its longer term needs can be ascertained. In the meantime, the Department will continue to work with the DP&E to monitor development and enrolment trends within Vineyard Stage 1 and the surrounding area.

Planning for a future community centre will also need to take into consideration the future population of the entire precinct. A large site on the precinct's eastern boundary is identified in the draft ILP for mixed use / social infrastructure. However, Council will need to consider whether it will accept this location. Should the identified site be agreed, it is proposed that the facility be developed in stages, to allow for expansion when the needs of the Stage 2 population are known. As noted previously, under current legislation, developer contributions may only be levied for the cost of land for community facilities, not for their building. A Section 94 Plan for Stage 1 should include apportioned costs for a site for a future community centre for the Precinct.

6.7 Conclusion

With a forecast population of about 7,400 people, Vineyard Stage 1 will provide a catchment that will warrant the provision of the following local community facilities:

- » Potentially a new primary school
- » A community centre where residents can participate in activities and programs, meet new friends or learn new skills. A facility of around 500-600m² would meet the needs of the Stage 1

population. However, it is recommended that the centre be developed in stages, to enable expansion when the needs of the Stage 2 population are better understood. While a site on the eastern edge of the Stage 1 Precinct has been identified in the draft ILP, it is recommended that Council consider whether this site meets locational criteria for accessibility and centrality or whether another location would be preferred.

- » A range of facilities to be provided by the commercial / non-government sectors, as demand emerges and according to their own feasibility assessments. These facilities are likely to include:
 - > Local cafes and informal meeting places
 - > Childcare centres and out of school care services
 - > GPs and medical centres
 - > Private schools
 - > Places of worship
 - > Residential aged care facilities.

The future population of Vineyard Stage 1 will also contribute to demand for a variety of district, sub-regional and regional level services facilities in the wider area, generally provided for larger population catchments. These types of facilities and services are generally best located in larger activity centres that are well served by public transport, to maximise access for the whole catchment. They include:

- » Higher order shopping and commercial services
- » High schools, tertiary education and lifelong learning facilities
- » Hospitals and specialist and community health services
- » Welfare and support services
- » Libraries and cultural facilities
- » Leisure and entertainment opportunities
- » Emergency and safety services.

The key issues with regard to access for Vineyard Stage 1 residents to district and regional facilities and services include:

- » The future of Hawkesbury Hospital as a public health facility and its capacity to meet demands generated by population growth in the Priority Growth Area beyond 2016 is uncertain, and will depend upon the availability of funding for expansion and negotiation of a new contract in 2016 to provide public patient services
- » The ability to expand existing welfare and support services to meet the needs of the Vineyard Stage 1 population, through gaining additional recurrent funding for staffing and programs through government funding programs
- » The development of public transport services, particularly linking Stage 1 residents with the facilities and services available in the surrounding district.

7 Open space and recreational requirements

This chapter outlines the open space, sporting and recreation facilities that will be required to meet the needs of the future Vineyard population of approximately 7,400 people.

7.1 Demand analysis

The following information has been considered to determine the likely needs of the future Vineyard Stage 1 community:

- » Broad national trends in sport and recreation participation
- » NSW participation rates in sport and recreation activities
- » The projected demographic profile of the precinct (and an assessment of the likely needs based on this profile).

This information is outlined below.

7.1.1 Broad trends

National trends in recreation participation and facility use across Australia include:

- » A swing from outdoor team sports to individual fitness and social sport
- » Substantial growth in indoor sport and recreation
- » Growth in year-round swimming
- » Increasing participation by women and girls in traditional male sports such as AFL, soccer, rugby union and rugby league
- » Increasing impacts of technology on leisure choices, such as computer games and new recreational equipment. Associated with this is a decreasing involvement by young people in active recreation activities, and an increase in indoor 'passive' activities such as computer use and watching television, videos and DVDs
- » Apparent decline in the physical activity levels of children causing concerns about obesity
- » Changes in participation in competitive sport (greater diversity of codes, reduced younger participation, greater participation in seniors and masters sports) and more participation in informal recreation activities
- » Continuing emergence of new activities as a result of overseas trends and increasing cultural diversity (with increased participation in sport and recreation of people born overseas, including people from non-English speaking countries)
- » Changing recreation preferences amongst older groups, as the population ages and 'baby boomers' enter retirement
- » Increase in the proportion of families with two parents working full time (with probable reduced time for leisure)

- » Flexibility in the times that people enjoy their recreation, as demands on time increase and work practices change. This creates greater demand for indoor facilities that are available all day, every day of the year.

The relevance of these trends to planning for Vineyard Precinct Stage 1 lies in the need to ensure that the quality and design of open space reflects these lifestyle trends.

7.1.2 Participation rate analysis

Australian Bureau of Statistics (ABS) data (*Participation in Sport and Physical Recreation, Australia, 2011-12*) suggests that the highest rates of participation in sport and recreation activities amongst people 15 years and over in NSW are as follows:

Table 5: Participation rates in sport and recreation

Activity/sport	Participation rate (%)
Walking	23.6
Fitness/gym	16.6
Swimming/diving	8.6
Jogging/running	8.1
Cycling/BMXing	6.1
Golf	5.3
Tennis	4.7
Soccer (outdoor)	3.5
Bushwalking	2.8
Football sports	2.7
Yoga	2.2
Surf sports	2.1

Of those sports with the highest participation, the following have experienced the most significant increase between 2009 and 2012:

- » Fitness/gym (increase of 3.4%)
- » Walking (increase of 2.4%)
- » Jogging/running (increase of 1.3%)
- » Golf (increase of 1.1%)
- » Cycling/BMXing (increase of 0.8%).

Australian Bureau of Statistics data (*2011-12*) further suggests that:

- » Participation in sport and recreation has increased slightly over this period (from 62.7% in 2009-10 to 65.7% in 2011-12)
- » The majority of participation in physical activity in 2011-12 was non-organised activities. Such participation has increased slightly, while participation in organised activity has remained stable

Of the population participating in organised activities, their activities are most commonly taking place in/at:

- » Indoor sports and fitness centres (41.0% of participants)
- » Public playing fields or ovals (38.4%)
- » Outdoor sports facilities (31.3%)

Of the population participating in non-organised activities, activities are most commonly taking place in/at:

- » Parks or reserves (43.3% of participants)
- » Indoor sports and fitness centres (25.5%)
- » Public playing fields or ovals (22.3%)
- » Off-road cycleways or bike paths (21.2% of participants).

The ABS *Survey of Children's Participation in Culture and Leisure Activities, Australia, 2012* provides data in relation to the participation of children in sport and recreation across Australia. This data also indicates trends that may inform the planning of sport and recreation infrastructure for the Vineyard Precinct. Key findings from this survey are outlined below.

Amongst Australian children (5-14 years) in 2012:

- » Of boys participating in organised sport, the most popular sports were outdoor soccer (22%), swimming/diving (16%), Australian Rules football (15%) and basketball (9.2%)
- » Of girls participating in organised sport, the most popular sports were dancing (27%) swimming/diving (19%), netball (16%) and gymnastics (8%)
- » 60.2% of all children participated in organised sport. Participation decreased from 63% in 2009.

The survey also examined participation in the informal/non-organised activities of bike riding, skateboarding, rollerblading and scooter riding and identified an increase in participation in these activities by both boys and girls.

With engaging in physical activity a key component of a healthy lifestyle, the above data highlights the importance of providing adequate, high quality facilities in the Vineyard Precinct. Provision of a broad range of facilities will assist the continuing growth in participation of adults and children in organised and non-organised sport and recreation into the future.

7.1.3 Likely needs and demands of the new Vineyard Stage 1 community

While precise needs cannot be identified at this early stage in the planning process, based on the findings of these studies and the demographic characteristics of the future population outlined in Section 5, it is likely that the broad needs of the Stage 1 Vineyard population will include:

- » The large proportion of families suggests the need for a variety of parks for informal play and passive recreation that support family and community activities. Parks that are locally accessible and provide high quality and well maintained facilities that support recreation and play will be required. There will be demand for local parks, larger recreation parks and linear parks that provide a focus for family activities including walking, bike riding, play, picnics and social gathering opportunities. These should provide a diversity of recreation settings and opportunities for all age groups and all abilities.
- » People should have the potential to walk to open space for activities, which will generally require residents to be within 400-500m of usable open space.

- » There will be demand for outdoor areas for larger gatherings and cultural events e.g. extended family and group picnics, amphitheatre, markets.
- » A relatively large proportion of children is likely and this highlights the need for playgrounds and other outdoor activity opportunities such as bike tracks, BMX and skateboarding. Playgrounds should offer a range of play experiences for different age groups and include paths, play equipment, fencing, landscaping and shelter from sun, wind and rain.
- » The likely large proportion of young people highlights the need for parks and public spaces that are designed to be friendly to young people, providing meeting places that are safe and welcoming and allow for social interaction and informal games.
- » In particular, there may be demand for adventure based activities, such as mountain biking, trail bikes, horse riding, rock climbing. This should include opportunities for adventure play for primary school aged children as well as young people – for instance informal tracks and mounds for BMX and active games, observation places and structures, flying fox.
- » The large proportion of adults suggests potential high demand for lower impact and flexible physical activity opportunities such as walking and bike riding. Linear connections and a network of walking and cycling tracks should be provided to support the potential high participation in walking and provide links to key destinations and recreation nodes.
- » Opportunities that increase incidental physical activity, through design of footpaths, road networks and accessible, safe and well-lit walking and cycling tracks should be provided. Bike tracks that provide safe and appealing activity and transport opportunities, particularly for children and young people, will be essential.
- » The open space network should also include areas to walk dogs, and off leash exercise areas for dogs.
- » Options to enhance individual fitness in parks and trails will also be important.
- » Opportunities to enjoy bushland, water and other natural settings, for picnics, bushwalking and as spaces for reflection, rest and relaxation will be valuable to broaden recreation opportunities.
- » To meet the demand for organised sport, multi-purpose playing fields that are suitable for a variety of field sports, and able to accommodate both junior and adult sporting activities for males and females will be required.
- » There will also be demand for access to both outdoor and indoor courts for court sports, and indoor spaces for activities such as dance, martial arts, yoga, fitness, gym.
- » Access to aquatic facilities that include a variety of leisure and fitness activities and programs consistent with local needs and preferences will also be required.

Some of these needs will be satisfied by local open space and facilities to be provided within Stage 1 of Vineyard Precinct, while others will be addressed by accessing facilities in the wider district and more broadly in the region.

7.2 Opportunities and constraints

The precinct presents a number of opportunities and constraints to be recognised in the planning of open space. These are outlined below:

- » The extensive riparian corridors running through the southern portion of the Stage 1 site (Killarney Chain of Ponds and Eastern Creek) and associated land which is flood affected present opportunities to create a network of linear open space as described in section 7.6. However the extent to which this may be used to create green, recreational linkages with

walking and cycling tracks will depend upon whether all or parts of this land are to be retained in private ownership.

- » These corridors, together with Windsor Road and the railway line present significant physical barriers which sever the precinct, particularly when planning for access for Stage 1 residents around the through the precinct. There could be impacts on circulation around the precinct if adequate access across these barriers is not provided
- » There is an existing gap in the provision of local open space in the area which may place additional demand on the open space provided, through use of new open space in the precinct by residents in surrounding areas. This places emphasis on the importance of providing adequate, high quality open space to ensure this shortage is not exacerbated
- » With a high proportion of existing sports fields in the LGA located on flood prone land, Hawkesbury City Council has requested that new sporting fields be located outside flood lands. This places constraints on the location of open space in the precinct.

7.3 Standards, guidelines and benchmarks

Guidelines, benchmarks and standards from a number of relevant sources have been considered in determining the open space and recreation requirements for Stage 1 of the Vineyard Precinct. These are outlined below.

7.3.1 NSW guidelines

NSW Government guidelines for open space provision, the *Recreation and Open Space Planning Guidelines for Local Government* (SGS Economics and HM Leisure Planning, 2010), advocate to Councils that they:

- » Establish the current supply of open space in an area by open space type (parks, outdoor sport, linear and linkage), hierarchy (regional, district, local), size and distance from most dwellings
- » Adapt default standards for open space planning in NSW to define locally- specific provision standards. The default standards for local open space in NSW are:
 - > About 9% of non-industrial land to be allocated for local and district open space, with a rough 50:50 split between sporting and recreational uses
 - > Local informal parks – 0.5-2 hectares in size and within 400 metres from most dwellings
 - > District parks to be 2-5 ha and 2 kilometres from most dwellings
 - > Local outdoor sporting areas: 5 hectares in size and 1 kilometre from most dwellings.
- » Develop locally-appropriate provision standards, after considering existing provision of open space as well as local needs, and locally-specific alternatives to meeting the default standard.

The open space planning guidelines also set out opportunities for and constraints to providing open space to fill gaps between supply and demand. Considering the high demand for open space and finite open space resources, there is a need for smarter use of existing assets through means such as:

- » Converting or adapting existing open space
- » Integrating the provision of a wide range of recreation facilities and programs
- » Co-locating recreation opportunities with other community and commercial services
- » Using alternative, commercial facilities and venues for recreation on an opportunistic basis

- » Using new technologies and enhanced design
- » Providing an equitable mix of outdoor and indoor recreation facilities
- » Rationalising underused or poorly located facilities
- » New partnerships and cross-boundary local government co-ordination to address resource and capacity constraints
- » Seeking agreements with educational and other institutions for co-use of open space
- » Innovations in providing and maintaining open space are required given increasing costs
- » Using marginal land (former landfill, drainage, utilities easements) that is acceptable for open space purposes
- » Acquiring larger sites for multiple and changing uses over time
- » Incorporating environmental resources as open space.

The levels of open space provision are recommended with an understanding that site opportunities and constraints may influence outcomes, and will ensure that the final quantum of open space proposed will reflect the realities of the landform, soils, drainage and other physical considerations, rather than the exact adopted standard.

7.3.2 Priority Growth Area benchmarks

The *Priority Growth Areas Development Code* (Priority Growth Areas Commission, 2006) has adopted a guiding benchmark for open space provision within the Priority Growth Area precincts of **2.83 hectares per 1000 people**.

7.3.3 Hawkesbury City Council benchmarks and guidelines

The *Hawkesbury Regional Open Space Strategy* (Clouston Associates 2013) provides guidelines for the planning of open space in the Hawkesbury LGA. The strategy places emphasis on the integration of passive and active (or sporting) opportunities in open spaces.

The *Hawkesbury Regional Open Space Strategy* proposes that a hierarchy of open spaces be implemented across the LGA, as outlined in the following table.

Table 6 *Hawkesbury Regional Open Space Strategy hierarchy*

Open space type	Guidelines
Local open spaces	<ul style="list-style-type: none"> » Local open spaces provide convenient access to passive and some active recreation opportunities for nearby residents of all age groups, within walking distance » Located within 1km actual walk or 15-20 minutes of all residents (new parks to be 400-500 metres walk) » Minimum of 0.2ha and up to 2ha (new parks to be no less than 0.3ha) » Preferably located close to public transport » To include planting, shade, seating, play equipment (primarily for small children), paths, some sports facilities, some picnic facilities, access to toilets (may be provided in adjoining building), informal active grassed areas and dog off-leash areas. Limited onsite parking.
District open spaces	<ul style="list-style-type: none"> » Larger open spaces providing a variety of active and passive recreation offerings » Located within 5 kilometres or 10-15minutes drive from residents » Minimum of 2ha » Readily accessed by public transport. Some onsite parking » To include <ul style="list-style-type: none"> > Sports facilities (including fields and courts) to accommodate multiple sports and supporting infrastructure – e.g. floodlighting, seating, change rooms and canteen > Cultural and civic spaces for events and ceremonies > Single and group picnic areas and park amenities building » Other possible inclusions – community gardens/nursery, public art, youth spaces/facilities, dog off leash areas, on and off-street car parking
Regional open spaces	<ul style="list-style-type: none"> » Large open spaces providing a variety of active and passive recreation opportunities for residents of the LGA and visitors from a wider areas » Accessed between 30 and 90 minutes travel by car or public transport. To include significant onsite parking » Usually 10ha or more » To include: <ul style="list-style-type: none"> > Regional sports facilities (including fields and courts) to accommodate multiple sports and supporting infrastructure – e.g. floodlighting, grandstands, change rooms and canteen > Large children’s play areas that may include adventure play and inclusive play > Cultural and civic spaces for events and ceremonies > Areas of natural significance > Open space for specific events (that attract local and regional tourism)

Open space type	Guidelines
	<ul style="list-style-type: none"> > Single and group picnic areas » Other possible inclusions – community and sports centres, cafes/kiosks, public art, youth spaces/facilities and dog off-leash areas.

The Strategy also specifies that urban meeting spaces be provided in town centres and some larger neighbourhood centres to meet local leisure and community interaction needs.

The *Hawkesbury Residential Land Strategy* (Hassell 2011) also provides direction for the provision of open space. The Strategy provides a hierarchy and benchmarks for open space (as shown in the following table). These differ from those proposed in the *Hawkesbury Regional Open Space Strategy* (included above) in that, most notably, they include population based benchmarks. These are outlined in the following table. Hawkesbury City Council has advised that the *Regional Open Space Strategy* hierarchy should have precedence over the hierarchy outlined in *Residential Land Strategy* where discrepancies exist.

Table 7 *Hawkesbury Residential Land Strategy* hierarchy

Open space type	Benchmark
Regional Park	<ul style="list-style-type: none"> » Size – 20ha minimum » LGA Catchment (1/LGA)
District Park	<ul style="list-style-type: none"> » Size – 3-10ha » 1/25,000-50,000 residents
Local Park	<ul style="list-style-type: none"> » Size – 1-4ha » 1/3,000-5,000 residents
Neighbourhood Park	<ul style="list-style-type: none"> » 1/1,000-2,000 residents
Sporting open space	<ul style="list-style-type: none"> » Size – 2ha » 2ha/1000 residents

Additional Council directions

Hawkesbury City Council has also advised that the following principles should be applied in the planning of open space within the LGA:

- » **Co-location of facilities:** The co-location of built sports and community facilities (e.g indoor sports centres and community centres) should be promoted
- » **Restricted sites:** Sites on drainage easements and under transmission lines are not suitable and cannot be considered as usable open space. Sports fields are not to be located in retention basins.
- » **Cycleway network:** A key objective for Council is to develop a north-south cycleway network through the LGA. Open space planning can play a role in the development of this network by providing a route through which cycleways can pass. Planning of the network should also aim to link key open space and facilities in the LGA. Council noted that while a cycleway is provided adjacent to Windsor Road, this is primarily a commuter route, it is unsafe due to its proximity and lack of separation with the major road and there is a need in the LGA for a recreational cycleway (away from major roads).

- » Council also believes the north-south cycle way connection could be achieved by providing a cycleway adjacent to the northern side of the railway line.
- » **Youth facilities:** Informal youth recreation facilities, such as skate parks, should be located in sites with very good passive surveillance, in centres and near key amenity (such as shops) and have a 'family friendly' environment to encourage use by a broader demographic.

7.3.4 Other guidelines and benchmarks

Consideration has also been given in this study to the benchmarks adopted by Blacktown City Council. These standards have been or will be used for the planning of open space and recreation facilities in the 12 Blacktown precincts within the North West Priority Growth Area and are included for comparative purposes and to address gaps in Hawkesbury standards. Blacktown standards differ from Hawkesbury standards, most notably in that:

- » Blacktown standards direct the provision of 1.9ha/1000 people of passive open space and approximately 1.2ha/1000 people for sports fields (does not include space for other sports facilities). Hawkesbury standard – 2ha/1000 people for active open space
- » Blacktown City Council provides population based standards for playing fields, outdoor and indoor sports courts.

Blacktown standards are outlined in the table below.

Table 8 Blacktown Council standards for active open space, sport and recreation facilities

Facility type	Guidelines and standards
Sports fields	<ul style="list-style-type: none"> » 1 playing field/1850 people » Arrangement to consist of: <ul style="list-style-type: none"> > Minimum double playing field layout (2 winter fields overlaid with 1 summer cricket oval) or > An area equivalent to 2 or more winter playing fields that could accommodate baseball or softball diamonds » Ideally footprint to support AFL » Cricket pitch accommodated between double playing fields » Site to accommodate amenities, lighting spill and practice facilities » Allow for adequate space between playing areas » Requires an area of approximately 4.5ha for each double playing field » 1 playing field/1,850 people @ 4.5ha for each double playing field equates to 1.2ha/1,000 people for sporting open space (refer note*)
Passive open space	<ul style="list-style-type: none"> » Approximately 1.9ha/1,000 people (refer note*)
Outdoor sports courts	<p>Netball:</p> <ul style="list-style-type: none"> » 1 netball court/3,500 people (includes centralised competition courts and satellite training courts) » For competition venues – minimum 40 courts (consideration to be

Facility type	Guidelines and standards
	<p>given to access, off street parking and future expansion of courts)</p> <p>Tennis:</p> <ul style="list-style-type: none"> » 1 tennis court / 4,500 people » Minimum 4 courts (in line with Tennis Australia guidelines) » Preferably to be incorporated with other sports facilities (e.g. aquatic centres or other indoor sports facilities) to support management
<p>Aquatic and indoor sport and recreation facilities</p>	<ul style="list-style-type: none"> » 1 indoor sport court per 25,000 people » Indoor sport complex size: <ul style="list-style-type: none"> > Four court facility – approximately 4200sqm GFA > One court facility/space (co-located in community hub) – approximately 785sqm GFA.

Source: Blacktown City Council

*NOTE: Blacktown City Council’s specified 1.2ha/1,000 people for sports fields and 1.9ha for passive open space equates to an overall quantum of 3.1ha/1,000 people (over the 2.83ha/1,000 specified by *Priority Growth Areas Development Code*). Co-locating active and passive open space however, enables opportunities for efficiencies in open space planning and some overlap in passive and active open space provision.

7.4 Proposed approach for the Vineyard Precinct Stage 1

There are significant discrepancies between Priority Growth Area standards, Hawkesbury City Council standards and standards of other councils applied in the other precincts in the North West Priority Growth Area. This study has considered the various standards available to develop a tailored approach to the provision of open space and recreational facilities for the 7,400 future residents of the Vineyard Precinct, as explained below:

- » For the sake of consistency across the Priority Growth Area precincts (to ensure an equitable provision), the *Priority Growth Areas Development Code* standard of a minimum of 2.83ha/1000 people has been adopted for the Vineyard Precinct Stage 1. When applied to the forecast population of 7,400 people, this suggests an overall quantum of 21ha of open space (passive and active/sporting) will be required
- » The *Hawkesbury Residential Land Strategy* provides a population based benchmark for sporting open space of 2ha/1,000 people. This would equate to 14.8ha of sporting open space. In the context of the recommended overall quantum, this benchmark would result in an undersupply of passive open space (with only 6.2ha allocated for passive open space). This also does not align with NSW guidelines outlined above which recommends a rough 50:50 split of land for active and passive open space
- » The *Hawkesbury Regional Open Space Strategy* takes a distribution/access based approach and proposes that district level open space (which includes sports fields and courts) be located within 5 kilometres of each resident. This would equate to one area of district open space within the Stage 1 Vineyard Precinct

- » The Blacktown standard of 1 sports field/1,850 people (and 4.5ha/double playing field) provides additional direction and would equate to a requirement for four sports fields in Stage 1 or two double playing fields, with an area of around 9ha

The proposed approach for open space and recreation facility provision for the Vineyard Precinct Stage 1 also includes:

- » Adoption of other Hawkesbury City Council guidelines and directions (including the provision of a hierarchy of open space)
- » In the absence of Hawkesbury City Council standards, adoption of Blacktown City Council standards for outdoor sports courts, aquatic and indoor sport facilities.

7.5 Recommended provision for the Vineyard precinct

The following table applies the proposed approach, outlined in the previous section, to the Vineyard Precinct (with a population of approximately 7,400 people) to determine open space and recreational facility requirements.

Table 9 Requirements for open space, sport and recreation facilities

Facility type	Standard*	Requirement for population of 7,400 people
Total quantum of open space (excludes regional open space, drainage, areas of cultural significance, conservation land, flood prone land, land under transmission lines and creeklines)	Minimum 2.83 ha/1,000 people	Minimum 21ha of quality, usable public open space
Open space hierarchy	<ul style="list-style-type: none"> » Integration of passive and active uses » Local open space – minimum size 0.3ha (preferably between 0.3-2ha) » District open space – minimum 2ha. Catchment area 5km radius » Regional open space – minimum 10ha. Catchment area 10km radius 	The provision of local open space within 400-500 metres walking distance for all residents. One area of district open space will be required in Stage 1 of the Vineyard Precinct and will include sports fields as required (refer below). Regional open space not required in Vineyard Precinct; however, the precinct population will still generate demand for larger open spaces. This demand will be met in existing areas within 10km.
Sports fields	1 sports field/1,850 people 4.5ha/double playing field	4 sports fields or 2 double playing fields (9ha total) Sports fields to be in land that is not flood affected

Facility type	Standard*	Requirement for population of 7,400 people
Netball courts	1 netball court/3,500 people	2 netball courts
Tennis courts	1 tennis court/4,500 people Minimum provision of four courts/site	1-2 tennis courts
Indoor sports facility	1 indoor sport court/25,000 people	Does not meet threshold Will contribute to demand for expansion of Hawkesbury Indoor Stadium Note: S94 contributions not applicable to indoor sports courts
Aquatic facility	No recognised standard	Facility not required for Vineyard Precinct population alone Needs of the Vineyard Stage 1 population will be met by existing Hawkesbury facilities

*Based on Priority Growth Areas Development Code standard, Blacktown City Council standards and Hawkesbury City Council guidelines

The following sections provide addition information on the requirements identified above, as well as other open space, sport and recreation facilities required to meet the needs of the future Vineyard Stage 1 ILP population.

7.5.1 Required overall quantum of open space

As outlined in the above table, the overall quantum of open space required to be provided in the Vineyard Precinct for a Stage 1 projected population of approximately 7,400 people is 21ha. This should be land which can be dedicated by Hawkesbury Council as public open space and which provides primarily a recreation function.

7.5.2 Requirements for sports fields

A total of 4 sports fields (or 2 double fields) will be required to meet the needs of the new Vineyard Stage 1 community. Based on a guide of round 4.5ha per double playing field, a total of 9ha is required for these sports parks.

These double playing fields should be multi-use facilities, capable of accommodating a range of sports (including, soccer, rugby league, ruby union, cricket, athletics and AFL). Such facilities provide greater flexibility by enabling programing of exact sporting use to occur at a later date, once specific needs can be confirmed.

The sports fields should be distributed so as to provide equitable access to residents in different parts of the precinct (ie Stage 1 and Stage 2 populations).

The clustering of sports fields to create at least one larger sports park is also supported, as this provides facilities suitable for both competition and training and allows for economies in providing amenities and parking areas.

Other requirements to be considered in relation to locating playing fields include:

- » Ensuring efficient access from main roads and public transport routes

- » The need for relatively flat land to support the development of playing fields
- » The need for adequate space to accommodate supporting amenities and buffers and some play equipment.
- » Sports fields to be set within larger areas of open space that will also provide passive recreational opportunities, consistent with the Hawkesbury Regional Open Space Strategy, so that they will then be considered as district parks.

Council's detailed requirements for embellishment of sporting fields have not been identified, but are likely to include parking (eg 50 spaces per single field), lighting and amenities buildings (toilets, change rooms, canteens).

The draft Stage 1 ILP has identified 8ha for active open space. This is capable of accommodating the recommended two double playing fields allocation. The site shown on the draft ILP is, however, located within flood affected lands, which is contrary to Council's requirements for playing fields to be located in land that is not flood affected. The active open space is part of a larger corridor of open space and can therefore satisfy requirements for the creation of a district park.

The extent to which this site might support larger competitions and training facilities is dependent upon detailed site planning. While the site is big enough to accommodate sports facilities additional to a double playing field, it is not recommended that it contain outdoor courts, for the reasons outlined in the following section.

7.5.3 Requirements for outdoor courts

Based on the standards applied by Blacktown City Council outlined above, two netball courts and one tennis court will be required to meet the needs of the new Stage 1 Vineyard community. In order to provide facilities suitable for competition and practice, sporting associations favour the clustering of courts. Clusters of courts also facilitate management and maintenance arrangements. Two court local facilities for netball and a single tennis court do not represent viable options. It is, therefore, recommended that the demand generated by the new Vineyard Stage 1 community be met off-site in larger clusters of court facilities in other parts of the Hawkesbury LGA.

7.5.4 Requirements for aquatic centres and indoor sport and recreation facilities

The forecast population alone will not meet the thresholds to justify indoor sport and aquatic facilities. However, it will contribute to demand for these facilities in the broader district.

Hawkesbury City Council has confirmed that the Hawkesbury Indoor Stadium is at capacity and will not be able to service these needs. The needs of the Vineyard Stage 1 community for indoor sport and recreation facilities will, therefore, need to be accommodated through expansion of an existing facility or provision of a new facility in the Hawkesbury LGA.

In terms of fitness, aerobic and gym facilities, these are most commonly provided by the private sector, as demand emerges. The proposed multi-purpose community centre for Vineyard will also contain spaces suitable for activities such as yoga, dance and children's martial arts and gymnastics classes.

With regard to aquatic facility needs, Hawkesbury City Council has confirmed that there is capacity in existing facilities that can accommodate the needs of the Vineyard Stage 1 community.

7.5.5 Requirements for passive open space

Of the 21ha minimum required as public open space, at least 10-11 ha should be provided as recreational open space in the form of parks and open space linkages.

The draft Stage 1 ILP has identified 16.1 ha as passive open space. Assuming that this can all provide quality space for recreation, this is more than adequate to satisfy the minimum benchmark requirement for the Stage 1 precinct. However, planning for Stage 2 will also need to ensure that passive open space is distributed equitably throughout the balance of the Precinct. The extent to which Council is willing to accept land in excess of the requirements as public open space will be a matter for Council's consideration.

Parks

In accordance with Hawkesbury City Council guidelines, the planning of open space should ensure all future residents are within 400-500 metres walk from passive open space opportunities. These opportunities should be provided through a number of stand-alone local parks of minimum 0.3ha (up to 2ha) as well as in the required district open space, co-located with active open space. Locating passive open space and calculating access and walking distances should consider key barriers such as creek corridors.

Passive open spaces should include amenities as directed by Hawkesbury City Council guidelines (refer Table 6 above).

Playgrounds

A network of playgrounds should be provided in local parks across the Vineyard Precinct. Playgrounds encourage children to engage in non-organised physical activity and provide important community meeting places that encourage social interaction and assist social cohesion. These playgrounds should collectively provide a range of play environments for children of various ages and a variety of play experiences.

A larger playground catering to various ages and abilities should also be located within one of the district open spaces (in accordance with Council guidelines). This playground should include challenging play opportunities for older children.

Activities for young people

The proposed district park should include amenities that cater to older children and young people in Stage 1 of Vineyard Precinct. Options include facilities for skateboarding, rollerblading, bike/BMX and scooter riding (identified as emerging popular activities for children 5-14 years in national and state sport and recreation participation rates). Other possible facilities include half courts for informal ball games and climbing walls. Precise facilities for young people to include within the parks will require further discussion with Hawkesbury City Council.

Linear open space

The extensive riparian corridor throughout the Stage 1 site and associated flood affected land presents opportunities to create a network of linear open space, which would provide access to natural areas and additional opportunities for passive recreation. However, this will depend upon the extent to which this land is retained in private ownership.

These open space areas should be appropriately vegetated to create the amenity of a natural bushland setting and include embellishments to create valuable, usable open space for passive recreation. Embellishments must be located outside of any core conservation areas (with buffers provided between) so as not to impinge on the future ecological value of the corridor. Suitable embellishments include:

- » Pathways and cycleways – this is key infrastructure to support popular non-organised sports and recreation activities such as walking, jogging/running and cycling (identified as key non-organised sports and recreational activities in NSW). The pathway network should include shared-use 2.5-3 metre wide paths. The critical success factor for these pathways is ensuring that they are safe by having passive surveillance and regular activity nodes and points of interest.
- » Fitness equipment (also supports participation in non-organised physical activity)
- » Seating, barbeque and picnic facilities
- » Signage and lighting
- » Playgrounds
- » Interpretive signage (cultural heritage and environment).

7.5.6 Additional Council requirements

Hawkesbury City Council has also requested the planning of open space in Stage 1 of Vineyard Precinct considers:

- » Development of the open space at Vineyard Park, which lies just outside the precinct boundaries, to include the entire frontage of Park Road, in order to provide a buffer between industrial and potential residential areas
- » Provision of a local park in the area of Harkness Road area to enhance residential access.

7.6 Regional and district facilities

It is envisaged that the regional and wider district level open space, sport and recreation facility needs of the new Stage 1 Vineyard Precinct community will be met through the existing regional level facilities outlined in Section 4.

Issues in relation to the access of future Vineyard Stage 1 residents to major facilities include the following:

- » Rouse Hill Regional Park will provide key open space amenity, due to its close proximity (4km) to the precinct. However, as outlined in Chapter 4, NSW National Parks and Wildlife Service has advised that this park is currently at capacity and upgrades and expansion of the park will be required if it is to continue to successfully serve the regional population into the future. Expansion of the Park is planned, but the nature of future embellishments to make it a usable recreation resource are yet to be determined
- » The Hawkesbury Indoor Stadium, the LGA's only indoor sports facility, is at capacity and will be unable to meet the needs of the new community. An alternative way of addressing the indoor sport needs of the Vineyard Stage 1 population will need to be identified
- » As previously identified, the Vineyard Stage 1 population's needs for outdoor sports courts (2 netball courts and 1 tennis court) will also need to be met elsewhere in the Hawkesbury LGA.
- » Hawkesbury Council has advised that the Governor Philip Reserve, which includes the boat ramp providing access to the Nepean River for the wider region, is at capacity. An augmentation of facilities providing boating access to the river will be required as the Hawkesbury population grows, and there is a case for development at Vineyard to contribute to the development of these facilities.

7.7 Delivery arrangements

Current Section 94 arrangements allow contributions to be levied for land and base level embellishments for open space. Council will need to determine the base level embellishments (including earthworks, landscaping etc as well as seating, paths, play equipment) it requires within the parcels of open space proposed in the draft Stage 1 ILP, in order to inform the preparation of a Section 94 Plan for Stage 1. This will require some detailed site assessment and planning, especially for the proposed large district park.

Open space planning for the balance of the precinct will occur in subsequent stages of the precinct planning process.

7.8 Conclusion

In terms of local and district open space and recreation facilities, the study has identified a need for:

- » About 21 ha of public open space
- » Passive local open space which meets Council requirements in relation to size and distribution
- » Two double playing fields
- » Provision of outdoor sports courts for tennis and netball in off-site complexes
- » Linear open space along the creek corridors to provide public walking and cycle trails that offer recreation opportunities and linkages to key destinations.

The future Vineyard Stage 1 population will rely on existing open space and recreation facilities in the wider district for access to regional open space and sporting facilities and aquatic facilities.

8 Conclusion

This study has considered the community facilities, human services and open space that will be required to meet the needs of the future population of Stage 1 of the Vineyard Precinct, in order to create communities which will meet the objectives identified in the Priority Growth Areas Development Code and be socially sustainable.

Currently only about 900 people live within the entire Vineyard Precinct. When fully developed, Stage 1 of the Vineyard Precinct is expected to contain approximately 2,400 dwellings, accommodating about 7,400 residents. Facilities and services in this area are currently limited, or sized for the existing lower rural residential population, and will not be able to meet the needs of this new release area. There will therefore be a need for new community facilities, services and open space to meet the needs of the future Stage 1 Vineyard population.

The report has identified the types of facilities and services that will require further consideration as the planning of the Vineyard Precinct moves forward. Key issues include:

- » Constraints relating to the area's topography, geography and existing infrastructure have resulted in a future urban form characterised by two discrete and separate communities:
 - > Stage 1 – located on the north eastern side of Windsor Road between Chapman Road, Menin / Commercial Road and Boundary Road (the subject of this assessment)
 - > Stage 2 - to the north west of Bandon Road / Chapman Road and an alignment broadly defined by a south-western extension of Brennan Dam Road.

Because of the planned pattern of development, Stage 1 may relate more closely, and, in time become integrated with, the adjacent community of Box Hill Precinct, which is part of The Hills Shire Council to the south east.

- » The proximity of Vineyard Precinct to the other precincts within the North West Priority Growth Area and expected similarities in future demographic characteristics creates challenges for planning community facilities. This precinct is on the southern fringe of Hawkesbury LGA and separated from many of the other residential parts of the LGA by considerable distances. As such, residents of the new communities may be more oriented towards services and facilities within other Priority Growth Area Precincts, such as neighbouring Riverstone and Box Hill. However, facilities within these precincts have not been planned with these new Vineyard residents in mind.
- » Vineyard is in a different LGA and Local Health District to the other Priority Growth Area precincts and this has necessitated planning for local government and health social infrastructure which is separate, rather than shared, with the balance of the NWGC.
- » Analysis undertaken for this report shows that the Stage 1 precinct will be too small in its own right to generate demand for district and regional level community facilities, and will instead rely on those in Windsor, Riverstone and Rouse Hill. However these have not taken account of population growth in Vineyard in their development and sizing and are quite distant from this precinct. The future development of a town centre in Box Hill Precinct may help address some of these needs.

Community facilities and human services recommended to be provided within Stage 1 of the Vineyard Precinct include:

- » A new primary school, subject to further planning by the Department of Education. Primary schools in Oakville and Box Hill may meet some of the needs generated by the precinct.
- » A community centre of around 500-600m² on a site of at least 3,000m², staged to allow for its future expansion as the wider (Stage 2) precinct is planned and developed and population needs are better understood.
- » A range of facilities to be provided by the commercial / non-government sectors, as market demand is established. These facilities are likely to include:
 - > Cafes and places for informal meeting within the village shopping centre
 - > Childcare centres
 - > GPs and medical centres
 - > Private schools
 - > Places of worship
 - > Residential aged care facilities

The future population of Vineyard Stage 1 will also require access to a variety of district, sub-regional and regional level services facilities in the wider area, generally provided for larger population catchments. They include:

- » High schools – The Vineyard population will rely on spare capacity within Windsor High and Riverstone High in the short term and in the longer term will have access to new high schools in Riverstone North and Box Hill
- » TAFE and university campuses within Western Sydney
- » The hospital and community health centre in Windsor and other facilities in the broader Nepean Blue Mountains Local Health District. In this regard, the future capacity of the Hawkesbury Hospital and its ability to meet the needs of a growing population in the area is an issue for future consideration in contract negotiations to take place with the hospital in 2016
- » Welfare and support services clustered in Windsor and Riverstone
- » Libraries and cultural facilities, primarily in Windsor
- » Leisure and entertainment opportunities across the district
- » Existing and proposed emergency, justice and safety services.

In terms of open space and recreation facilities, the study has identified a need for:

- » About 21 ha of public open space within the precinct
- » Passive local open space which meets Council requirements in relation to size and distribution
- » Two double playing fields
- » Provision of outdoor sports courts for tennis and netball in off-site complexes
- » Linear open space along the creek corridors to provide public walking and cycle trails that provide recreation opportunities and linkages to key destinations.

The future Vineyard Stage 1 population will rely on existing open space and recreation facilities in the wider district for access to regional open space, regional sporting facilities and aquatic facilities.

9 References

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Appendices

A District level open space and recreational facilities

A District level open space and recreational facilities

District open space/ recreation facility	Description
Outdoor sport and recreation parks	
Ownership/management is Council unless stated otherwise.	
Bligh Park	Location: Bligh Park (Hawkesbury LGA) Inclusions: Sports field
Bruce Purser Reserve	Location: Rouse Hill (Hills Shire LGA) Inclusions: New multipurpose playing field, cricket practice nets
Colbee Park	Location: McGraths Hill (Hawkesbury LGA) Inclusions: 2 sports fields with cricket pitches, cricket practice nets, baseball field, BMX track
Colonial Reserve	Location: Bligh Park (Hawkesbury LGA) Inclusions: Sports field, amenities block
Deerubbun Park	Location: Windsor (Hawkesbury LGA) Inclusions: Sports fields
The Hills Centenary Park	Location: Rouse Hill (Hills Shire LGA) Inclusions: Multipurpose playing field with cricket pitch, baseball diamond and grass athletics track, cricket practice nets, athletics field event amenities
Kellyville Netball Complex	Location: Kellyville (Hills Shire LGA) Ownership: Hills Shire Council. Leased to Baulkham Hills Shire Netball Association Inclusions: 38 outdoor netball courts
McQuade Park	Location: Windsor (Hawkesbury LGA) Inclusions: 2 sports fields, 2 tennis courts
Mileham Street Netball Complex	Location: South Windsor (Hawkesbury LGA) Inclusions: 19 outdoor netball courts, 4 tennis courts
Mill Street Reserve	Location: Riverstone (Blacktown LGA) Inclusions: Sports field with cricket pitch, cricket practice nets
Oakville Reserve	Location: Oakville (Hawkesbury LGA) Inclusions: Sports field with cricket pitch and

District open space/ recreation facility	Description
	amenities building
Riverstone Park	Location: Riverstone (Blacktown LGA) Inclusions: 2 Sports fields (1 with cricket pitch and grass athletics track), cricket practice nets, 2 tennis courts, 4 netball courts
Russell Reserve	Location: Rouse Hill (Hills Shire LGA) Inclusions: Multipurpose playing field
Schofields Park	Location: Schofields (Blacktown LGA) Inclusions: 3 sports fields, cricket practice nets, 1 netball court
Vineyard Park	Location: Vineyard (Hawkesbury LGA) Inclusions: Sports field with cricket pitch
Indoor sporting/recreation facilities	
Bernie Mullane Sports Complex	Location: Kellyville (Hills Shire LGA) Ownership: Hills Shire Council Management: Private (Belgravia Leisure) Inclusions: Indoor multipurpose sports courts, fitness centre
Blacktown Leisure and Aquatic Centre Stanhope	Location: Stanhope Gardens (Blacktown LGA) Ownership/management: Blacktown City Council Inclusions: 2 indoor sports courts, fitness studios, squash court (and aquatic facilities)
Emerton Leisure centre	Location: Emerton (Blacktown LGA) Ownership/management: Blacktown City Council Inclusions: 2 indoor multi-purpose sports courts, outdoor beach volleyball court (and aquatic facilities)
Hawkesbury Indoor Stadium	Location: South Windsor (Hawkesbury LGA) Ownership: Hawkesbury City Council Management: YMCA Inclusions: 6 indoor multi-purpose sports courts, gymnastics training area
Riverstone Sports Centre	Location: Riverstone Ownership/management: Private (Riverstone Community Church) Inclusions: Indoor soccer courts
Aquatic centres	
Annangrove Aquatic and Leisure Centre	Location: Annangrove (Hills Shire LGA)

District open space/ recreation facility	Description
	Ownership/management: Private (Annangrove Aquatic & Leisure Centre)
Blacktown Leisure and Aquatic Centre Stanhope	Location: Stanhope Gardens (Blacktown LGA) Ownership/management: Blacktown City Council Inclusions: Indoor 25 metre pool, children's pool, wave pool, program pool (and indoor sports facilities)
Emerton Leisure centre	Location: Emerton (Blacktown LGA) Ownership/management: Blacktown City Council Inclusions: Indoor 25 metre pool, leisure pool, program pool (and indoor sports facilities). Outdoor 50 metre pool and 25 metre pool
Hawkesbury Oasis Aquatic and Fitness Centre	Location: South Windsor (Hawkesbury LGA) Ownership: Hawkesbury City Council Management: YMCA Inclusions: Indoor 25 metre pool and leisure pool, outdoor 50 metre pool
Riverstone Swimming Centre	Location: Riverstone (Blacktown LGA) Ownership/management: Blacktown City Council Inclusions: Outdoor 50 metre pool, leisure pool, program pool and children's pool
University of Western Sydney Nirimba Campus Aquatic Facility	Location: Quakers Hill (Blacktown LGA) Ownership/management: UWS (pool available for general community use) Inclusions: Outdoor 50 metre pool



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