Moss Vale Road North Urban Release Area

Community infrastructure study and open space masterplan

Client: Shoalhaven City Council
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Contents

FIGURES

TABLES

APPENDICES

1 Executive summary

This Community infrastructure study and open space masterplan (the study) has been prepared for Shoalhaven City Council (SCC) to inform a Planning Proposal for the Moss Vale Road North Urban Release Area (MVRN URA).

The study recommends the types of community facilities and open space that should be provided to help ensure the MVRN URA is a healthy and socially cohesive place for future residents and their surrounding communities. The study findings are based on a spectrum of population scenarios ranging from low (3,640 people) to high (8,400 people).

A summary of the community facilities and open space requirements recommended by this study are shown in Table 1 below:

Table 1 Summary of community and recreation requirements

Infrastructure type	Assessed rate of provision	Recommendation for delivery
Community infrastructure		
Community centres (Meeting and function spaces)	Between 291sqm to 672sqm of community meeting spaces, with the majority (75%) provided as local level space and remainder (25%) as district level space. A stand alone local level facility of 500sqm+ is not triggered except under the high population scenario.	A local facility of <1,000sqm is unlikely to be sustainable at MVRN URA in the context of existing availability and capacity throughout Planning area 1. Instead, developer contributions should be made towards the upgrade of the nearby Bomaderry Community Centre to enhance its functionality as a district level facility. Optionally, a proportion of developer contributions for this item could be utilised for onsite provision of an outdoor, unenclosed community pavilion space built within the recommended onsite central urban park.
Cultural centres (Includes Library, performance, arts and museums)	A combined total of between 317sqm to 731sqm of library and performance/ museum/ gallery space. A stand alone local level facility is not triggered under any population scenario, as all recommended floorspace is needed at a district level of provision to maximise visitation.	A cultural facility is unlikely to be sustainable at MVRN URA in the context of existing availability and capacity throughout Planning area 1. Instead, developer contributions should be made towards: 1. Expansion of existing cultural facilities across Planning area 1 (particularly Nowra Library) 2. Additions of cultural spaces as part of future expansion of the Bomaderry Community Centre. Optionally, a small proportion (no more than 35%) of developer contributions for this item could be utilised onsite within the recommended urban park for provision of targeted cultural spaces such as: » Pop up/mobile library reading space » Outdoor (landscaped) amphitheatre with stage (and power) » Public art features (local artists commissioned).

Infrastructure type	Assessed rate of provision	Recommendation for delivery
Education facilities (Childcare Centres)	Between 87 to 201 long day care centre approved places for children aged between 0 to 5 years old. It is presumed existing nearby facilities have limited capacity to expand their centres in future to increase their number of available approved places.	The onsite provision of at least one childcare centre (two under a high population scenario), based on a medium centre size i.e. offering between 60 to 90 places. A facility would indicatively require a site of between 1,500 sqm to 2,000 sqm. It is likely this centre would be delivered by the private sector in response to market driven demand.
Education facilities (Primary and Secondary Schools)	Between 328 to 756 primary school enrolment places, and 255 to 558 high school enrolment places. It is presumed the majority of demand will remain for enrolments within Government schools, and residual demand will be met by the private school system.	An onsite school will not be required except under a high population scenario, where it is considered likely a new Government Primary School would be viable (requiring a minimum 3ha site near the village centre). Otherwise, it is estimated there should be: 1. Expansion of both Cambewarra Public School and Bomaderry Public School to accommodate anywhere between 7 to 16 new teaching/classroom spaces. AND 2. Expansion of Bomaderry High School to accommodate between 5 to 12 new teaching/classroom spaces.
Health and wellbeing facilities	Between three to eight general practitioners. This assumes existing medical centres have no availability to take on new patients and/or are unable to expand their services to increase the number of GPs available to operate from their facilities.	An onsite medical practice is not required but would be desirable for the convenience of future residents. It is likely a new medical facility would be delivered in the village centre of MVRN URA by the private sector in response to market driven demand. There will be some additional demand pressures also placed on existing hospitals and ambulance services.
Recreation infrastructure		
Total open space **(Active, passive and natural)**	Total minimum of 9% of the site as 'usable' and accessible open space. » Unencumbered natural open space suitable for use as passive recreation/ park areas (min. 4% total site area) » Both passive and active open space areas (min. 5% developable site area)	A minimum of 12ha total open space available onsite under a low and mid population scenario, and 15ha for a high population scenario. It is expected the majority of public open space (estimated 5ha+) can be provided as informal natural or unencumbered bushland/linear recreation park areas to capitalise on the accessibility of onsite riparian areas, but should also include: » Minimum 3ha passive parks within net developable area including 1ha+ urban recreation park ('village green') near the village centre » Minimum 4ha district sports park.

Infrastructure type	Assessed rate of provision	Recommendation for delivery
Passive open space **(Recreation parks)**	Between three and nine parks, in a range of different sizes, distributed throughout the site so that all residents are ideally less than 400m walking distance from a park area. To achieve this, each park should be at least 0.3ha in size, with preferably an overall average size of 0.5ha.	A minimum of 7ha total passive park areas. Of this, it is suggested: » 3ha of parks be delivered as two large parks embellished to a very high standard (see SCC CISP 'District Recreation Park' standards, p110) and being more than 1ha in size each: > One located near the site's retail centre (southern portion of the site) as an urban park or 'village green' > One located near the site's riparian corridor (northern portion of the site) delivered as a bushland or 'nature' park » 4ha of parks be delivered as at least five other local recreation parks (minimum size 0.3ha) distributed between the north and south portions of the site and embellished as per SCC CISP 'Local Recreation Park' standards, p108). Future detailed landscape design should demonstrate the onsite parks will contain built elements that specifically encourage physical activity (e.g. playgrounds, fitness equipment, skate elements). In addition, all play space design proposals should follow universal design/inclusive principles.
Active open space **(Sports parks)**	One sports precinct sized at least 3ha to allow for two rectangular full sized soccer fields OR one full sized AFL oval/ NRL field. The sportsground location should ideally be visible from major roads between Cambewarra and Bomaderry to encourage residents from surrounding communities to also be able to access sporting facilities.	One minimum 4ha sports park delivered within 2km of the centre of the development. The site for the sports park should ideally be located along Moss Vale Road. It must include embellishments such as parking, drainage, lighting and an amenities building (see also SCC CISP 'District Sports Park' standards, p118) For the low and mid population scenarios, sports field provision should ideally be supplemented with provision of at least two outdoor courts (e.g. tennis). For a high population scenario, sports field provision should be supplemented with a minimum four outdoor court complex. In addition, developer contributions should be made towards the enhancement of district level facilities in Planning area 1, particularly the Bomaderry sports complex which provides indoor sports and aquatic based recreation options that will not be met onsite.

Infrastructure type	Assessed rate of provision	Recommendation for delivery
Natural open space (Includes recreation parks and linear parks made up of areas of unencumbered bushland, but not land for designated environmental management)	Recommendations for active and passive space (above) are based on a minimum of 4ha natural areas being available for provision across the site as unencumbered bushland or linear parks adjoining riparian areas. There is potential for a contiguous wide green linear 'spine' of off-street shared pathway to connect all key passive and active open space areas between the northern and southern portions of the site.	It is estimated that at least 4ha of onsite passive open space will be provided as natural bushland park areas. Determining if an area of natural open space is classified/ counted as a recreation park should be based on if the area of open space includes a minimum 0.2ha of unencumbered area that would be suitable for some kind of recreation, for example as 'kickabout' space, or throwing a frisbee. Shared off street pathways are recommended to be: » min. 2.5m in width » as few road crossings as possible » enable connection through riparian areas.

Overall, the study concludes that the community infrastructure and open space needs generated by the future population of the MVRN URA proposal can be adequately met through:

1. Modification of the site open space masterplan to indicate:

    1.1 Minimum seven recreation parks, two large (district) and at least five small (local) distributed across the site

    1.2 A dedicated sports park (district) within 2km of the site's centre, preferably along Moss Vale Road

    1.3 A wide linear off-street green 'spine' close to riparian areas to facilitate cycling and walking 'loops' for recreation.

    An indicative open space layout is further described at Appendix B.

2. Providing high quality and well-designed new onsite local community infrastructure and recreation facilities as per the advice in Chapter 5 and Chapter 6 of this study

3. Making appropriate developer contributions towards providing pro rata funding towards enhancing the capacity of existing district and regional level community and recreation facilities offsite, preferably those located in Planning area 1.

2 Introduction

This Community infrastructure study and open space masterplan (the study) has been prepared for Shoalhaven City Council (SCC) to inform a Planning Proposal for the Moss Vale Road North Urban Release Area (MVRN URA).

The study documents the likely community infrastructure and open space needs that would be generated through future development of the MVRN URA. The study recommends the different types of local community and recreation facilities that should be provided to help make it a healthy and cohesive environment for future residents to live in, as well as for their nearby neighbours in the surrounding communities of Cambewarra, Bomaderry and the Moss Vale Road South Urban Release Area (MVRS URA).

2.1 Study background

SCC first indicated the MVRN URA was an appropriate location for future residential development in 2006[1]. At this time, an indicative dwelling yield of 1,300 dwellings was proposed, potentially generating an estimated future population of 3,250 people. It was envisioned that this new population would be supported by a local retail centre, recreation grounds and a possible new school. While a general statement about desired future character and design principles for the MVRN URA was developed, detailed development controls or a development contributions framework have not yet been completed.

The Moss Vale Road North Owners Group (MVNOG) recently submitted a package of planning documents and studies to SCC in response to a Council decision in August 2017 for SCC to progress detailed planning work for the MVRN URA.

Council has provided in principle support for the planning package as forming a basis for future detailed planning work which will inform a full Planning Proposal to the NSW Department of Planning, Industry and Environment (DPIE) to amend the Shoalhaven Local Environment Plan (LEP) 2014.

Prior to submission of a Planning Proposal, SCC is required to prepare a Development Control Plan (DCP) Chapter and Contributions Plan. As part of this process, SCC is now undertaking some additional studies that will build on the existing work commissioned by the MVNOG.

2.1.1 Study purpose

This study is one of several technical documents that will assist SCC to prepare a Planning Proposal for the future development of the MVRN URA (described above at section 2.1).

Its objective is to provide SCC with independent advice on a preferred approach to providing contemporary community and recreation infrastructure at MVRN URA to meet the needs of future residents. This advice will help establish a nexus between the new development and population need which can then guide and inform SCC when they calculate developer contributions.

2.1.2 Methodology

The approach to needs analysis in this study aligns with that already adopted in the Shoalhaven City Council Community Infrastructure Strategic Plan (SCC CISP) (Ross Planning 2017-2036, page 1). This includes:

» The definition of community infrastructure is public land and buildings e.g. cultural buildings, recreation buildings, passive and active open space, which accommodate community support services, programs and activities e.g. preschool service, child care, youth services, aged services,

[1] "Creating Place": Nowra Bomaderry Structure Plan, adopted 2006.

community meetings, sporting competition, informal recreation, cultural activities, education activities, community support etc

» For the purpose of analysis, community infrastructure is divided into community buildings and recreational open space

» Standards are used as a starting point for assessment of need but are not relied upon solely, with other contextual sources also used to establish need.

Preparation of this study has involved:

» Review of prior policy and planning documents provided by SCC, particularly the SCC CISP

» Regular phone conversations with staff from SCC

» Audit and mapping of existing community facilities and open space in Planning area 1

» Provision of advice that aligns with best practice social infrastructure provision for greenfield developments.

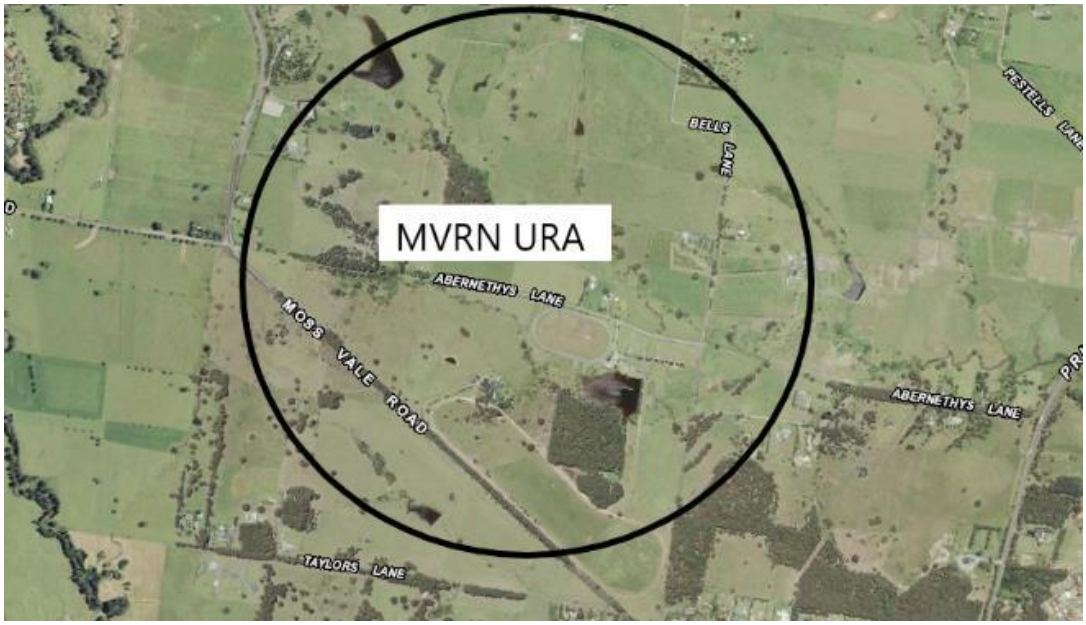
Due to Covid 19 restrictions, the study authors did not attend a site visit in person but instead relied on aerial photography platforms and other imagery provided by SCC and dsb architecture[2].

It is noted that while SCC is also in the process of planning for the MVRS URA, this study does not refer to or rely on any proposed community facilities or open space needs generated by its future population.

2.2 Geographical context

The MVRN URA consists of a 266 hectare parcel of land bordered by Moss Vale Road to the south, the Princes Highway to the east, and the Cambewarra Range Nature Reserve to the north (see Figure 1). The majority of the site is cleared rural land that has previously been used for grazing and other rural activities.

Figure 1 Aerial image of geography around site location

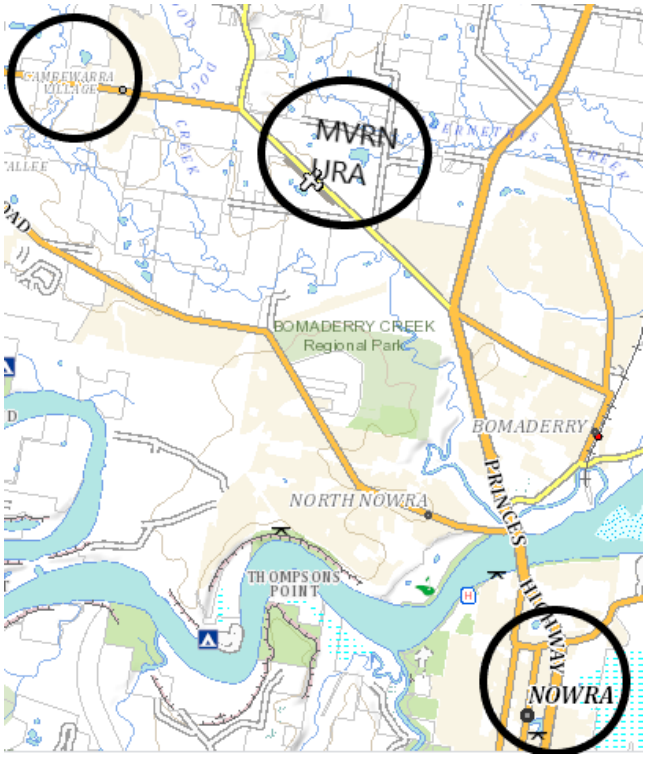


Source: NSW Government https://maps.six.nsw.gov.au/

The site is located approximately 1.5km (straight line) East from Cambewarra Village, and 5km North/North West from Nowra CBD (see Figure 2).

[2] Dsb Architecture completed a review of the visual impact assessment for the MVRN URA at the same time this study was prepared.

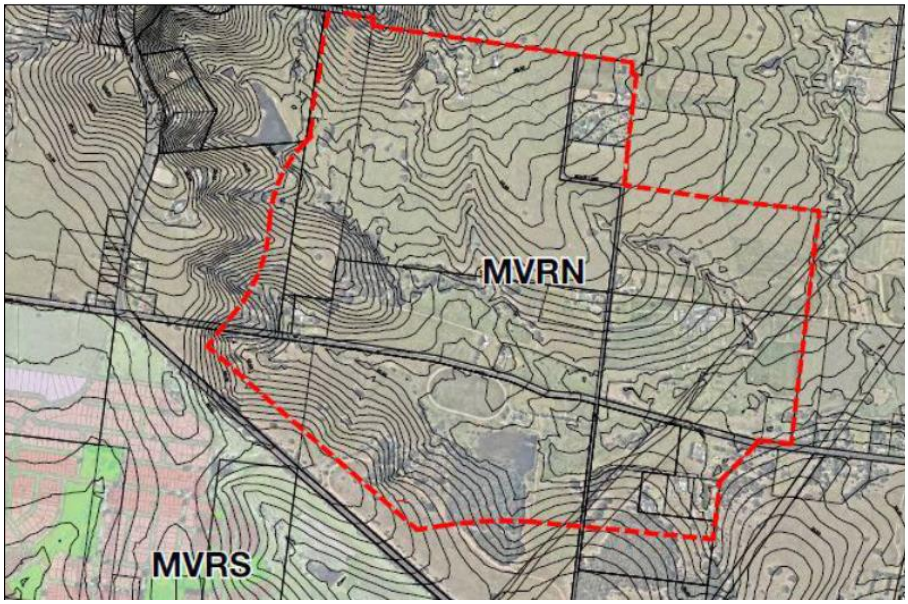
Figure 2 Location of the site



Source: NSW Government https://maps.six.nsw.gov.au/

The site predominantly is comprised of gently sloping land to the south-east with a 50m fall across the site (see Figure 3).

Figure 3 Site topography



Source: SCC DCP for MVRN 17/10/2018

The site currently consists of 17 separate landholdings (properties) of various sizes owned by a number of landowners, totalling approximately 216 hectares of the overall MVRN URA. These landowners have collectively formed a joint venture as the MVNOG in order to advance planning work for future development of the land.

Across the MVRN URA, current residential urban land zoning (developable) area totals 159ha (60% of the site). A large proportion of the remaining area is zoned for environmental conservation and management (36%), with a small portion for a business and neighbourhood centre (3%) and public recreation (1%).

3 Policy and planning context

Planning for the MVRN URA is influenced by an extensive number of local guidance documents which were reviewed for this study. This enabled advice to identify how study recommendations might assist to meet policy goals.

Table 2 provides a summary of the documents reviewed, their relationship to the site and potential alignment with the future Master Plan for the site.

Table 2 Summary of key documents

Key document	Summary of relevance to study	Implications for MVRN URA
State level planning		
Illawarra Shoalhaven Regional Plan 2036 (released 2015)	The first of nine regional plans providing a vision and direction for strategic and land use planning for future needs for housing, jobs, infrastructure, a healthy environment and connected communities. The Plan supports provision of housing opportunities close to existing services, jobs and infrastructure (p35). A priority action for 2017-2019 includes to coordinate infrastructure delivery to support the Nowra-Bomaderry release areas (p5).	Recommended community infrastructure and recreation facilities should enhance liveability of the broader Nowra area. Improving connectivity and access are a key focus. As the MVRN URA site contains a lot of riparian corridor, and is on the fringes of the existing urban footprint, particular attention needs to be paid to road layout, pedestrian and cycling connections.
Local level planning		
Shoalhaven City Council Integrated Strategic Plan (2018): Our Priorities (Community Strategic Plan).	This document incorporates a requirement for Council to ensure community involvement is central in the formation of their strategic planning and day to day operations. The overarching community vision is: We will work together in Shoalhaven to foster a safe and attractive community for people to live, work, stay and play; where sustainable growth, development and environmental protection are managed to provide a unique and relaxed lifestyle.	Community facilities and recreation opportunities are not specifically mentioned, but delivery of facilities is implied by the following expressed community aspirations: » 1. Resilient, safe and inclusive communities > 1.2 Activate communities through arts, culture and events > 1.3 Support active, healthy liveable communities.

Key document	Summary of relevance to study	Implications for MVRN URA
Shoalhaven Contributions Plan 2010	Provides works schedule of contribution projects, including project delivery and timing for specific planning community infrastructure.	Relevant local projects for Planning area 1 are: » Northern Shoalhaven (Indoor) Sports Stadium (Cambewarra Road) » Active recreation facility upgrades (various locations) Relevant district projects for Planning area 1 are: » Synthetic Hockey Field Facility (Bernie Regan Sporting Complex, North Nowra) Shoalhaven City Library Extensions (Berry Street, Nowra)
Nowra Bomaderry Structure Plan	This document first identified the MVRN URA area as appropriate for residential development. The Nowra-Bomaderry Structure Plan outlines a strategic direction for the MVRN URA in the context of other urban development planned across the LGA. SLEP2014 provides the statutory pre-requisites before subdivision of an urban release area can occur. SCC must be satisfied that the conditions for continued implementation of the NBSP are achieved.	A basic tenet of the structure plan is that Nowra will remain the primary urban centre within the region, accommodating much of the City of Shoalhaven's predicted growth. This implies that MVRN URA should focus on provision of local community and recreation infrastructure, with key district and regional services being delivered from the city centre. The Plan envisions MVRN as consisting of low and medium density housing, suggesting an occupancy rate slightly above the overall SCC LGA average. The emphasis on preserving the scenic value of the area supports the use of unencumbered natural bushland for recreation uses.
Shoalhaven Local Environment Plan (2014)	SLEP 2014 provides the legal framework for planning decisions made by Council and other parties. Part 6 of SLEP 2014 sets out the conditions that must be met before the MVRN URA will be eligible for development approval, one of these conditions being the preparation of a development control plan (DCP).	Shoalhaven City Council (SCC) considers that the pre-conditions of Part 6 of the SLEP 2014 have or can be met, therefore, the preparation of a DCP is to be commenced. Council is prioritising the release of certain greenfield sites including the MVRN URA (which is listed as second priority only to MVRS URA).
Draft Development Control Plan	Outlines detailed design requirements to facilitate the development of land in the MVRN URA in accordance with the provisions of Part 6 of Shoalhaven Local Environmental Plan (LEP) 2014.	Provides Indicative Layout Plan showing possible open space provision. This indicates that the large passive open space areas are relatively important in provision of a movement network for pedestrians and cyclists as well as recreation opportunities Main public open space (village green) is shown as oval adjacent to local retail centre. Possible school site is not indicated.

Key document	Summary of relevance to study	Implications for MVRN URA
Community Infrastructure Strategic Plan 2017-2036	The Plan makes recommendations for the future provision, priorities and funding of community infrastructure at local, district and regional levels. Recommendations made take into account the needs and demographics of the surrounding community, what is currently already being provided by neighbouring infrastructure, availability of existing infrastructure that is being under utilised and funding opportunities. The plan emphasises that SCC has an abundance of supply of existing community infrastructure and open space. Planning area 1, in which MVRN URA falls, includes almost half of the LGA's community infrastructure, although much of it does not meet contemporary expectations.	The beach, natural areas/ bushland and tracks/trails and boardwalks were identified as the most popular recreation and sports. Overall, the plan recommends a future focus on embellishing key open space (land) to the embellishment standards specified and the modification of a number of well used community buildings to multiuse facilities to further increase the use/capacity of the existing community infrastructure assets.
Landowners planning package of technical documents		
Background report to support rezoning Allen price & scarratts pty ltd, (May 2019)	This document outlines and explains the rationale behind an indicative layout plan (ILP) for the MVRN URA that differs from the original URA. A key outcome of this report is that the ILP allows for an increased housing density, and subsequently would result in more people living at the site in the future, than what the original masterplan anticipated. Of the 266ha site, the proposed zoning changes would result in no change to the provision of land for public recreation (3% of site).	Any higher dwelling density on the site will yield a higher residential population, This is likely to require more community facilities and open space than originally proposed for the MVRN URA.
Infrastructure report (April 2019)	This report investigates the provision of essential services to the MVRN URA including water, sewer and electricity.	Reference is made to community and open space infrastructure in a general sense, indicating that exact quantums required by Council as part of developer contributions planning has not yet been finalised (page 13).
Landscape Study (April 2019)	Shapes open space network in line with continuous riparian corridors along Abernethy's Creek and tributaries. The study contains an open space strategy (p30) that outlines both broader and localised trends in leisure and recreation planning. The stated objectives of open space provision are to ensure open space is:	At present, » active open space is proposed to be met via a 'village green' (approx.. 2.6ha), however this space is unlikely to be suitable for use as a sportsground » passive open space is proposed to be met via multiple local parks, 8 scattered throughout residential areas, and the remainder adjacent to existing riparian corridors.

Key document	Summary of relevance to study	Implications for MVRN URA
	» provided within the site to meet the reasonable demand of the future population of the site for public open space (local parks, district and city wide parks and sporting grounds) » appropriately located and distributed within the site having regard to the location of future residential neighbourhoods, and that the location of public open space responds to the particular environmental features of the site.	

4 Social context

To ensure the MVRN URA is responsive to its existing social context, this chapter provides a brief analysis of the community profile of the surrounding area.

As the proposed development is likely to include a noticeably different level of housing diversity to the older established suburbs of Cambewarra and Bomaderry, forecasting the future population of the proposed development also examines some recently developed areas in the nearby Shellharbour LGA and Wollongong LGA.

All data is taken from .idcommunity (https://profile.id.com.au) whose source is the Australian Bureau of Statistics.

It is expected that broadly, current trends in the profile of the existing Shoalhaven LGA community will closely reflect the likely demographics of future residents of the site.

4.1 Existing population profile

4.1.1 Demographic area

For demographic analysis, the MVRN URA is located within a bespoke geographical area called "Planning area 1".

Planning area 1, shown in Figure 4 below, includes more than 30 localities including Berry, Shoalhaven Heads, Cambewarra Village, Bomaderry and Nowra.

The profile of the overall Shoalhaven LGA has been used as the baseline for comparison purposes.

Figure 4 Planning area 1

Source: .id profile https://profile.id.com.au/shoalhaven/population

4.1.2 Population change

The usual resident population of Planning area 1 in 2016 was 44,724 people, an increase of 2,894 people (+6.7%) since 2011. This represents an average annual population change of 1.3% per year over the period.

The growth rate in the area supports the need for change in local land use to increase residential density, as this will provide housing for new populations who desire to move to the area.

4.1.3 Age

Planning area 1 has a high proportion of people in younger age groups (21.5% aged 0 to 17 years) and a low proportion of people in the older age groups (29.3% aged 60+ years), compared with 19.7% and 34.3% respectively for Shoalhaven City.

The major differences found between the age structure of Planning area 1 and Shoalhaven City were:

» A larger percentage of 'Young workforce' (11.5% compared to 9.3%)

» A larger percentage of 'Tertiary education & independence' (8.1% compared to 6.6%)

» A smaller percentage of 'Empty nesters and retirees' (13.8% compared to 16.2%)

» A smaller percentage of 'Seniors' (12.5% compared to 14.9%).

This means that overall, the people who currently live near the MVRN URA are typically younger/ made up of more family with children households than the Shoalhaven LGA average.

The largest changes in the age structure of the area between 2011 and 2016 were in the age groups:

» Empty nesters and retirees (60 to 69) (+895 people)

» Seniors (70 to 84) (+751 people)

» Young workforce (25 to 34) (+740 people)

» Secondary schoolers (12 to 17) (-433 people).

This indicates the people who currently live near the MVRN URA are ageing in place, and if there is no significant change in the birth or death rate and no new incoming populations, it will likely result in a higher median age for the area over time.

Relevant trends

Across Australia, there is an ageing population trend despite overall increases in the number of people in younger age cohorts arising from overseas migration programs. This trend is applicable to the Shoalhaven region, with frailty prevalence mapping indicating populations of persons aged 65+ in the Kangaroo Valley/ Bomaderry area will increase to proportions anywhere between 28% to 52% of the total population[3]. In addition to this broader ageing trend, the Shoalhaven region is subject to significant internal migration trends of 'sea changers': people who move to the area from Sydney and Illawarra looking for a more relaxed, affordable coastal lifestyle. These 'sea changers' are typically over the age of 55 years.

Implications for MVRN URA

Typically, new release greenfield areas initially attract a high proportion of first home buyers/ young families. This results in high proportions of younger age cohorts early in the area's residential development. As the suburb lifecycle progresses in the decades following development, it is expected than many people will 'age in place'. As time goes on this will gradually decreases the proportion of people aged under 18 years, and increase the proportion of people aged 70 years and over.

For the MVRN URA, the ageing and 'sea change' trends described above are likely to fully counter/neutralise this new release development trend, resulting in an age profile that is very close to the overall current age profile average of the Shoalhaven LGA.

[3] University of Adelaide, Frail and pre-Frail estimates 2011 and 2027
https://uofadel.maps.arcgis.com/apps/MapSeries/index.html?appid=ab3ffe3e59c34053acf6f56d3368fb78

4.1.4 Culture

Compared with the Shoalhaven LGA, Planning area 1 shows a slightly smaller proportion of people born overseas (12.1%), compared with 12.8% for Shoalhaven City. 5,370 people who were living in Planning area 1 in 2016 were born overseas, and 10% arrived in Australia within 5 years prior to 2016.

The largest increase in place of birth was people born in India (+72 people).

There was also a larger percentage of overseas arrivals to Planning area 1 between 2011 and 1026 (10%) compared with Shoalhaven City (6.8%).

Relevant trends

Across Australia, natural population increase (births and deaths) is a minor factor in population growth, with a high reliance on overseas migration to drive growth. Broadly, migrants who were born overseas prefer to settle in major cities compared with regional areas such as Shoalhaven. For the Shoalhaven region, internal (interstate and within state) migration ('sea changers') is expected to be the main trend, meaning new populations will likely be broadly culturally similar to the existing population.

Based on the current migration program[4], which provides visa incentives for skilled workers to move to regional areas for at least 3 years, some ongoing increases in people from the following nationalities can be expected:

» India

» China

» United Kingdom

» Philippines.

Implications for MVRN URA

While it is expected that some of the people who will live in the MVRN URA will have been born overseas, it is unlikely to be a major driver of community infrastructure and open space provision. Ongoing increases in ethnic mix of the whole Shoalhaven LGA will necessitate the provision of programs and activities that help build social cohesion. Provision of high quality meeting spaces and availability of sporting groups will assist this to occur.

4.1.5 Education

Across the Shoalhaven LGA, around a third of the population attend an educational institution.

In Planning area 1, there is very slightly higher levels of attendance at primary school (+0.5%) and University (+0.5%). There is a high reliance on the public school system, with 78% of primary students and 65% of high school students attending Government schools.

The largest changes in the number of persons attending education institutions in Planning area 1, between 2011 and 2016 were in those who nominated:

» TAFE (-286 persons)

» Primary school (+267 persons)

» Secondary school (-250 persons)

Relevant trends

Like many regional areas of Australia, Shoalhaven LGA tends to lose young adults to Sydney and Wollongong, primarily for employment and education purposes.

[4] Australian Government Migration Program 2018-2019 https://www.homeaffairs.gov.au/research-and-stats/files/migration-trends-highlights-2018-19.PDF

Implications for MVRN URA

It is likely that the MVRN URA will attract families with young children, with availability of nearby primary schools particularly critical to decision making for households about their preferred housing location.

4.1.6 Households

In Planning area 1 there is a comparatively high proportion of couple families with child(ren) and one-parent families:

» 24.2% couple families with child(ren) compared with 21.6% for Shoalhaven City.

» 11.8% one-parent families compared with 10.6% for Shoalhaven City.

There were a similar proportion of lone person households (26.9%) and a lower proportion of couples without children (28%).

Since 2011 the largest change has been the number of lone person households, increasing by +287 households compared with all other household types:

» Couples without children (+124 households)

» One parent families (+112 households)

» Couples with children (+106 households).

Relevant trends

Across Australia, there are growing proportions of lone person households. In addition to this trend, internal migration of 'sea changers' and an ageing population is likely to see Shoalhaven LGA subject to very high proportions of households with either single person or couples without children households.

Implications for MVRN URA

The average occupancy rate of dwellings in MVRN URA is unlikely to be less than the current Shoalhaven LGA average of 2.3 persons per household.

Dwellings with 4+ bedrooms will likely be in lower demand than smaller dwelling types with 1 to 3 bedrooms.

4.1.7 Tenure

In Planning area 1, most households own their home (35.7%) although this is still a lower proportion than the average for Shoalhaven LGA (41.6%). A slightly higher proportion of households (27.2%) are purchasing their dwelling (i.e. have a mortgage) compared with the average for Shoalhaven LGA (25.3%).

In line with broader Australian trends, the largest change since 2011 has been in the number of persons renting their home (+403 households) compared with the increase in number of people who fully own their home (+231 households).

Table 3 Housing tenure

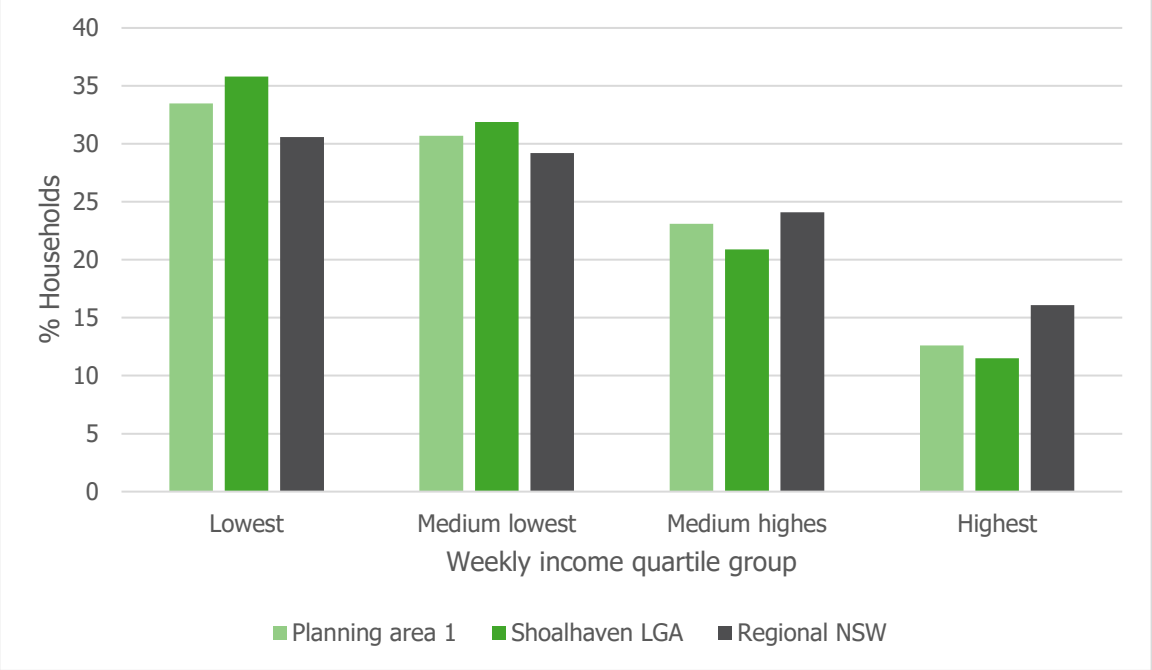
	Planning area 1		Shoalhaven City
Tenure type	**Number**	**%**	**%**
Fully owned	6,200	35.7	41.6
Mortgage	4,732	27.2	25.3
Renting	4,871	28.0	23.8
Total households	**15,803**	**100.0**	**100.0**

Relevant trends

The housing market in Australia is very resilient, with increases in home values continuing strongly. While some households prefer the flexibility and mobility afforded by renting, Australians continue to highly value home ownership. This is leading to increased inequity of affordability between those who can afford to purchase their home, and those who continue to rent.

In the context of the Shoalhaven LGA, which has lower than average household incomes than the average for regional Australia (see Figure 5), the availability of housing that is affordable for families will continue to be of high importance.

Figure 5 Equivalised household incomes



Implications for MVRN URA

If housing provided in MVRN URA is of higher cost than other parts of the Shoalhaven LGA, it may result in increased socio-economic disparity between the populations of the new release areas (MVRN + MVRS) and existing populations in Cambewarra and Bomaderry. It will be important to ensure that community and open space infrastructure is placed in such a way it encourages social interaction between new and existing communities, and does not create the impression the new release areas are 'gated' in any way.

4.2 Future resident profile

Projecting the future community profile of the MVRN URA helps predict how the likely changes to the existing community profile (described throughout section 4.1) might impact on the provision and adequacy of community facilities and open space in the area.

4.2.1 Forecast population size

To determine the likely size of the future population of MVRN URA, an average occupancy rate per dwelling must first be established. As indicated in section 4.1.6, this is unlikely to be below the current Shoalhaven LGA average of 2.3 persons per dwelling.

Table 4 shows that at present, the suburb of Cambewarra has an average household occupancy of 3 persons per dwelling, with all dwellings consisting of separate houses. This occupancy rate is higher than the Nowra Bomaderry average of 2.6 persons per house, and 2.5 persons per dwelling overall.

Table 4 Occupancy rates near the site

	Cambewarra			Nowra-Bomaderry		
	Dwellings	People	Average Occupancy	Dwellings	People	Average Occupancy
Separate house	378	1,129	3.0	10,881	28,612	2.6
Semi-detached	0	0	0	1,292	2,026	1.6
Apartment:	0	0	0	350	577	1.6
Total dwellings	379	1,139	**3.0**	12,808	31,689	**2.5**

Table 5 shows the 2016 occupancy rates for some areas that are considered likely to be comparable to the future MVRN URA as they had large increases in the number/proportion of new residents between 2011 and 2016 Census. It indicates that similar to Cambewarra, the average occupancy of separate houses is likely to fall between 2.8 and 3.3 persons per dwelling. Assuming that the MVRN URA will also consist of some medium and higher density housing types, the overall occupancy rate is likely to be less than 2.8 persons per dwelling.

Table 5 Occupancy rate comparisons

	Separate house	Semi-detached	Apartment	Total dwellings*
Tullimbar (Shellharbour LGA)				
Dwellings	178	0	0	184
People	504	0	0	510
Average Occupancy	2.8	0	0	2.8
Flinders (Shellharbour LGA)				
Dwellings	1,567	565	4	2,149
People	5,106	1,234	13	6,377
Average Occupancy	3.3	2.2	3.3	3.0
Horsley- Kembla Grange (Wollongong LGA)				
Dwellings	2,592	87	3	2,794
People	8,100	172	7	8,303
Average Occupancy	3.1	2.0	2.3	3.0

Source: ABS Community Profiles Table G32. *Numbers may not total correctly due to inclusion of unoccupied dwellings.

Based on a maximum likely occupancy rate of 2.8 persons, Table 6 below indicates that the MVRN URA could potentially generate a population of between 3,640 to 8,400 people depending on various development scenarios.

Table 6 Estimated future population

Development scenario	Dwelling number	Estimated population
Low	1,300	3,640
Mid	2,150	6,020
High	3,000	8,400

4.2.2 Forecast age profile

To determine the likely age profile of the future population of MVRN URA, the findings of section 4.1.3 suggest it will be relatively similar to the existing averages for Shoalhaven LGA and Planning area 1. While the largest proportion of the population is projected to fall within the 50 to 69 year age bracket, it is noted that in the first 10 years of the development, lower proportions of persons aged over 70 years are expected, with the assumption that new residents will the 'age in place'.

Table 7 shows an indicative age profile that is used for the benchmarking of community facilities discussed throughout Chapter 5.

Table 7 Projected age profile for first 10 years of MVRN URA

Service age group (years)	Comparison area			Development Scenario population		
	Planning area 1 (%)	Shoalhaven LGA (%)	MVRN URA (%)	Low (Number)	Mid (Number)	High (Number)
Babies and pre-schoolers (0 to 4)	6.0	5.1	**6**	218	361	504
Primary schoolers (5 to 11)	8.7	7.9	**9**	328	542	756
Secondary schoolers (12 to 17)	6.8	6.6	**7**	255	421	588
Tertiary education and independence (18 to 24)	8.1	6.6	**8**	291	482	672
Young workforce (25 to 34)	11.5	9.3	**11**	400	662	924
Parents and homebuilders (35 to 49)	16.7	15.9	**17**	619	1023	1428
Older workers and pre-retirees (50 to 59)	12.9	14.1	**16**	582	963	1344
Empty nesters and retirees (60 to 69)	13.8	16.2	**17**	619	1023	1428
Seniors (70 to 84)	12.5	14.9	**8**	291	482	672
Elderly aged (85 and over)	3.0	3.2	**1**	36	60	84
Total	**100**	**100**	**100**	**3,640**	**6020**	**8400**

5 Community facilities needs analysis

This chapter provides a community facilities needs analysis to advise on how provision of community facilities can best meet the characteristics of the future site population and their surrounding communities, as established in the demographic profiling throughout Chapter 4.

5.1 Community centres

For the MVRN URA to become a socially sustainable community, it needs access to spaces for people to meet and gather together. Programs and activities like book clubs, play groups, support groups help people feel connected and give them an important sense of belonging. Community facilities also provide larger spaces like halls where events and celebrations can be held, like festivals, expos and family anniversaries.

5.1.1 Existing community centres

The closest existing local level community meeting spaces to the site are:

» Cambewarra Scouts Hall (2.5km)

» Cambewarra School of Arts Hall (3km), a small privately owned hall available for hire.

» Bomaderry Community Centre (2.9km).

The closest existing district level community meeting spaces to the site are in Nowra, more than 5km from the site.

As noted in the SCC CISP (and listed at Table 8), there are a wide availability of community centres throughout Planning area 1, with standards suggesting an overall surplus of facilities for both the current and future population.

A key existing concern is the quality of facilities, which generally do not meet contemporary community expectations around amenity and accessibility.

Table 8 Existing nearby community centres

Facility name	Distance from site (km)	Brief description	Image
Council owned			
Cambewarra Scout hall	Main Road Cambewarra 2.5 km (5 minutes)	Leased by Council, condition unknown Close to Cambewarra School of Arts Hall	
Bomaderry Community Centre	17 Birriley Street, Bomaderry 2.9 km (5 minutes)	Building in fair condition Large open hall with parquetry flooring, capacity - maximum 220 people Partitioned carpeted meeting room Regular hirers include The Amaranth Salt Church, South Coast Institute of Performing Arts, Tai Kwon Do, Karate, Parkinson exercise group, Ballroom rock & roll dancing	
Bomaderry former school building	Adjacent to community centre (above) 5 Birriley Street	Heritage listed (local)	

Privately owned			
Cambewarra School of Arts Hall	Main Rd Cambewarra Village 3.0 km (<5 minutes)	Community hall available for hire (not managed by Council) Tennis court at rear	 
Bomaderry Bowling Club	154 Meroo Road, Bomaderry 3.0 km (5 minutes)	Auditorium: Capacity: 350 (Seated), 450 (Standing) Board Room: Capacity: 12 (Seated), 12 (Standing) Old Dining Room: Capacity: 40 (Seated), 60 (Standing)	
Bomaderry RSL club	5 Bunberra St, Bomaderry 3.2 km (5 minutes)	Function room: (weddings and other events) approx. 100 persons	

5.1.2 Determining rates of provision for community centres

The SCC CISP indicates that standards for provision of community centres is one local facility per 10,000 people and one district facility per 50,000 people. By this benchmark, the population around Cambewarra and Bomaderry is being serviced adequately by the presence of Bomaderry Community Centre as a district facility, and two local facilities being Cambewarra Scout Hall and the Cambewarra School of Arts Hall (noting the latter is not a Council owned facility).

Based on project experience, Elton Consulting calculates community centre demand to be around 80sqm per 1,000 people. Indicatively, around 60sqm/1,000 of this benchmark is notionally for local level facilities, and 20sqm/1,000 for district level facilities. A facility is typically only recommended to be provided onsite at a minimum of 500 sqm floor space (i.e. for a service catchment of around 6,250 people). Due to rising community expectations of facility features such as parenting rooms, adequate storage space and a variety of room size options, contemporary community centres are usually at least 1,000 sqm in size (i.e. they service a catchment of around 10,000 people). Over time then, to improve viability and activation of facilities, benchmark recommendations for local level community space are increasingly being suggested to be provided as additional contributions towards district level facilities, or as combined with cultural facilities, or with recreation facilities.

Using Elton Consulting standards, the MVRN URA is therefore unlikely to be able to sustain its own stand alone local community centre except possibly in a high development scenario (shown in Table 9).

Table 9 Suggested rate of future community centre need

Development scenario	Estimated population	Community facilities benchmark	Potential requirement
Low	3,640	291sqm » 218sqm local » 73sqm district	Stand alone facility not viable. Outdoor meeting space could be provided in the form of a pavilion space, or a community meeting room as an adjunct to another use (e.g. shopfront in village centre, part of recreation amenities building)
Mid	6,020	481sqm » 361sqm local » 120sqm district	Small stand alone facility unlikely to be viable. Recommendation for community meeting room space as above.
High	8,400	672sqm » 504sqm local » 168sqm district	Small stand alone facility could be viable, especially if co-located with other community infrastructure such as a recreation venue.

It is noted that at present, the MVRS URA does not propose provision of an onsite community centre. If demand generated by its indicative future population is also taken into account, a high population scenario for MVRN URA would indicatively push the potential service catchment area over 11,000 people and be much more likely to be able to support provision of a local community centre (663sqm).

5.1.3 Assessment of required community centres

Given the proximity of the site to existing community facilities at Cambewarra and Bomaderry, it is highly unlikely that a new stand alone community centre would be socially or financially sustainable for provision at MVRN URA. Even if the future population of MVRS URA is considered as part of the local service catchment for a facility, the number of existing community facilities available in the area suggests there is adequate provision of meeting spaces for future residents to access. It is however acknowledged that the level of amenity being offered at these

existing local facilities is generally outdated. As a principle though, resources should be dedicated to improving their condition to increase utilisation prior to any consideration of provision of new community centre buildings.

It is recommended that the cumulative population demand for community meeting space generated by MVRN URA be met primarily through provision of developer contributions towards enhanced provision of district level community centres within the northern portion of Planning area 1. In particular, the additional demand for community meeting spaces that will be generated from the future population of MVRN URA warrants expansion of the Bomaderry Community Centre to enhance its capacity from being a facility targeting the needs of its immediate suburb area to one that also services the broader area. It is noted that this recommended expansion of Bomaderry Community Centre is not currently listed as a recommendation in the SCC CIP. Suggested upgrades could include:

» Increase floorspace of facility to >1,000sqm by adding additional hall space and/or meeting rooms, parenting room

» Improve sustainability by adding energy efficient elements such as solar panels

» Consider additions such as a community garden, men's shed, children's playground.

Alternatively, the local Scout Hall facility at Cambewarra could be similarly upgraded to increase its capacity and functionality.

If a high population scenario for MVRN URA were to eventuate, and it is preferred that a local community meeting facility be provided on the MVRN site to also service the population of the MVRS URA, it should consider alternative forms of delivery to that of a traditional enclosed building. A popular contemporary example is hireable outdoor pavilions (see Figure 6) that provide shelter, power, running water and toilet facilities.

Figure 6 Example community pavilion at Western Sydney Parklands

Source: Image by Simon Wood Photography, reproduced with permission from landscape architecture firm McGregor Coxall, Chrofti and Northrop. Original photo and further information can be found at https://mcgregorcoxall.com/project-detail/189

5.2 Cultural facilities

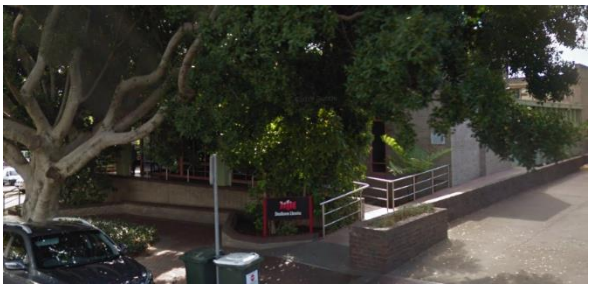
Culture and arts in the context of community needs refers to creative industries that provide both economic and social value. This includes libraries, heritage (museums, historical sites), visual arts (painting, sculpture, film) and performance (music, theatre and dance).

5.2.1 Existing cultural facilities

The closest existing local level cultural space to the site is the Nowra Players Theatre (3.3km). All other local and district facilities are situated south of the Shoalhaven River (more than 5km distant). This includes the closest library, Nowra Library (4.7km).

As noted in the SCC CIP and supported by the "Develop a Library Infrastructure and Service Delivery Model for the Shoalhaven Final Report" (October 2009) there is an existing shortfall of library space across Planning area 1. Both documents highly recommend extension of the existing Nowra Library into a regional level facility (>3,000sqm) to meet future population demand.

Figure 7 Existing nearby cultural facilities

Facility name	Distance from site (km)	Brief description	Image (Google Maps)
Council owned			
Nowra Players Theatre	27 Meroo Street 3.3km (5 minutes)	Leased to the Nowra Players, a non-profit community organisation, who have run performances since 1951. 141 seat facility.	
Nowra Library	10 Berry Street 4.7km (<10 minutes)	Located in a main street of the Nowra Town Centre, 1,570sqm facility. Site has good access to public transport and a drop off area for specific buses / taxis. Council owns the carpark across the street.	

5.2.2 Determining rates of provision for cultural facilities

The SCC CISP indicates that standards for provision of cultural facilities are:

» One district performance space per 50,000 people

» Local museums as required, with a district level museum available per 100,000 people

» One city-wide art gallery per 100,000 people

» Library facilities as per NSW State Library 'People Places' guide (indicatively 47sqm/1,000 people)

Using these standards, Planning area 1 currently meets the requirement for performance space via the Nowra Players Theatre and will be unlikely to meet population triggers for a district museum or art gallery until well after the year 2041. The indicative requirement for library space (between 171-395sqm) is also not considered viable for provision of a contemporary local (branch) library.

Elton Consulting typically calculates combined demand for all types of cultural space to be around 40sqm per 1,000 people, preferably met through a multi-purpose district level facility of more than 3,000sqm (i.e. a service catchment around 75,000 people). This benchmark includes the floor space of local facilities that tend to be

provided on an ad-hoc/ as needs basis, for example local historical collections or Aboriginal cultural centres. To improve viability and activation of facilities, it also is suggested that any recommended floorspace be combined with or even subsumed into any recommended community centre space (discussed at section 5.2.1) to produce a co-located and multipurpose facility.

Based on this standard, the MVRN URA is highly unlikely to require its own stand alone library, theatre, gallery or museum under any development scenario (shown in Table 10). It will however contribute to the cumulative population based demand for these facilities, with most existing facilities not currently designed to meet district or regional level populations.

Table 10 Suggested rate of future cultural facility need

Development scenario	Estimated population	Cultural facilities benchmark	Potential requirement
Low	3,640	146 sqm performance/museum or gallery 171 sqm library	No stand alone facility required. Developer contributions would be made to either: » expansion of existing facilities in Planning area 1 » addition of cultural space as part of expansion of the Bomaderry Community Centre.
Mid	6,020	241 sqm performance/museum or gallery 282sqm library	
High	8,400	336 sqm performance/museum or gallery 395 sqm library	

It is noted that the future population of MVRS URA will also contribute to the cumulative demand for cultural facilities. In particular, it will likely exacerbate the urgency of improvements being needed to expand the capacity of the Nowra Library.

5.2.3 Assessment of required cultural facilities

Given the proximity of the site to existing cultural facilities in central Nowra, it is not considered socially or financially viable for the MVRN URA to provide its own local library, theatre, museum or gallery space. It is recommended that the demand for cultural space be met through the provision of developer contributions towards enhancement and upgrade of district and regional facilities being:

» The Nowra Players Theatre

» Nowra Library

» Shoalhaven Regional Gallery

» Nowra Museum.

Alternatively, developer contributions could be combined with those recommended for community facilities (see section 5.1) to make Bomaderry Community Centre inclusive of new purpose built cultural space. It is noted that this is not currently listed as a specific recommendation of the SCC CIP. Examples could include:

» Exhibition space (such as picture hangings and purpose lighting)

» Maker spaces/ workshop area for art and craft lessons

» Pop Up library/ reading area with public Wi Fi and technology access.

If cultural spaces were preferred to be provided on the MVRN site, it is recommended this should be no more than one third of benchmarked requirements. Examples of how cultural facilities could be provided at a local level include:

» Pop up/mailbox library

» Outdoor amphitheatre/stage with access to three phase power

» Public art (locally commissioned).

Figure 8 Example of public art in local park

Source: Elton Consulting, taken at Minto NSW

5.3 Education facilities

Education in modern society supports socialisation as well as economic growth. It promotes problem solving, creativity and the ability to adapt to change. It is a human need to be supported through education to acquire the skills needed for people to participate in social life and to gain quality employment.

5.3.1 Existing education facilities

There are no childcare centres located in Cambewarra, and four facilities located in Bomaderry. As shown in Table 11, these facilities collectively offer a total of around 179 approved childcare and preschool places.

Table 11 Existing childcare centres

Facility	Distance from site	Capacity (ASCEQUA)	Description
Platypus Kinda	2 Karowa Street Bomaderry 2.9km (5 minutes)	28	Preschool and day-long care centre, cater for children 2 years to school age
Bomaderry Learning Centre	16 Lyndhurst Drive Bomaderry 2.3km (<5 minutes)	20	Long day care centre
Lyndhurst Children's centre and preschool (2 facilities)	43-63 Lyndhurst Drive, Bomaderry 2.9km (5 minutes)	41	Children's centre: 24 places Preschool: 17 places
Kids World Kindy	281 Princess Hwy Bomaderry 1.3km (<5 minutes)	90	Centre based care, Includes babies room

Source: https://www.acecqa.gov.au/resources/national-registers Vacancy data would normally be recorded however due to Covid 19, data at childcarefinder.gov.au is not considered an accurate reflection of centre capacity.

There are five schools located nearby the site: two primary schools, one high school, one combined school and a special school. As shown in Table 12, these facilities collectively offer more than 2,200 enrolment places for young people aged 11 through to 18 years. Except for Cambewarra Public school, which currently exceeds its indicative enrolment cap, existing schools can potentially expand to accommodate new enrolments.

Table 12 Existing schools

Facility	Distance from site	Enrolment 'Cap'	Enrolment				Trend	Current Capacity
			2016	2017	2018	2019		
Cambewarra Public School	3.3km (5 minutes)	208	307	308	300	266	Decreasing	Oversubscribed +58 students
Bomaderry High School	2.2km (5 minutes)	1,100	718	690	725	742	Fluctuating	Can potentially expand +358 students
Bomaderry Public school	2.6km (5 minutes)	532	332	315	328	345	Stable	Can potentially expand +187 students
Nowra Anglican College (Years K to 12) Non Government)	2.0km (<5 minutes)	Not available	772	798	864	913	Increasing	n/a
Shoalhaven River college (Years 9 to 12) Non Government special school.	1 Mattes Way Bomaderry 3.0 km (5 minutes)	Not available	n/a	n/a	n/a	n/a	n/a	n/a

Source: myschools.gov.au website and school enrolment cap data taken from Sydney Morning Herald Article quoting NSW Department of Education figures, 4 May 2020 "The Sydney schools exceeding new enrolment caps by almost 1000 students" By Jordan Baker and Nigel Gladstone https://www.smh.com.au/education/the-sydney-schools-exceeding-new-enrolment-caps-by-almost-1000-students-20200420-p54lfh.html

Figure 9 Demountable classrooms at Cambewarra Public School

Source: Elton Consulting. To manage increases in enrolment demand over time, particularly short term fluctuations in capacity, schools often utilise portable classrooms.

5.3.2 Determining rates of provision for education facilities

Early childhood centres

Early childhood education is met primarily through market provision of long day care centres. The average enrolment and/or capacity of a preschool in NSW is around 90 places.

Based on 1 in 3 children aged 0 to 5 needing a childcare place it is estimated the current population of the Cambewarra and Bomaderry area of Planning area 1 generate a need for around 269 child care places. This is an estimated existing shortfall of 100 childcare places (assuming all children required placements in the four nearby facilities outlined above at Table 11). It is likely that this technical shortfall is being met by parents utilising child care services outside of the facilities available near their residences, for example around the Nowra town centre. This is because caregivers decisions about where to place their child can depend on factors other than location including preference for a centre located nearby their place of work or where siblings attend school, as well as factoring in considerations such as cost and quality (accreditation ratings). Many caregivers also reply on informal care arrangements or family day care services rather than utilising long day care services.

Assuming that all future MVRN URA residents would like to place their young children into local long day care centres, and using the projected age profile for MVRN URA (section 4.2.2, Table 7), Table 13 shows that all development scenarios indicate a suitable site should be made available for provision of a childcare facility to be established.

Table 13 Suggested rate of future childcare centre need

Development scenario	Estimated population	Estimated childcare place demand	Potential requirement
Low	3,640	87 places	1 childcare centre (60 to 90 places)
Mid	6,020	144 places	1 childcare centre (90 to 120 places)
High	8,400	201 places	2 childcare centres (60 to 120 places each)

If the future population of MVRS URA is also considered, this estimated demand for child care would increase by an additional childcare centre (64 places).

Schools

Primary and secondary education is met primarily through government provision. In Planning area 1, 78% of primary school aged students attend a public school, and 65% of high school aged students attend a public school. The remainder of demand is met by the non-Government (independent and Catholic) school sectors.

Based on all people aged 6 to 17 requiring a school place, it is estimated the current population of the Cambewarra and Bomaderry area of Planning area 1 generate a need for around 1,842 school places. With a current total existing enrolment of 2,226 students at the four schools nearest to the site, this indicates that all existing local demand in the area is being met. It is likely that the technical oversupply of student enrolments represents 'out of area' enrolments at Nowra Anglican College by caregivers who have chosen the school for enrolment based on the school's pastoral care or reputation as opposed to proximity to their residence.

Using the projected age profile for MVRN URA (section 4.2.2, Table 7), and assuming that all future MVRN URA residents would like to place their children into local government schools at similar proportions to the existing rates of Planning area 1, Table 5 shows that all development scenarios indicate the need for investment into expanding existing schools to meet growing demand. The highest population scenario suggests a likely need for an onsite government primary school to be provided.

Table 14 Suggested rate of future school need

Development scenario	Estimated population	Estimated school place demand	Potential requirement
Low	3,640	328 Primary » 211 Government 255 Secondary » 167 Government	Expansion of both Cambewarra and Bomaderry Primary Schools to accommodate equivalent demand of 7 new teaching spaces, noting Bomaderry Public School may be able to accommodate the majority of this within existing capacity.

Development scenario	Estimated population	Estimated school place demand	Potential requirement
			Bomaderry High School would be able to accommodate demand equivalent of around 5 new teaching spaces within existing capacity.
Mid	6,020	542 Primary » 422 Government 421 Secondary » 275 Government	Substantial expansion of Cambewarra and Bomaderry Primary Schools to accommodate equivalent of 12 new teaching spaces. Depending on cumulative demand from MVRS, potential need to expand Bomaderry High School to accommodate equivalent of around 9 new teaching spaces.
High	8,400	756 Primary » 589 Government 558 Secondary » 365 Government	Significant expansion of Cambewarra and Bomaderry Primary Schools with around 16 new teaching spaces required. This could be viewed as sufficient demand by the NSW Department of Education to justify a new primary school onsite (approx. 3ha site) Likely need to expand Bomaderry High School to accommodate equivalent of up to 12 new teaching spaces, as existing capacity will be exceeded.

It is noted that at present, MVRS URA does not propose provision of an onsite school. If demand generated by its indicative future population is also considered, there will be demand for an additional 205 primary school places and 178 high school places (160 public primary school enrolments and 116 public high school enrolments). If a high population scenario for MVRN URA were to eventuate, this would almost certainly justify provision of a new government primary school onsite or elsewhere in the immediate local area.

5.3.3 Assessment of required education facilities

Given the proximity of the site to existing Government schools, it is not considered necessary for the MVRN URA to provide its own school facility except for a primary school site under a high population scenario. If demand from the MVRS URA is also taken into account however, it is very likely that there will be considerable competition to take up any new enrolment capacity that is created within existing schools, and the need for a new local government primary school could become significant.

Planning for new government primary schools is undertaken by the NSW Department of Education (DOE) who note that predicting where and when new schools are required is a complex matter requiring consideration of key variables such as land use, suburb lifecycle and fluctuations in socio-economic characteristics. DOE undertake demand analysis based on a both a catchment and regional level. In established areas, it is generally DOE policy to optimise the use of existing assets through upgrade or expansion prior to planning for new school provision.

While budget plans and future projects have not been discussed with DOE representatives at this stage, it is recommended that the projected cumulative demand for school enrolments could be met through investment to upgrade schools as follows:

» Cambewarra Primary School to more than double its existing capacity to accommodate a new enrolment cap of up to 600 students

» Bomaderry Primary School to increase its existing capacity by around 100% to accommodate an enrolment cap of up to 1,000 students

» Bomaderry High School to increase its existing capacity by around 25% to accommodate an enrolment cap of up to 1,500 students.

Alternatively, developers of MVRN URA could approach the independent school sector to investigate market interest in provision of a private school, noting these typically require larger school sites (5 to 10ha).

5.4 Health facilities

Medical orientated health care remains primarily prevention focused, along with traditional therapeutic interventions and rehabilitation requirements.

5.4.1 Existing health facilities

There are two local medical practices located near the site. As shown in Table 15, these centres collectively offer access to around 9 General Practitioners. Additionally, the site is nearby to three district medical facilities being a community health centre and two hospitals.

Table 15 Existing medical centres

Facility	Distance from site	GP's	Description
Cambewarra Mountain Health	1 Elvin Drive Bomaderry 1.0km (<5 minutes)	2 Doctors	Second location for Junction Street Family Practice http://www.junctionmedical.com.au/about-us/latest-news/
Meroo Street Family Practice	1 Meroo Street Bomaderry 3.0km (5 minutes)	7 Doctors	General Practice, family health care https://meroostfp.com.au/our-practice/
Nowra Community Health Centre	Corner of Lawrence and Worigee St 6.0km (10 minutes)	Unknown	https://www.islhd.health.nsw.gov.au/services-clinics/community-health-services
Nowra Private hospital	Weeroona Place 8km (15 minutes)	75 beds	Commissioned in 1980. Provides acute surgical and medical services, rehabilitation, and day surgery services. Owned and operated by Ramsay Health Care. https://www.nowraprivate.com.au/About-Us/About-Our-Hospital
Shoalhaven District Memorial Hospital	2 Scenic Drive Nowra 5km (10 minutes)	188 beds	The main acute care hospital for the Shoalhaven region, including an Intensive Care Unit (13 beds). Part of the Illawarra Shoalhaven Local Health District. https://www.islhd.health.nsw.gov.au/hospitals/shoalhaven

5.4.2 Determining rates of provision for health facilities

Based on a national benchmark of one general practitioner per 1,000 people, Planning area 1 currently generates demand for around 12 GPs. There are currently an estimated nine doctors practicing from nearby medical centres, with the indicative shortfall of three GPs likely being met by facilities located in the Nowra town centre.

Assuming that all future MVRN URA residents would like to access a medical facility near to their residences, Table 16 shows that two development scenarios indicate there could be sufficient market demand for provision of a local medical centre with around four GPs. The anticipated population of MVRS URA would notionally increase this by an additional two GPs.

Table 16 Suggested rate of future health facility need

Development scenario	Estimated population	Estimated demand for GP's	Potential requirement
Low	3,640	Three	Likely to require expansion of existing medical practices
Mid	6,020	Six	Expansion of existing medial practices necessary to prevent significant increase in waiting times, an onsite medical practice could be viable
High	8,400	Eight	Likely to require new onsite medical practice with up to four general practitioners

Currently, the Australian average for population demand for hospital beds is approximately four beds per 1,000 people. This indicates that the population of MVRN URA may create a notional demand for between 14 and 33 new hospital beds at existing facilities. It is noted that the population of MVRS URA would notionally increase this new demand by an additional 10 beds.

5.4.3 Assessment of required health facilities

Given the proximity of the site to existing local medical practices, it is not necessary for the MVRN URA to provide its own medical centre onsite. This does not negate provision onsite being desirable from a convenience perspective for future residents. It is recommended that the cumulative population demand for additional doctors in the first instance be met through private market expansion of existing facilities with additional GPs.

Assuming that the average medical centre has approximately four GPs, any population scenario of more than 4,000 people (around 1,450 people) suggests the area could support its own medical centre. This is particularly the case if a new medical centre were to also service the population demand arising from MVRS URA.

It is considered likely that additional demand for hospital services will be absorbed by existing hospitals. In particular, the MVRN URA can be expected to place some additional resource demands on ambulance services.

6 Open space needs analysis

Open space contributes significantly to people's physical and psychological wellbeing, as well as encouraging social connectedness.

The SCC CISP divides open space into two overarching categories: active (sports) and passive (leisure). These two categories are helpful to ensure there is overall balance between areas of open space that are used for formal sport and informal play. While many local governments indicate provision between these two types of open space should be broadly equal, the most popular forms of participation in recreation continue to be casual opportunities for physical activity such as walking and cycling, rather than participation in organised team sports.

In new developments, the balance of open space land has been generally shifting towards increasing areas of passive open space that encourage active lifestyles. To reflect this, it is increasingly best practice to examine open space in terms of its performance in a recreational sense. This is consistent with the SCC CISP, which in addition to benchmarks to establish quantum of open space, recommends analysis of:

» Access to open space

» Land characteristics

» Level of embellishment (quality).

For this study, 'active open space' is considered to strictly be areas that are designed for sport and movement facilities. This open space type would be designed to meet the specific requirements of a particular sporting code such as football, soccer, baseball, tennis, netball and swimming. Active open space usually features built elements such as marked grass or paved playing surfaces, goalposts or hoops, spectator areas and amenity buildings. It is important to note that sport and movement facilities are not always open for use by the general public, for example when sporting clubs are training or playing competitions. To become a member of a sporting club often involves significant costs such as membership fees and uniform, presenting an economic barrier to participation for vulnerable residents.

'Passive open space' is considered to be all remaining open space designed for play and leisure recreation. This open space type would be designed to provide spaces for people to exercise, meet with others, relax and play. It is differentiated from sport and movement space in that it is almost always free to access by the general public and can host multiple uses at the same time. Informal sport can still be played in these areas, such as kicking a ball around, throwing a frisbee or playing social cricket, but built features are usually limited to discourage use for formal sport (such as providing 'half courts'). Play and leisure facilities can also act as outdoor community gathering spaces, for example 'village greens' being used for Christmas Carols, children's birthday parties and outdoor community markets.

An additional category of open space is also considered appropriate for this site, being 'natural recreation'. This category acknowledges the availability on the site of substantial areas of bushland. With the exception of protected areas of bushland, if passive open space is unencumbered, its placement alongside bushland should be also counted as a passive open space opportunity. In particular, natural open space can provide continuous 'green' linkages throughout the site that can allow people to 'loop' on their walks or runs. This aligns with the SCC CISP finding that the community of Shoalhaven is proud of and values areas of natural beauty (p37).

6.1 Total public open space

Generally, total public open space is a figure that reflects the overall 'green space' available in a geographic area, expressed as a percentage of the site area.

6.1.1 Existing public open space

There is no public open space currently located on the site, as the MVRN URA is currently privately owned land.

6.1.2 Determining rates of provision for public open space

The SCC CISP does not benchmark total open space provision, however finds that overall the entire LGA is generally well provided for in terms of designated parks and informal parkland. Regardless, with MVRN URA being a new urban area, it is considered appropriate to indicate some baseline provision requirement.

Benchmarks for total open space in NSW tend to refer to a traditional standard of 2.83 ha per 1,000 people. As a spatial standard, this figure has been widely discredited as dating back to the 1940s from use in the United Kingdom, but nonetheless remains a useful starting point for tailoring to contemporary urban contexts.

While more recent than the historical standard, the Department of Planning Guidelines for Recreation and Open Space Planning for Local Government (2010) are now also considered outdated. These recommend 4.2% of the site as local and district parks and linear green links, and 4.6% local and district sporting areas, totalling around 9% of new release site areas. If regional level facilities are also considered, this total increases to an indicative 15% of the developable area.

An indication of potential open space yield arising from application these benchmark examples of overall public open space are provided in Table 17 below.

Table 17 Suggested future rates of total open space need

Development scenario	Estimated population	Potential requirement at 2.9ha/1,000 people » 1.2ha per 1,000 passive » 1.7ha per 1,000 active	Potential requirement at 9% to 15% site area
Low	3,640	10.6 ha	» 24ha to 40ha (total site) » 14.3ha to 23.8ha (net developable area).
Mid	6,020	17.5 ha	
High	8,400	24.4 ha	

6.1.3 Assessment of required public open space

Given the availability of significant natural open space within riparian areas on the site which could act as recreation parks and linear green connections, it is not considered practicable to calculate total public open space needs based only on percentage of developable land for active and passive use. As natural open space is often heavily encumbered however, some percentage of public open space with a primary purpose aside from environmental conservation and management will be necessary.

For the MVRN URA, it is understood a very large percentage of the 264ha total site area will remain zoned for environmental conservation and management (36%). To contribute significantly to total open space provision, it is assumed that within this zoning a minimum of 5% environmental land (5ha) could be identified which is available and suitable to be used for passive recreation purposes (must be unencumbered). If this criteria can be met, then 'other' passive and active open space provision could indicatively equate to at least 4% of the remaining developable site area (estimated 159ha), equating to a minimum of 7ha land.

In summary then, assuming provision of public open space can be achieved as a split between 5ha+ of unencumbered natural open space (within riparian areas) plus 7ha of passive and active open space (within developable area), a total of 12ha public open space is considered achievable. For a low development scenario, this represents a total open space provision of approximately 3.3ha per 1,000 people, which is a generous green space environment. For a mid development scenario, provision would equate to 2ha per 1,000 people which is considered generally comparable with other contemporary urban fringe developments. For a high development scenario, provision would equate to approximately 1.4ha per 1,000 people which is a figure more usually associated with in established inner city areas with high proportions of apartment living. Closer to 15ha total open space would be more appropriate for the MVRN URA under this high population scenario.

Table 18 Recommended total public open space provision

Development scenario	Estimated population	Requirement as total split of natural, active and passive open space	Requirement as ha/1,000 people
Low	3,640	At least 8ha, preferably 12ha (5ha+ natural, 7ha active & passive)	2.2ha to 3.3ha/1,000 people
Mid	6,020	At least 12ha, preferably 13ha	2.0ha to 2.2ha/1,000 people
High	8,400	At least 15ha	1.8ha/1,000 people

6.2 Passive open space

Passive open space can be made up of both dedicated, landscaped park areas as well as unencumbered natural open space areas, which sometimes serve a dual environmental protection or other purpose (such as drainage).

6.2.1 Existing passive open space

There is no public passive open space currently located on the site. The nearest parks and playgrounds to the site are at Cambewarra or Bomaderry, all more than 2km from the MVRN URA.

The MVNOG proposed Landscape Masterplan for the site (see overleaf Figure 10) indicates provision of:

» One large (2ha+) passive 'village green' located adjacent to the village centre

» Numerous 'pocket' parks located adjacent to riparian areas and existing vegetation

» Several rectangular local parks within residential areas across the site, bounded by local streets.

Figure 10 Landscape masterplan

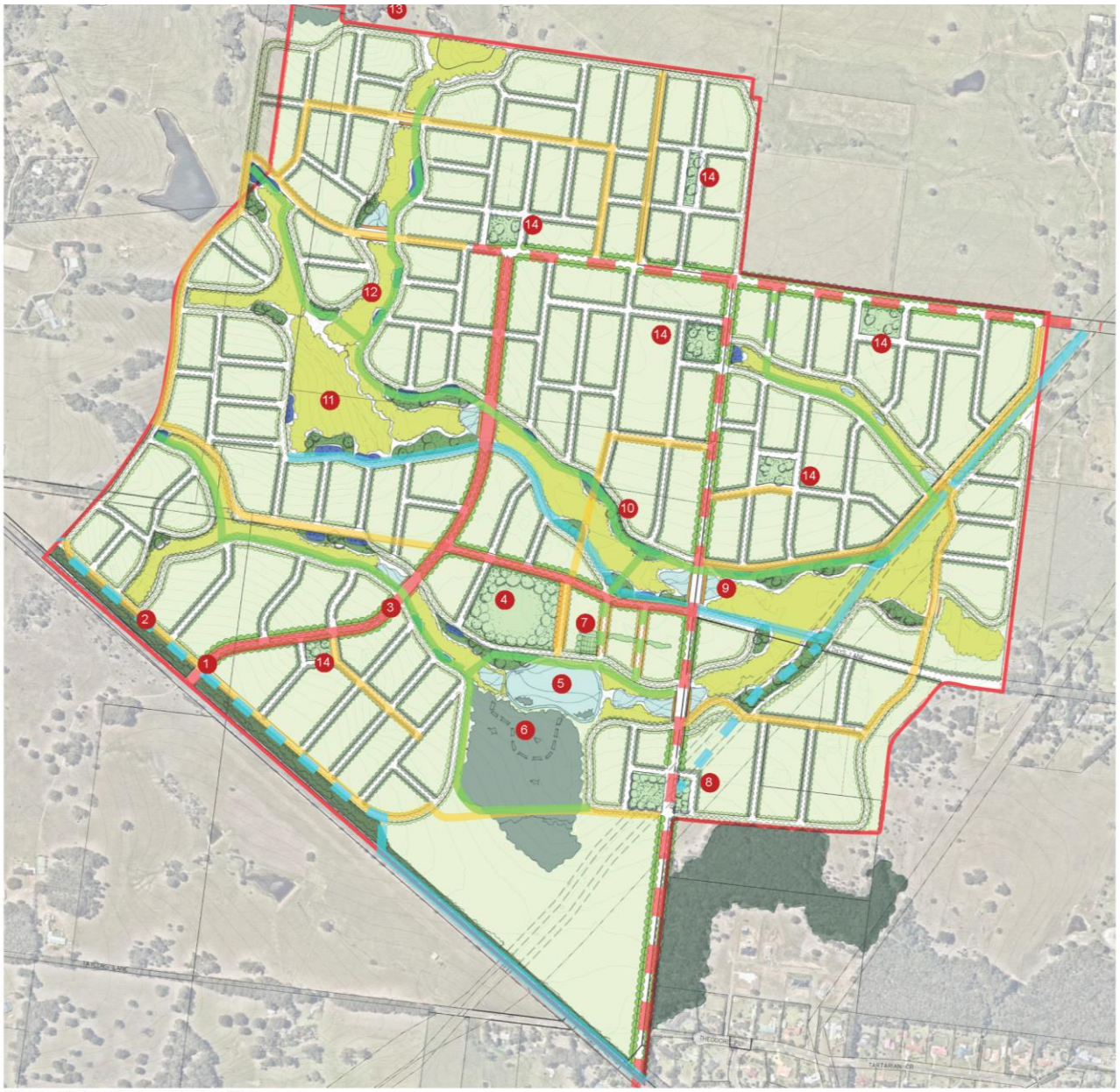


Figure 25 Landscape Master Plan

Source: Taylor Brammer Landscape Architects Pty Ltd, p45, 4 April 2019

6.2.2 Determining rates of provision for passive open space

The SCC CISP benchmarks passive open space provision as follows:

» Local park: 0.5ha per 1,000 people

» District park: 0.6ha per 1,000 people (provided at minimum 2ha i.e. population of 3,300 people)

» Regional recreation park: 0.2ha per 1,000 people (not applicable to site, as regional recreation is planned for at an LGA scale).

Application of this benchmark (shown in Table 19) to the MVRN URA indicates the site should yield a very wide range of between 4ha to 9ha of land for the provision of recreation parks. It is important to note that use of this benchmark demonstrates the inherent constraint of using population numbers as a trigger for open space provision, as higher populations indicate cumulative increased quantum of park provision without accounting for critical aspects such as their scale, distribution, or opportunities to embellish them to increase their utilisation.

Table 19 Suggested population based rate of passive open space need

Development scenario	Estimated population	Indicative provision at 1.1ha/1,000 people » Local 0.5ha/1,000 people » District 0.6ha/1,000 people
Low	3,640	4.0ha » 1.8ha local parks » 2.2ha district parks
Mid	6,020	6.6ha » 3ha local parks » 3.6ha district parks
High	8,400	9.2ha » 4.2ha local parks » 5.0ha district parks

Rather than solely referring to population based standards, a performance based approach[5] is now best practice for parks planning, using the following criteria themes:

» Accessibility and connectivity (5 minute walk/ 400m from residences)

» Distribution (local open space of minimum 0.5ha within 400m from residences)

» Size and shape (minimum local park size of 0.3ha, with road frontage and visibility key considerations)

» Quantity (larger district public open space areas are considered ideal to provide more recreation opportunities)

» Quality (embellishment that encourages activation and takes into account ongoing maintenance requirements)

» Diversity (a range of open space settings are available in an area).

For the MVRN URA, this would translate to the site needing onsite access to at least five parks, totalling around 8ha of land (see Table 20).

[5] Not currently adopted policy: taken from, the Government Architect NSW Open Space for Recreation Guide (Draft for discussion, Greener Places, 2018)

Table 20 Suggested performance based rate of passive open space need

Performance based criteria	Indicative provision
One park within 400m of all residences	A minimum of five parks would be needed to meet this on the 216ha site
Equitable distribution north and south of the riparian corridor	A minimum of five parks would allow for three parks in northern portion of site and two parks in southern portion of site
Parks are a range of sizes and shapes	Around 8ha of land would allow for: » 2 large parks with an average size of 1.5ha » 10 small parks with an average size of 0.5ha
Quantity that encourages more recreation opportunities	One park in the northern portion of the site and one park in the southern portion of the site would be sized above 1 ha
Quality	At a minimum, the two larger parks could provide very high quality landscaping and playground facilities to promote physical activity and socialisation between residents.
Diversity	Many of small parks could be located adjacent to riparian corridors to encourage walking and cycling and minimise the need for people to cross roads to access parkland.

6.2.3 Assessment of required passive open space

With reference to both population based and performance based standards described at section 6.2.2, it is recommended that if the MVRN URA provides at least 7ha of total passive open space for recreation parks. This is considered sufficient to provide a minimum of two district level parks and five local level parks onsite (see also Appendix B for detail of Indicative Open Space Layout recommendations).

Given the availability of natural (riparian) open space on the site, it is not considered practicable to propose the location of passive open space parks solely by a proximity to dwellings measure. This is because it is highly likely that all future residents will be within walking distance of some form of unencumbered green space even if they are not necessarily all embellished as recreation parks. As discussed in the total open space analysis (section 6.1.3), it is estimated that at least 5% of the site (5ha+) will consist of natural areas sufficiently unencumbered to allow for recreational use.

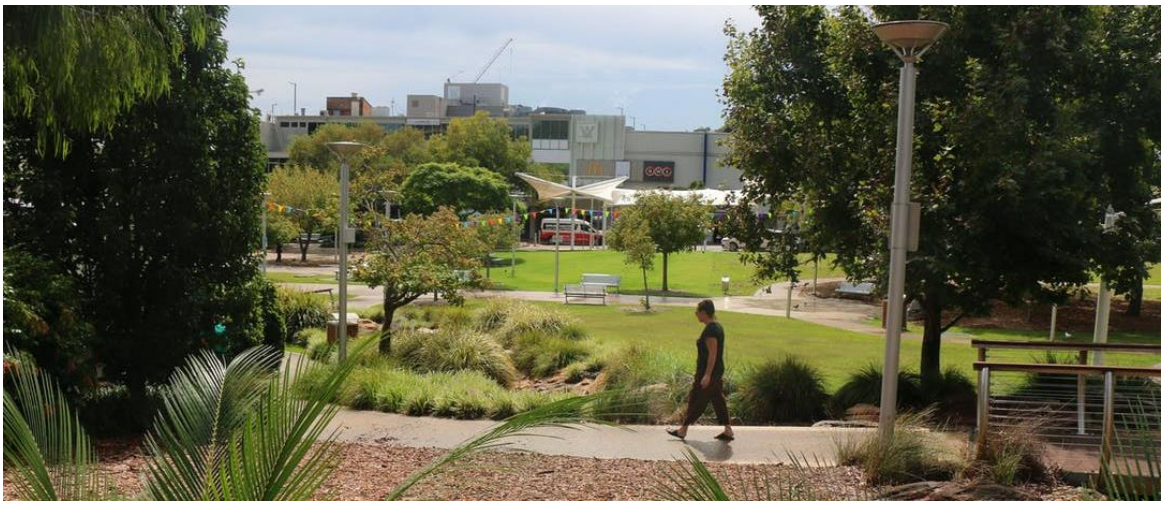
The large park or 'village green' shown in the MVRNOG proposed Landscape Masterplan for the site is in a highly desirable location for an urban park space servicing the village centre. To ensure this space can be embellished to a high standard, it should be re-sized to better complement its urban environment (i.e. at least 1ha but no more than 2ha). This will promote feelings of safety and security as people do not need to cross vast exposed grassed areas and can more easily make eye contact and recognise faces. A park of between 1 to 2ha can still promote informal active sports such as throwing a frisbee or kicking a ball, but also discourages the impression that the space is suitable for formal team sport (see example at Figure 11).

Figure 11 Example of highly landscaped park

Source: Elton Consulting, Speers Point Park

A possible comparative example of what could eventuate for a central 'village green' at MVRN URA is Kibble Park in Gosford, NSW, an urban park in the city centre which is approximately 1.2ha in size (see Figure 12).

Figure 12 Kibble Park, Gosford



Source: Gosford City Council, Kibble Park https://www.yourvoiceourcoast.com/kibblepark

Source: https://maps.six.nsw.gov.au/

It is recommended a second large park area (1ha+) be added to the MVRNOG proposed Landscape Masterplan in the northern portion of the site (i.e. more than 400m from the 'village green'). This is desirable to provide an alternate passive recreation experience for MVRN URA residents. This park could be embellished with more informal elements, such as picnic tables and nature play (see examples at Figure 13).

Figure 13 Examples of nature play elements

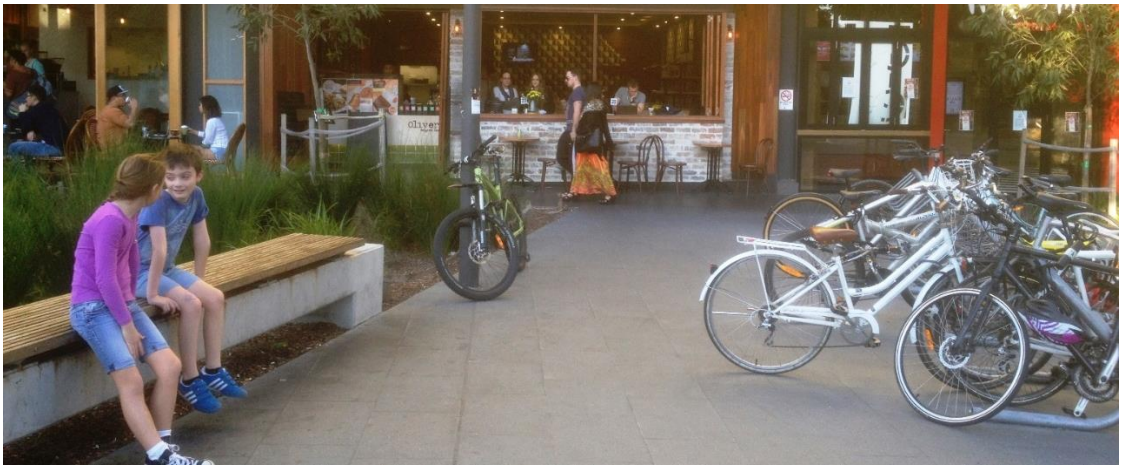
Source: Pixabay https://pixabay.com/

Aside from these two 1ha+ parks, the other local recreation parks shown on the MVRNOG proposed Landscape Masterplan are likely to be sufficient to ensure that all MVRN URA residents will be proximate to a good level of passive open space amenity. All these local parks should be at least 0.3ha in size, be accessible for residents (i.e. allow for safe road crossings) and pay due consideration to their connection with natural open space (discussed in section 6.4).

For all parks that are provided at MVRN URA, consideration of universal design is important. As per the 2019 'Everyone Can Play' guidelines[6], ensuring the principles of inclusion are implemented in all playspace design will help create places that everyone can enjoy regardless of age, ability or cultural background.

In addition, the recommendation of passive open space park areas does not preclude MVRN URA also providing opportunities for complementary passive recreation areas for residents to enjoy. For example, public outdoor spaces can also be included within the village centre in the form of urban squares, plazas and laneways close to shops (see Figure 14).

Figure 14 Opportunities for passive recreation in retail areas



Source: Elton Consulting

Additional relevant guidance on recreation park design is contained in Appendix E of the SCC CISP, including a recommendation that the future developer involve relevant Council parks operational staff to advise on the development of a detailed design for all onsite parks prior to their submission for DA approval.

6.3 Active open space

Active open space can be made up of both dedicated sports parks (typically with rectangular fields or ovals) as well as outdoor courts, athletics tracks or other purpose built sports areas (such as outdoor gyms, BMX trails).

6.3.1 Existing active open space

There are no public active open space areas currently located on the site. The MVNOG proposed Landscape Masterplan does not currently indicate the provision of any formal active open space, although the village green park is shown as indicatively large enough to be around the size of a cricket field (oval).

The nearest existing sportsgrounds to the site are at Bomaderry sports complex which includes a diverse array of sports options, including an aquatic facility and indoor sports centre (listed in Table 21).

6 NSW Government, https://everyonecanplay.nsw.gov.au/

Table 21 Existing sportsgrounds

Facility	Distance from site	Description	Image
Bomaderry Sports complex	1.9km 113 Cambewarra Road, Bomaderry	Multiple sports facilities including an aquatic centre, redeveloped indoor sports centre (opened Nov 2019), multiple fields (incl. Royal Artie Smith) and Croquet club.	
Ray Abood Oval	3.5km The Concourse, Cambewarra	Single Cricket field Contains recently upgraded playground equipment, upgraded irrigation and drainage.	
Bernie Regan Sporting Complex	6 to 7km (10 minutes) West Cambewarra Road	Hockey field (synthetic), 2 ovals, cricket pitches.	

6.3.2 Determining rates of provision for active open space

The SCC CISP benchmarks active open space provision as follows:

» District sports park - 1.3ha per 1,000 people (provided at min. 4ha, i.e. population of 3,000 people)

» Regional sports park - 0.6ha per 1,000 people (not applicable to site, likely to be provided at Bomaderry).

Other industry benchmarks suggest need for a local sports precinct (2 fields) is triggered at populations of 4,500 to 5,000 people.

Application of these population benchmarks to the MVRN URA (shown in Table 22) generates an incredibly wide range of indicative requirement for a sports park, yielding figures between one and seven sports fields on between 1.5ha to 11ha land. In the same way previously noted with passive open space benchmarks, these population based rates for active open space are limited in their ability to account for cumulative demand. Increased amounts of field provision should be considered in conjunction with popularity and affordability of

different sport types, and opportunities for fields to be utilised more regularly (increased capacity) prior to additional provision being investigated for delivery.

Table 22 Suggested population based rate of active open space need

Development scenario	Estimated population	1.3ha/1,000 people	1 sports precinct (2 fields) every 4,500 people
Low	3,640	4.7ha (indicatively three fields)	One field (requires min. 1.5ha)
Mid	6,020	7.8ha (indicatively five fields)	One sports precinct (2 to 3 fields) (requires approx. 5ha)
High	8,400	11ha (indicatively seven fields)	One sportsground (3 to 4 fields) (requires approx.. 6ha)

Rather than rely solely on population based standards, a best practice approach is to also consider performance indicators to assess active open space accessibility, distribution, size and shape. Key directions using this performance approach are outlined in Table 23:

Table 23 Suggested performance based rates of active open space need

Performance Criteria	Best practice guidance	Considerations for MVRN URA
Accessibility and connectivity	» Safe access minimising barriers such as major roads » Connections between open spaces via linkages	» Moss Vale Road and Princess Highway are major roads » Site proposes several public transport stops that would enable public transport access to facilities at Bomaderry
Distribution	» Low/ medium density neighbourhood should be 20 minutes walk/ 2km distance to at least 2 organised sport areas » Adequate buffering to adjacent residential uses so noise and light do not create amenity impacts	» A central location (to the broader Planning area 1- not the site) with a high degree of visibility/ passive surveillance opportunities » Bomaderry more than 20 min walking distance from site however is less than 10 minutes drive from wide range of organised sport facilities
Size and shape (quantity)	» Fit for intended purpose: provides parking, change facilities » Minimum recommended format for any sports field of 4ha to allow for multi filed unit	» Environmental conservation land (riparian corridor) may constrain availability of suitable land parcel » Providing open space along Moss Vale Road can help provide visual buffer and encourage interface with surrounding communities
Quality	» Minimise maintenance and management burdens	» Locate on relatively flat site » Flood free land if possible » Provision of amenity buildings, drainage, lighting
Diversity	» Provide for a range of settings and activities	» Provide for a use (sport) that Cambewarra and Bomaderry currently do not have

Source: Adapted from NSW Government Architects Office Draft Open Space for Recreation Guide (2018), not released as public document.

Participation in organised sport tends to be more popular amongst younger age groups, particularly children under 15 years. For the MVRN URA, it is worth highlighting recent data from Aus Play[7] which examines participation in sport by age cohort. Given that the future population will be made up of high proportions of people aged over 55 years, there should be increased focus on the facilities they are most likely to utilise. Across NSW, these sports are:

» Walking (60%+ participation)

» Gym based exercise (27%+ participation)

» Swimming (11%+ participation)

» Cycling and Golf (7%+ participation).

Other sports include bowls, tennis and yoga/pilates. There is little to no evidence of older people participating in significant numbers in team based sports associated with the need for fields (soccer, AFL, hockey, baseball etc).

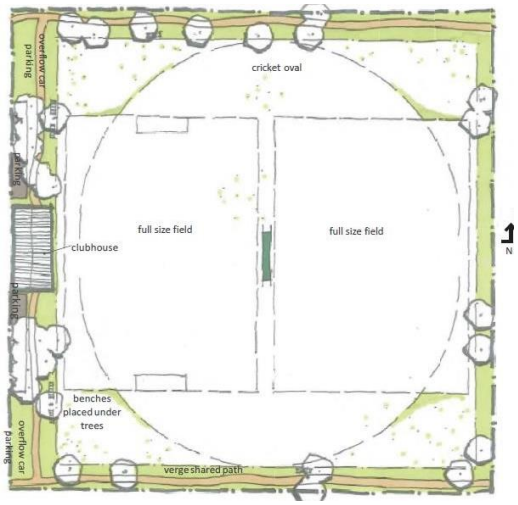
6.3.3 Assessment of required active open space

The SCC CISP notes that historically, sports park planning in the LGA has been "ad-hoc, resulting in a large number of single or two field parks…with opportunities for integration and co-location being limited" (p38). It is noted that at an LGA level, Shoalhaven has a significant surplus of land for district sports parks, and that Planning area 1 "is the only planning area where the provision requirements for land for regional sports park is meeting demand" (p41).

With this in mind, it is a priority that the active open space delivery focus for MVRN URA should be primarily on ensuring excellent walking and cycling connections, discussed further in section 6.4 natural open space. This will assist to meet the consistent contemporary trends for the majority of people using walk/run and cycle to meet their physical exercise needs. The current coronavirus pandemic is renewing emphasis on ensuring that people can explore their local neighbourhoods without being crowded onto narrow pathways or poorly laid out parklands.

On the basis that existing sportsgrounds are a borderline 2km from the site, as a baseline provision for a greenfield urban release area it is suggested that the MVRN URA should provide at an absolute minimum a standard sports park format regardless of low, mid or high population scenario (defined in the SCC CISP as a 'District Sports Park, p118). The minimum land area needed for a contemporary sports precinct is at least 3ha to provide adequate space for 2 full sized rectangular fields or one oval (see example below at Figure 15).

Figure 15 Diagram of standard local sports precinct format on 3ha land



Source: Supplied by Shoalhaven City Council

[7] Aus Play Clearinghouse for sport https://www.clearinghouseforsport.gov.au/research/smi/ausplay/results

Noting that the SCC CISP emphasises there should be a future focus on providing good quality district recreation parks (p44) an allowance of an additional 1ha active open space should be made available to allow for development of additional amenities such as increased parking, spectator areas, clubhouse storage room and children's playground facilities. In the context of sports preferences of an older population base, MVRN URA could also feasibly need additional land take for a complex of outdoor courts (e.g. tennis). A recommended minimum of 4ha sports precinct provision is therefore considered prudent to prevent the need for retrofitting of recreation space by future generations who may live on the site in higher densities than is currently anticipated.

A 4ha site for a sports park may also assist SCC to factor in the ongoing sustainability (quality) of provision at MVRN URA. In addition to land take, contemporary sportsgrounds require high quality draining, lighting and other amenities (such as change rooms, canteen). From a social sustainability perspective, ongoing maintenance costs and therefore burden on ratepayers must be weighed against the likelihood that the fields can be regularly activated not only by the site population, but its neighbouring communities of Cambewarra, Bomaderry and the MVRS URA.

Given the projected older age profile of the MVRN URA, the recommendation for an 4ha sports park also allows for an underlying assumption that the future detailed design of the sports precinct space has the potential for provision of alternative sports uses outside of traditional team sport field or court structures. For examples velodrome, bowling alley or indoor squash.

It is acknowledged that the recommendation for a 4ha district sports park goes somewhat against the SCC CISP direction that new developments (developer contributions) should "focus on embellishing the existing recreation parks and sporting facilities to encourage use" (p44). This direction is supported, especially given that existing sports parks are reasonably accessible from the site assuming residents have private vehicles, with indicative travel (driving) time distances being less than 10 minutes. Despite noting this travel time is well within performance standards for access, a district sports park is still being recommended by this study for delivery at MVRN URA based purely on actual geographic proximity. Ensuring a sports park is located within 2km of the MVRN URA will negate overreliance of future residents on private vehicle for their access to sportsgrounds.

If a high population scenario for the MVRN URA were to eventuate, and if the future population of MVRS URA is considered to be also reliant on provision within MVRN URA to meet their active sports needs, it is recommended that the minimum sports park size would expand to at least 5ha to allow for a third rectangular field that could be used as a either a practice/'warm up' field, for junior sports, or to provide an additional complex of outdoor courts. It is not expected that under any development scenario or service catchment would a new major district sports area (i.e. 6ha to 10ha or more) be needed. These are typically planned at population catchment areas of 15,000+ people (i.e. whole of Planning area 1). From this strategic planning perspective, it is recommended that the Bomaderry sports complex, Ray Abood oval and Bernie Regan sporting complex continue to be enhanced to function as district-regional sporting centres to service this broader population size catchment with a variety of recreation opportunities including indoor sports, skate parks and aquatic facilities.

Additional commentary on sports park location is provided at Appendix C.

6.4 Natural open space

While the preservation of riparian corridors in urban fringe developments is primarily to maintain existing ecological functions and preserve natural environments, they also can be used for controlled recreational activities such as picnicking and walking.

Access to open space that encourages people to have contact with nature is not typically explicitly addressed in documents such as the SCC CISP because it is highly contextual to each site. The inclusion in the MVRN URA site of high quality vegetation presents a unique opportunity to maximise bushland based recreation that can play a role for projected site residents in providing open space for passive leisure purposes. This could be provided through embellishments such as walking trails, viewing platform and picnic shelters.

6.4.1 Existing natural open space connections

There are currently no dedicated pedestrian and cycle pathways along Moss Vale Road that would enable existing populations to easily access onsite natural bushland.

6.4.2 Determining rates of provision for natural open space

While there are no accepted benchmarks for natural open space, there is a growing body of evidence that it can contribute significantly to human health. Exposure to natural areas has been found to decrease people's stress levels.

A key consideration for provision of natural open space for recreation is the degree to which the spaces are encumbered. If natural areas are impacted by heavy foliage, flooding, uneven topography or other constraints it will hinder people's ability to interact with it.

For the MVRN URA, there is a risk that thick riparian corridors will become natural geographic barriers to pedestrian travel throughout the site (see example at Figure 16) unless high quality off street shared pathways are provided.

Figure 16 Riparian corridors can be a geographic barrier

If unencumbered natural bushland spaces are available onsite, they can function as passive open space and therefore should be calculated using performance based standards in a similar way (connectivity, distribution, shape, quality, diversity).

For the site, the landscape masterplan shown previously at Figure 10 (page 38) shows a wide riparian corridor crossing the entirety of the site, effectively separating the residential areas into a southern and northern portion.

6.4.3 Assessment of required natural open space

To enhance opportunities for recreation, provision of linear links between usable passive park and active sports spaces will be critical. For the MVRN URA, it is recommended the site provide a continuous 'spine' of off street pathway (shared walk and cycle). Based on the projected age profile of the site, this will particularly ensure that persons with mobility needs are provided a dedicated pathway for linking all recreation spaces. Examples of target groups for use of this path include older persons on mobility scooters and parents with prams. A contemporary example of an offstreet shared pathway is shown in Figure 17.

Figure 17 Example image of off street shared pathway

Source: https://www.newnybridge.com/south-nyack-residents-get-first-look-at-shared-use-path-project-team-shares-new-renderings-designs-of-side-path-and-visitor-parking/

It is recommended the provision of a continuous, shared 'spine' of off street pathway be at least 2.5m, preferably 3m, to allow for maximum overtaking by pedestrians and other pathway users. The off street path should follow the riparian corridor edge possible to avoid the need for multiple road crossings. It should also pass both the local and district park space as well as connect to the active open space sportsground to promote equitable access to community infrastructure.

7 Conclusion

This study has assessed the community infrastructure and open space requirements likely to be generated under three future population scenarios for the MVRN URA. The residential component of the proposal is expected to yield between 3,640 and 8,400 people. This population is expected to have a mix of characteristics, being culturally similar to existing Cambewarra and Bomaderry residents, but differing by having higher proportions of older people moving to the area for lifestyle reasons.

Overall, both the low to mid population scenario is considered able to be provided for by:

» increased utilisation of existing social and recreation infrastructure throughout Planning area 1

» delivery of limited onsite facilities being a childcare centre, sports precinct, two large parks and at least five small parks.

For a high population scenario, additional onsite facilities would likely be needed, including a medical centre, primary school, community centre and expanded sports precinct.

Throughout the assessment, it is noted that if the future population of MVRS URA also becomes reliant on utilisation of facilities provided at MVRN URA, the likelihood of their social and financial viability will increase.

For all population scenarios, there will be additional pressure on demand for existing district level facilities and services in the area, for example the Nowra Library and Bomaderry Sports Complex. It is recommended this be mitigated through developer contributions made towards their enhancement in negotiation with Council. Additional demand on local schools and hospitals should be flagged with key State Government agencies to ensure site population projections are incorporated into their strategic planning so that upgrades and additional resourcing can be budgeted for.

Overall, this study concludes that low to mid population scenarios for the MVRN URA would result in minimal impacts to community and open space infrastructure across Planning area 1 provided that all recommended local facilities are delivered to contemporary standards and with an adequate level of embellishment.

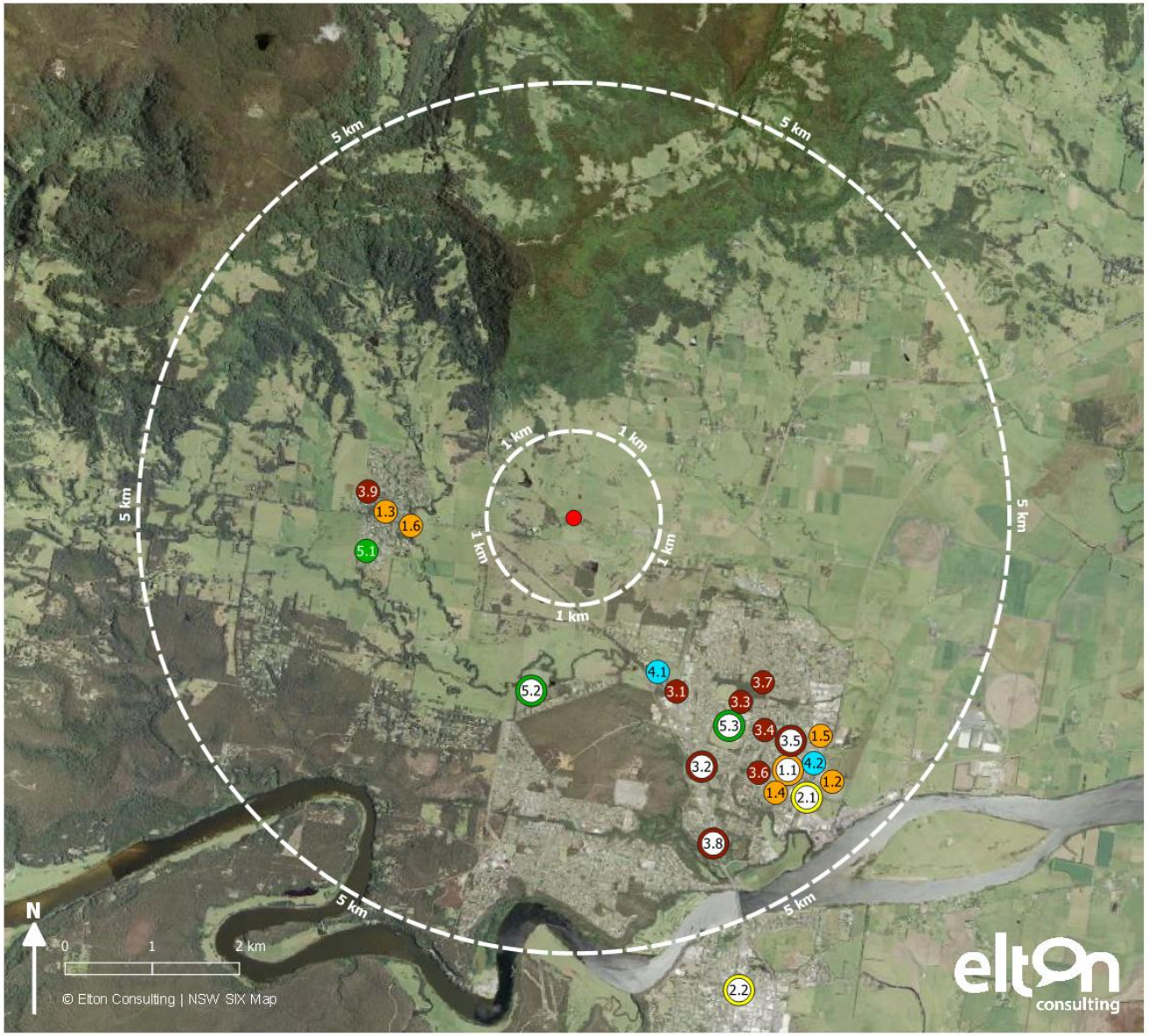
Appendices

A Map of existing community and recreation facilities

B Indicative open space layout

C Sports park location advice

A Map of existing community and recreation facilities



Legend

- Site
- Local
- District

Community

- 1.1 Bomaderry Community Centre
- 1.2 Bomaderry former school building
- 1.3 Cambewarra School of Arts Hall
- 1.4 Bomaderry RSL club
- 1.5 Bomaderry Bowling Club
- 1.6 Cambewarra Scout Hall

Culture

- 2.1 Nowra Players Theatre
- 2.2 Nowra Library

Education

- 3.1 Kids World Kindy
- 3.2 Nowra Anglican College
- 3.3 Bomaderry High School
- 3.4 Bomaderry Learning Centre
- 3.5 Bomaderry Public School
- 3.6 Platypus Kinda
- 3.7 Lyndhurst Children's Centre and Preschool
- 3.8 Shoalhaven River College
- 3.9 Cambewarra Public School

Health

- 4.1 Cambewarra Mountain Health
- 4.2 Meroo Street Family Practice

Recreation

- 5.1 Ray Abood Oval
- 5.2 Bernie Regan Sporting Complex (Shoalhaven Hockey Field)
- 5.3 Bomaderry Sports Complex

B Indicative open space layout

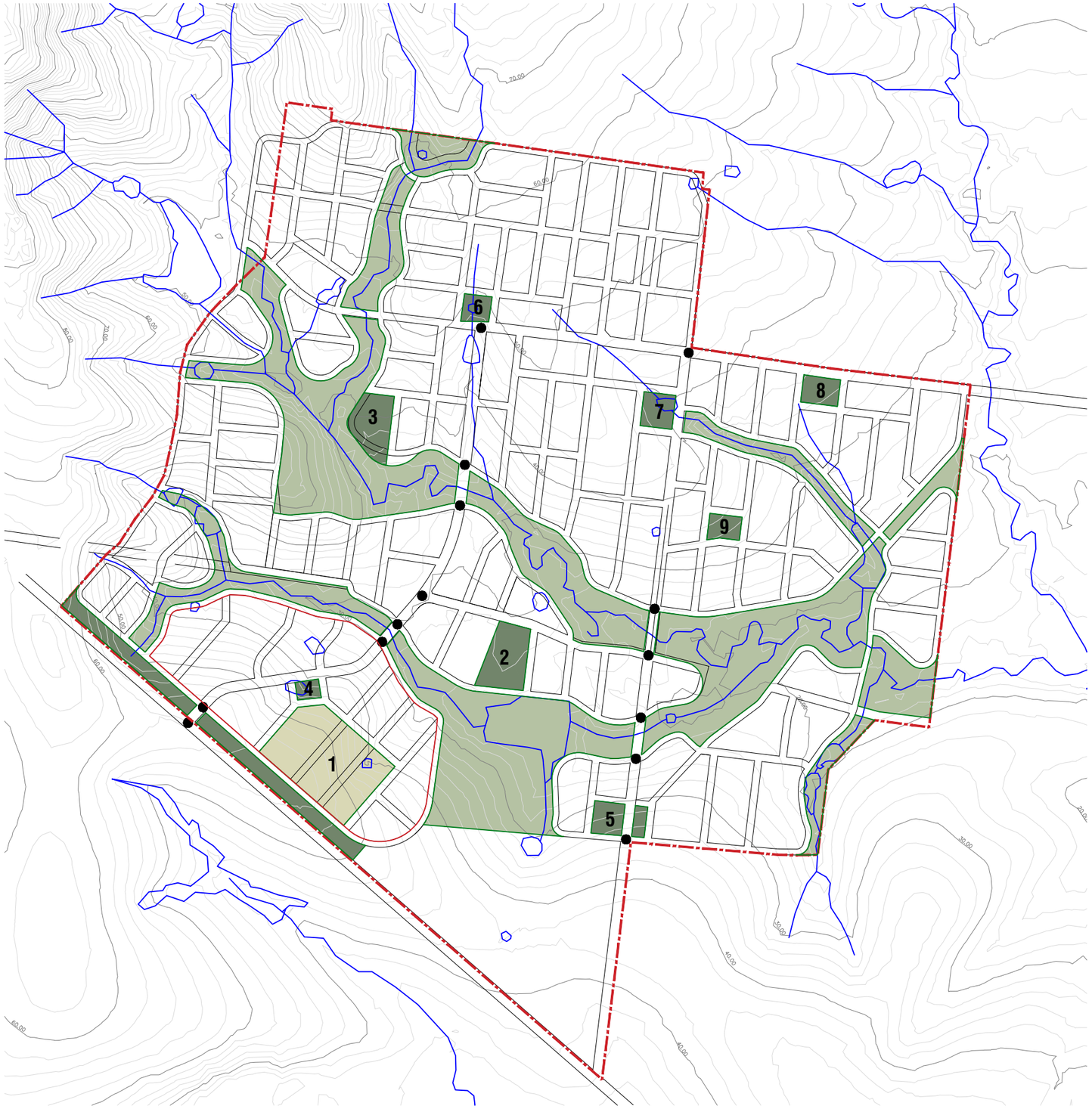
This section describes recommended amendments to the MVNOG proposed open space as shown in the current landscape masterplan. It is based on three key open space recommendations contained in the study:

» Provision of dedicated 4ha+ sports precinct to meet active open space need

» Reduction in size of park in south of the site to <2ha to improve activation of passive open space in urban park environment

» Provision of a 1ha+ park in the north of the site to ensure a large passive park sizes is available on each side of the major collector (entry) road and meet nature play passive open space need in a location that is not encircled by local streets

Figure 18 overleaf provides a overlay of the existing open space masterplan to show how open space is recommended to be provided on the site.



LEGEND

- RIPARIAN CORRIDOR
- ACTIVE OPEN SPACE
- PASSIVE OPEN SPACE / PARKS
- 1 SPORTS GROUND
- 2 VILLAGE GREEN (SOUTH)
- 3 NATURE PARK (NORTH)
- 4 PARKLET 1 (SOUTH)
- 5 PARKLET 2 (SOUTH)
- 6 PARKLET 3 (NORTH)
- 7 PARKLET 4 (NORTH)
- 8 PARKLET 5 (NORTH)
- 9 PARKLET 6 (NORTH)

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PROJECT Moss Vale Road North Urban Release Area
CLIENT Elton Consulting
DRAWING NO. 3875-P101
REVISION C
DATE 29/09/2020

0 50 100 150 200 250m
1:5000 @ A1 1:10,000 @ A3

OPEN SPACE CONCEPT PLAN

C Sports park location advice

This section briefly outlines the benefits and constraints of potential sports park locations to service the future residents of the MVRN URA.

As noted at section 6.3.3, the recommended provision of a 4ha sports park is based primarily on geographic performance criteria, being the proximity of existing sports fields as more than 2km distant from most future residents.

While this study assumes a sports park would be delivered onsite for practical reasons, namely the ability for Council to plan for active open space land as part of the Planning Proposal process, this is not necessarily required from an open space planning perspective. In other words, the future community of MVRN URA would be equally served by a sports park at an alternative offsite location, provided it is within 2km of the majority of residents.

A summary of potential locations in order of preference is shown at Table 24.

Table 24 Potential sports park locations

Location (in order of preference)	**Opportunities**	**Constraints**
Onsite (along Moss Vale Road near entrance to development)	Can form part of visual buffer from Moss Vale Road Line of sight from Moss Vale Road encourages integration and use by surrounding communities of Cambewarra and Bomaderry Topography of site is relatively unencumbered (flat and not flood affected).	Site size fixed/ limited ability to allow for future expansion
Offsite (within 2km of centre of MVRN URA site)	May be more accessible to Bomaderry, Cambewarra and MVRS URA residents May increase viability of future expansion May assist to meet SCC CISP rationalisation recommendations for Planning area 1 Increases net developable area available for housing at MVRN URA	Likely to be less accessible to MVRN URA residents
Onsite (as part of expanded (3ha+) 'Village Green' park)	Increased activation of village centre (e.g. attracting Saturday sports crowd to shops)	Site size fixed/ limited ability to allow for future expansion Competes with use of village green as 'urban park' Reduces developable area available for higher density housing close to village centre High risk of noise and lighting impacts to surrounding residents, complaints around parking at peak usage times