

NORTHERN & WESTERN GEELONG GROWTH AREA.

Social Infrastructure Report



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Final Report

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Date of Report:	29 th November 2018
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**City of Greater
Geelong**



Document History

VERSION	DATE OF ISSUE	PERSON	ACTION
0.1	16/11/2016	Thao Ashford	Draft Report for comment
0.2	29/11/216	Thao Ashford	2 nd Draft for comment
0.3	18/04/2017	Thao Ashford	3 rd Draft for comment
0.4	31/05/2017	Thao Ashford	Final Report
0.5	28/08/2017	Thao Ashford	Final Report Updated
0.6	24/08/2018	Thao Ashford	Revised Report
0.7	29/11/2018	Thao Ashford	Revised Final Report

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List of Abbreviations

Abbreviation	Term
ABS	Australian Bureau of Statistics
CALD	Culturally and Linguistically Diverse
CBD	Central Business District
CFA	Country Fire Authority
CoGG	City of Greater Geelong
CSIRO	Commonwealth Science and Industrial Research Organisation
DET	Department of Education and Training
DCP	Developer Contributions Plan
DHHS	Department of Health and Human Services
GPAC	Geelong Performing Arts Centre
GP	General Practitioners
HA	Hectares
ICT	Information and Communication Technologies
IIDP	Integrated Infrastructure Delivery Plan
KM	Kilometres
LGA	Local Government Area
MCH	Maternal and Child Health
MSS	Municipal Strategic Statement
NDIS	National Disability Insurance Scheme
NGGA	Northern Geelong Growth Area
NWGGA	Northern and Western Geelong Growth Areas
OSHC	Outside of School Hours Care
PIA	Planning Institute of Australia
PDA	Priority Development Area
QLD	Queensland
SECCCA	South East Councils Climate Change Alliance
SES	State Emergency Services
SDS	Special Developmental School
SIP	Social Infrastructure Plan
ULDA	Urban Land Development Authority
U3A	University of the 3 rd Age
VIFSA	Victoria in Future Small Areas
VIC	Victoria
VIF	Victoria in Future
WA	Western Australia
WGGA	Western Geelong Growth Area

1.0 Introduction

1.1 Project Background

The City of Greater Geelong is establishing a planning framework (Framework Plan) to guide future growth of the Northern and Western Geelong Growth Areas (NWGGA) (refer to Figure 1). Both Growth Areas were identified as Further Investigation Areas in the G21 Regional Growth Plan, which sets the context for future urban growth. As part of the process, a social infrastructure needs assessment is required to feed into the Integrated Infrastructure Delivery Plan (IIDP). The social infrastructure needs assessment will result in a Social Infrastructure Report (this report) which will identify the social infrastructure needs of the Northern and Western Geelong Growth Areas.

It is essential that Council is aware of the likely infrastructure requirements to support future communities in the two Growth Areas. With this, there is a need for Council to understand the potential funding requirements and associated implications to deliver social infrastructure to these areas without compromising service levels to existing Geelong residents. The IIDP will enable Council to fully appreciate the overall infrastructure requirements and particularly, the social infrastructure requirements, and associated funding needed for delivery and maintenance.

1.1.1 Project Aim and Purpose

The aim of the project is to develop a ***Social Infrastructure Report for the Northern and Western Geelong Growth Areas***. The key outputs of this project will at a broad level include:

- > Social Infrastructure Needs Assessment (Social Infrastructure Report)
- > Input into the Framework Plan for the Growth Areas
- > Input into the Integrated Infrastructure Delivery Plan (IIDP)

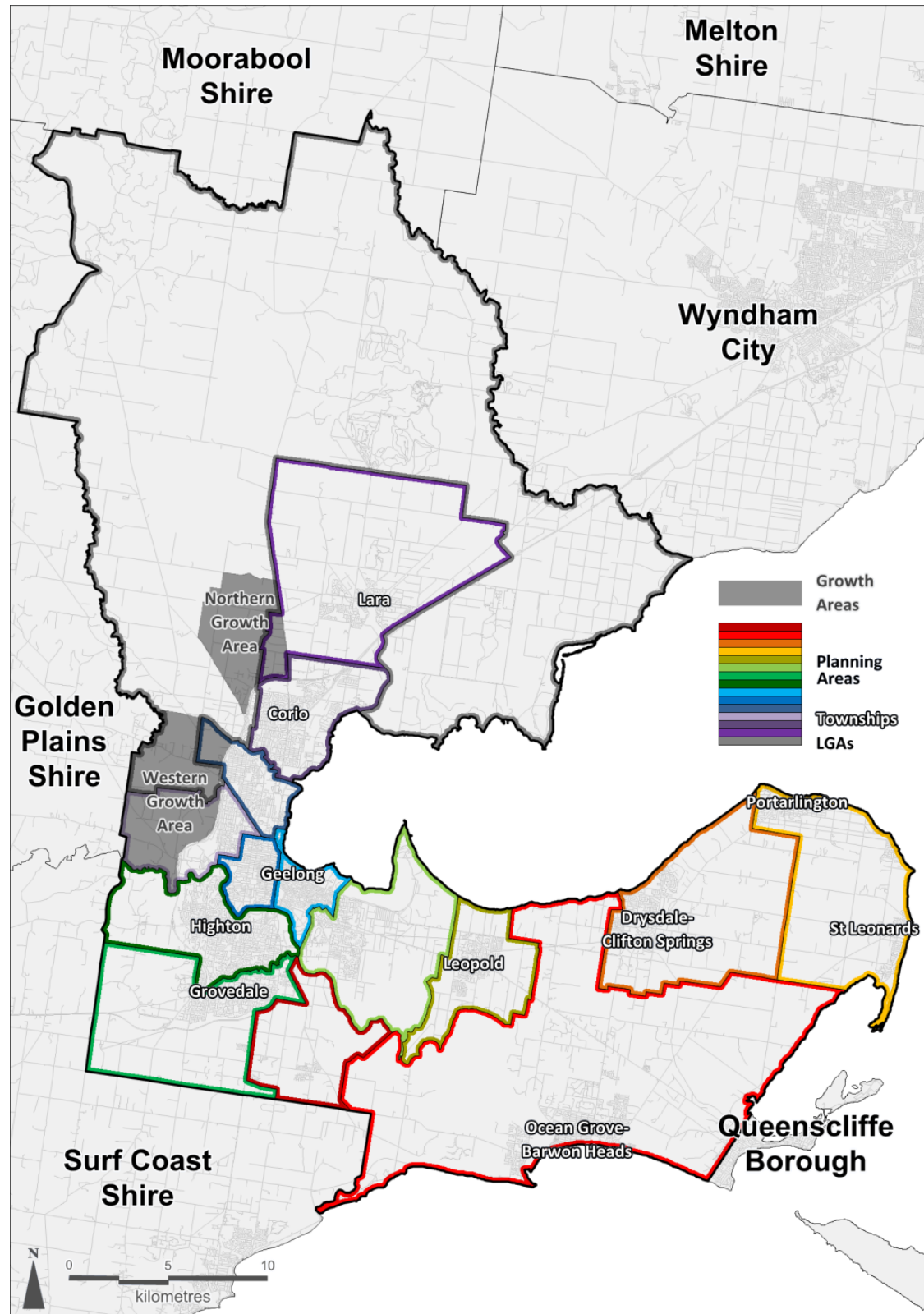
The purpose of this study is as follows:

- > Develop key assumptions on future population profiles supported by an evidence base.
- > Define robust assumptions/methodology to form the basis for projecting future social infrastructure needs.
- > Consider the area's future population and its characteristics alongside the local, district and regional community facilities and open space that would be required to deliver a liveable, vibrant and cohesive community.
- > Identify what services and facilities are required, where these should be located, principles for their location and inform how services and facilities will be delivered including investment requirements for various tiers of government and relevant agencies.
- > Engagement with key agencies and stakeholder to ensure that the Growth Areas are included in future strategic planning by key agencies.
- > Identify agency's future investment plans, strategic directions and potential partnership opportunities.
- > Consider opportunities for innovative models in early delivery of social infrastructure for pioneering communities in the growth areas.
- > Work with key agencies to inform the Social Infrastructure Report.

It is important to note that this report is developed to inform the Framework Plans for the Northern and Western Geelong Growth Areas. It sets out, at a high level, the social infrastructure needs for the future residents of the growth areas. In the future, when the preparation of Precinct Structure Plans is undertaken, this report will be used as a guide for social infrastructure planning. However more detailed, fine grain, social planning will occur in

conjunction with the development of PSPs. Each PSP will be informed by a Social Infrastructure Report which will take account of local conditions. Importantly, these individual reports will also be able to reflect changing trends in the community for sporting, educational and cultural pursuits.

Figure 1. Northern and Western Geelong Growth Areas (NWGGA)



Source: Thao Ashford Planning, 2018

1.2 Project Method and Scope

1.2.1 Method

The Social Infrastructure Report has been informed by the following:

Consolidation of background information pertaining to social infrastructure for the NWGGA. This primarily included information from the City of Greater Geelong Social Infrastructure Plan (SIP) 2015. The SIP 2015 is the current overarching plan for the planning of community facilities/spaces in the municipality. It provides the evidence base for, and recommends the required provision of social infrastructure. The SIP is currently being reviewed, but at the time of writing is not sufficiently developed to inform this report, thus for the purposes of this report the SIP 2015 remains the relevant reference. To understand the planning needs at a local and regional level, the SIP breaks down the municipality into 15 Planning Areas and considers each area within its own right. The Planning Areas that will be affected by the NWGGA include:

- > Planning Area 11 – Bell Park, Bell Post Hill, Geelong North (borders Western Geelong Growth Area)
- > Planning Area 12 – Hamlyn Heights, Herne Hill, Fyansford (borders Western Geelong Growth Area)
- > Planning Area 13 – Corio, North Shore, Norlane (borders Northern Geelong Growth Area)
- > Planning Area 14 – Lara (borders Northern Geelong Growth Area)
- > Planning Area 15 – Anakie, Lovely Banks (borders Northern Geelong Growth Area)

The following information has been sourced from the SIP and is considered relevant to NWGGA:

- > In order to understand the likely **socio-demographic characteristics** of the NWGGA, a review of the demographic profile for the Planning Areas (as defined by the SIP) surrounding NWGGA were reviewed. This provided the best source of information for demographic trends that could influence the Growth Areas.
- > Identify **existing facilities** and services in adjacent communities to NWGGA to ascertain current demand and capacity to service NWGGA in the initial phases of development was a critical aspect of this study. Much of this information is contained in the SIP and was supplemented further with information from consultation.
- > The SIP provides **guiding principles** for the development of social infrastructure in Geelong and many of these principles are considered relevant to the NWGGA and have been adopted for the purposes of social infrastructure development in the Growth Areas.

Review of exemplary growth area master plan communities to inform the NWGGA around challenges and opportunities. In total, 5 case studies were reviewed and these included:

- > Ellenbrook WA;
- > Springfield Lakes QLD;
- > Ripley Valley QLD;
- > Armstrong Creek VIC; and
- > Selandra Rise VIC.

The case studies assisted with identifying expected demographics of Greenfield developments; innovative models of early delivery of social infrastructure and benefits (as attractor) and challenges (capital investment); implementation including collaboration and partnerships; funding models for social infrastructure and planning principles and community development principles.

Population assumptions and projections have been developed for NWGGA to inform likely demographics and social infrastructure needs of the community. Assumptions were informed by the Context Report for the NWGGA

Project 2016 developed by Council, Victoria in Future (VIF) projections for Geelong Local Government Area (LGA) and local areas as well as case studies reviewed of similar master planned communities.

To understand need from multiple perspectives a benchmark analysis was undertaken for the NWGGA. This analysis uses desired standards of services sourced from the SIP and other relevant sources to identify social infrastructure requirements based on a population threshold approach. It should be noted that the benchmark analysis for Early Years Infrastructure used a slightly different approach.

Consultation with key government and non-government stakeholders including, council officers, state agencies and service providers was undertaken. The objectives of the consultation were to:

- > Identify existing and future needs of the communities surrounding the NWGGA project site.
- > Examine stakeholders' perceptions of, and assess the gaps in, social infrastructure.
- > Consider the potential needs of the NWGGA community, and how these could be addressed.

The consultation phase took place between the 12th September and 21st October 2016. A total of 47 stakeholders from 38 separate organisations including, state and local government, not for profit organisations, peak bodies, private sector and service providers were invited to participate in the consultation for the study. Of the 38 organisations, the team consulted with a total of 33 via key informant interviews (face-to-face and telephone).

1.2.2 Scope of Facilities / Spaces

For the purposes of this study the following definition has been adopted, *"Social Infrastructure is generally understood to mean infrastructure of a communal, human or social nature that is required progressively as a community grows. Social Infrastructure provides for both informal and formal places and spaces providing physical resources that are used substantially for community activities and services. Social Infrastructure is the sum of both community facilities / spaces plus public open space...social infrastructure includes support services and facilities"*. (City of Greater Geelong Social Infrastructure Plan 2015)

Social infrastructure can also be defined as the structures and facilities / spaces that help communities and neighbourhoods to function effectively. These can include:

- Universal facilities / spaces and services such as education, health, active open space, recreation and sport, safety and emergency services, religious, arts and cultural facilities, community centres and meeting places;
- Lifecycle targeted facilities / spaces and services such as those for the elderly, youth and children; and
- Targeted facilities, spaces and services for groups with special needs such as families, people with a disability and indigenous and culturally diverse people.

In light of the above, the following social infrastructure has been included in this analysis (refer to Table 1 and Appendix A for definitions):

- Cultural spaces such as libraries, museums, civic centres, art gallery - these spaces contribute to the cultural fabric of a place;
- Education & training infrastructure such as University, TAFE secondary and primary school which provides the community with access to learning, training and knowledge;
- Health, safety and emergency services such as hospitals, police, ambulance, etc. are important for ongoing safety of the community;
- Leisure and recreation spaces such as aquatic and indoor sport and recreation facilities, which promotes active and healthy living;
- Early years infrastructure such as childcare, kindergarten and Maternal and Child Health (MCH) are important for the community to ensure young children have continued access to early education and support;

- Targeted support includes spaces for youth (e.g. drop in space), seniors (senior citizens space), multicultural groups such as Aboriginal and CALD service support spaces; and
- Community centres and spaces such as meeting space and neighbourhood house are important infrastructure for the community to allow for social connections and resilience to take place.

Facilities/Spaces have been identified as either providing a, regional, district or local function and further information on the hierarchy can be found in Section 2.3.1 below. In addition, Table 1 identifies the responsible agency for delivery of space which has been adapted from the SIP 2015.

Table 1. Scope of Facilities / Spaces

Category	Facilities / Spaces	Level	Responsibility for Delivery of Space
Cultural Facility	Regional Performing Arts/Theatre/Cultural Space	Regional	State Government
	Art Gallery	Regional	Local/State Government
	Convention/Exhibition Space	Regional	Local/State Government
	Museums	Regional/District	Local/State Government
	Civic Space	Regional	Local Government
	Central Library	Regional	Local Government
	Arts, Cultural & Heritage Space	District	Local Government
	Branch Library	District	Local Government
	Neighbourhood/Community Library	Local	Local Government
Education and Training	University	Regional	Federal Government
	TAFE	Regional/District	State Government
	Secondary Schools (Public and Private)	District	State Government/Non-Government sector
	Primary Schools (Public and Private)	Local	State Government/Non-Government sector
	P12 (Public and Private)	District	Non-Government sector
Health, Safety and Emergency Services	Police	District	State Government
	SES	District	State Government
	Country Fire Authority (CFA)	District	State Government
	Ambulance	District	State Government
	Hospital (Public and Private)	Regional	State Government/Non-Government sector
	Community Health	District	State Government/ Non-Government sector
Leisure and Recreation	Regional Sports Facility	Regional	Local/State Government
	Aquatic Space	District	Local Government/Non-Government sector
	Indoor Sport and Recreation Space	District	Local Government/Non-Government sector
	Sporting Clubs/Pavilions	Local	Local Government
Early Years	Maternal and Child Health (Public and Private)	Local	Local Government/ Non-Government sector
	Kindergarten/Preschool(Public and Private)	Local	Local Government/Non-Government sector
	Outside of School Hours Care (OSHC)	Local	Non-Government sector
	Occasional Care	Local	Local Government/Non-Government sector

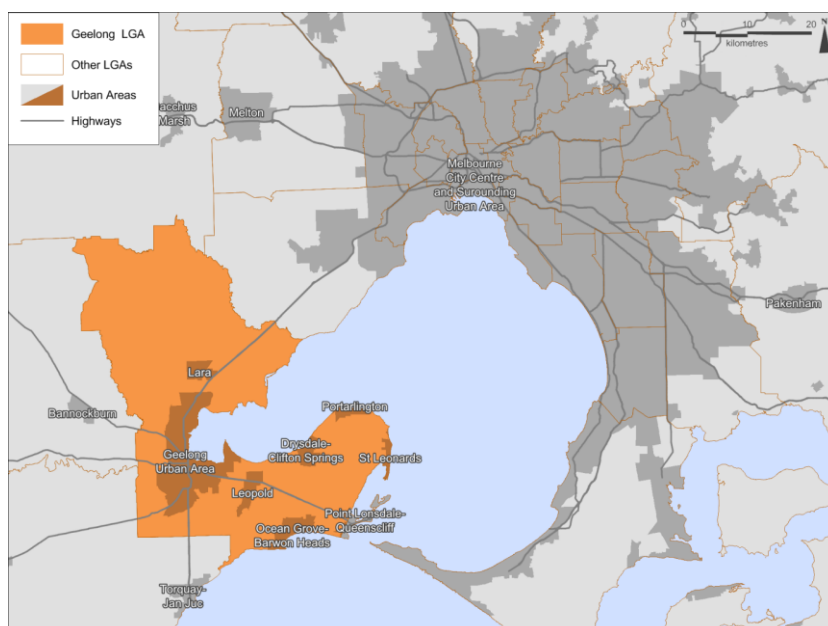
Category	Facilities / Spaces	Level	Responsibility for Delivery of Space
	Long day care/Childcare (Public and Private)	Local	Local Government/Non-Government sector
	Integrated Children's Centre (also known as Early Years Centre/Early Childhood Centres)	District	Local Government/Non-Government sector
Targeted Support	Seniors Space	District	Local Government
	Youth Space	District	Local Government
	Men's Shed	District	Local Government/ Non-Government sector
	Day Respite Space (Planned Activity Groups)	District	Non-Government Sector
	Aboriginal Service Space	District	Non-Government Sector
	Migrant Service Space	District	Non-Government Sector
Community Centres and Spaces	Multipurpose Community Space	District	Local Government/ Non-Government sector
	Neighbourhood House/Community Space	Local	Local Government/ Non-Government sector
	Community Meeting Rooms/Halls	Local	Local Government/ Non-Government sector
	Community Gardens	Local	Non-Government sector / Local Government

Source: City of Greater Geelong Social Infrastructure Plan, 2016

1.3 City of Greater Geelong Context

Within the context of globalisation and regional growth, the CoGG has transformed significantly over the last 10 to 15 years and has seen an increase in both residential and commercial developments as well as diversification of the economy. Located some 75 km from Melbourne's CBD (refer to Figure 2), Geelong is Victoria's second largest city in the fastest growing region and is the primary service centre in the south-western half of the state, playing a key support role to Melbourne (G21 Regional Growth Plan, 2013). Geelong is the G21 region's largest city, providing key services and employment activity for the whole region and housing the majority of the region's workforce.

Figure 2. Context Map for City of Greater Geelong



Source: Thao Ashford Planning, 2016

1.3.1 Summary of Demographic Trends for City of Greater Geelong

The following is a summary of key socio-demographic trends for CoGG which will have implications for the NWGGA.

Population Growth

CoGG area has grown at an average annual rate of 1.2% from 2001-2011. The estimated resident population in 2018 is 247,068 (Forecast ID, 2018) people. The estimated resident population of CoGG area is projected to grow to nearly 326,000 by 2036 according to ID forecast data. This equates to an average annual growth rate of 1.6% from 2016-2036. It should be noted that this growth does not take into consideration the NWGGA developments.

Younger Demographic

Compared to regional Victoria, CoGG area has higher proportions of adults in younger age groups (20-39 years), and lower proportions of adults in older age groups (50-74 years). The age profile of CoGG area is expected to remain similar to the age profile in 2011 (ID 2014). There may be higher proportions of people in older age groups from 65-84 years, and slightly lower proportions of people in other age groups.

Ageing Population

In 2011 an estimated 17% of the regional population was aged 65 or older and this is expected to increase over time to 19% by 2031 (ID 2014). An ageing population will require suitable support services, health care and a range of community and cultural facilities, particularly places to meet and facilities / spaces that offer leisure and recreational programs to support healthy ageing.

A higher proportion of the population over 75 years of age required assistance. In CoGG area, 29% of people over 75 years required assistance compared with 27% for regional Victoria. Many of the towns in the CoGG area are popular retirement destinations and the challenge with an ageing population, particularly in regional communities, is the adequacy of services such as aged care in these locations.

Families with Children

The highest percentage of households were comprised of couples with children (28%), followed by lone people households (26%) and couples without children (26%).

Culturally Diverse Community

CoGG area was more culturally diverse than regional Victoria. A higher proportion of CoGG population was born overseas compared to regional Victoria (16%, compared to 11% for regional Victoria). A higher proportion of the overseas born population spoke a language other than English at home (43%, compared to 36% for regional Victoria).

2.0 Social Infrastructure Planning in New Growth Areas

2.1 Understanding High Growth Communities

Population growth in high growth areas is the result of a combination of 'push' and 'pull factors'. The motivations for moving to high growth areas vary according to individual and family circumstances but common drivers include:

- > Affordable housing;
- > Employment or change in job;
- > Retirement;
- > Improved climate and amenity;
- > Change in lifestyle; and
- > Proximity to families and friends (ABS 2004, p.1).

There is a common demography of new residents to high growth areas:

- > Younger age profile than existing residents;
- > Higher levels of education qualification than existing residents;
- > Young people less likely to be attending an education institution, indicating they are more likely to move after completing a qualification; and
- > High levels of unemployment and lower levels of employment than existing residents (although this improved with the length of stay) (ABS 2009).

High growth areas located close to employment centres tend to attract younger residents, whilst older residents are attracted to seaside communities.

In a number of Australian regions, populations in these high growth areas have been identified as exhibiting a particular "pattern of social need and vulnerability" due to the rapid urban growth in combination with the following factors:

- > High concentration of families with young children;
- > Impact of cost of housing and mortgages (high housing stress and limited rental stock); and
- > Service provision lagging behind growth (Marston Morgan and Murphy 2003, p.12).

This is particularly true for 'interface' areas, where established urban centres, new Greenfield communities and the rural populations intersect.

Local governments in growth areas have highlighted a number of challenges for servicing these new communities including:

- > Time lag in the delivery of infrastructure and the ensuing backlog of facilities and services;
- > Difficulty in delivery services and facilities in line with community expectations, recognising that there will not likely be the same quantum of facilities in new growth areas as oppose to existing areas due to difficulties with service providers raising capital for investment in greenfield areas;
- > Need for local government to be both provider and 'facilitator' of social infrastructure, for example, it is often the case in greenfield sites that there is a larger reliance on council infrastructure;
- > Under-provision in community support, health and education services;
- > Comparatively higher levels of economic and social disadvantage;

- > Paucity of public transport; and
- > Insufficient sources of local employment.

Forward planning for human service investment in new communities has presented many challenges for local governments, policy-makers and service providers. Some of these are highlighted below:

- > Population forecasts for growth areas are difficult to prepare due to a lack of information around the profile for new residents (Rohlin 2006, p.1);
- > Difficulty in securing land upfront in the land use planning process for co-located social infrastructure (SGS 2007d, p.7);
- > Complexity in negotiations to secure partnering and shared-use agreements between multiple providers with differing reporting and governance requirements; and
- > Competition for scarce resources with established areas with documented levels of need.

2.2 Case Studies of Master Planned Communities

This section of the report details case study examples of leading practice Greenfield Master Planned Developments. Five master planned communities were researched and reviewed including Ellenbrook, Springfield Lakes, Ripley Valley, Armstrong Creek and Selandra Rise.

Ellenbrook, Western Australia

Ellenbrook is a master planned Greenfield development undertaken as a joint venture between the WA Department of Housing and the developer, LWP Property Group, in the City of Swan. Relatively isolated from neighbouring suburbs, Ellenbrook has been designed to function as a self-sustaining community. It is situated approximately 25 kilometres north east of the City of Perth and has been designated a Regional Centre in the Metropolitan Region Scheme. Initial planning for the 15-year joint venture commenced development in 1992 and has had a strong community engagement focus from day one.

Springfield Lakes, Queensland

Springfield Lakes (also known as Greater Springfield) is situated in one of the fastest growing regions in Australia and is a planned community conceived conceptually in 1991. It is located approximately 25 kilometres southwest of the Brisbane central business district. Springfield Land Corporation conceived and established the Masterplan for Springfield Lakes and has nurtured the pillars of the community namely community development, education, information technology and health. These pillars have ensured a high level of amenity to an area that was previously economically and socially disadvantaged.

Ripley Valley, Queensland

The Ripley Valley was declared a Priority Development Area by the Department of Infrastructure and Local Government and Planning in 2010, and is located in one of the largest growth areas in Australia. The primary aim of the Ripley Valley is to provide 50,000 dwellings to support a regional population of 120,000 people as the area provides opportunities for significant residential growth and to achieve the regions affordable housing needs. The Urban Land Development Authority (ULDA) expects that the Ripley Valley will become a 'model' new community embracing or even exceeding 'best practice' in ecological sustainability.

Armstrong Creek, Victoria

Situated 11km south of the Geelong CBD, the Armstrong Creek Urban Growth Area is approximately 2600 hectares of greenfield farming land. The area is currently identified as Victoria's sixth growth area and is part of the Geelong region, recognised as the fastest growing region in Victoria. Geelong's Municipal Strategic Statement (MSS) designates Armstrong Creek as a primary growth corridor for future urban growth, noting that stage 1 of the project will accommodate majority of Geelong's long term growth. The key objective for the site is to develop land to provide an extension to the Greater Geelong urban area to accommodate for the population expansion proposed for the region.

Selandra Rise, Victoria

Located in Melbourne's South-East growth corridor in the City of Casey, approximately 53kms to the east of Melbourne CBD and 20km from the Mornington Peninsula, Selandra Rise is a greenfield master planned development site. Selandra Rise is the result of an innovative partnership between Stockland, the Planning Institute of Australia, the Growth Areas Authority, the City of Casey and the local community to deliver a uniquely planned destination with an emphasis on "liveability". Selandra Rise was designed and developed to address the complex issues surrounding health and the built environment and strived to incorporate and implement best practice planning in addressing these challenges. A key focus of the development was to use Selandra Rise to be a model example of these features and incorporate the developments success in the design and development of future residential communities.

The review of the case studies focused on the following key themes (refer to Appendix B):

- > The expected demographics of the greenfield developments;
- > Innovative delivery models for social infrastructure and benefits (as an attractor) and challenges (capital investment);
- > Community development initiatives for social cohesion;
- > Implementation including collaboration and partnerships;
- > Funding models for social infrastructure and;
- > Planning and community development principles.

A summary of these themes is discussed below.

2.2.1 Expected Demographics of Master Planned Communities

Through the analysis of case studies, it can be concluded that the planning and development of these sites appeals to specific members and demographics of the wider community. Studies undertaken in academic literature have indicated that this form of development appeals to a younger demographic and a review of the population demographics found in each of the case studies support this.

The following key findings have been noted:

- > **Younger demographic:** Predominately each of the case study sites maintained a younger demographic population with a large proportion of population being aged between 19-34 years old. Primarily, these residents were attracted to greenfield developments in response to provision of affordable house and land packages that appeal to first home buyers. This phenomenon was particularly evident in Selandra Rise and Armstrong Creek. However, despite the prevalence of a younger demographic, the case studies show that greenfield developments can also appeal to a broader demographic with established families and the elderly. A good example of this is The Vines development at Ellenbrook. The Vines is a

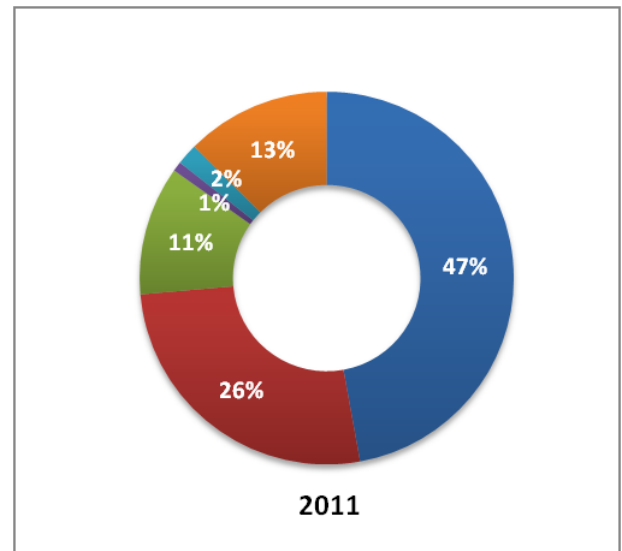
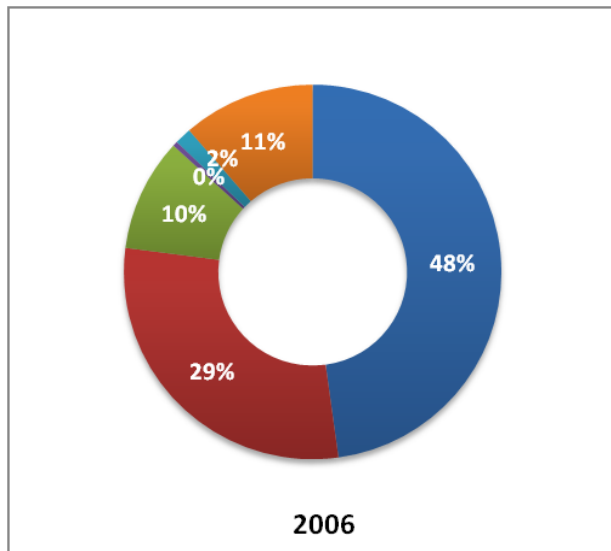
neighbourhood precinct in the master planned community targeted at retirees. In addition, as the development matures the demographic profile typically follows similar trends to the broader area.

- > **Larger household sizes:** The case study research shows that typically greenfield master planned developments tend to have a higher average household rate when compared to the broader area, particularly at the outset of development. This is quite evident in the early stages of development where a number of case studies exhibited a higher average household size which has slowly decreased as the development matures. Of the case studies reviewed, Ripley Valley had the highest average household size of 3.1 in 2011. Ellenbrook and Springfield Lakes both recorded the same average household size of 2.95 in the same period and Armstrong Creek¹ appears to have a slightly lower rate at 2.86. Historic data for Ellenbrook shows that in the first few years of development the average household size was similar to Ripley Valley at 3.02 (according to 1991 ABS Census data). Similarly, 2006 ABS Census data for Springfield Lake suburb shows a similar rate of 3.00.
- > **High proportion of families with children:** The predominant family types in the case studies reviewed is couple families with children. Whilst, couple families with children are the predominant family type, ABS Census data between 2006 and 2011 shows a decline which was evident in Ellenbrook and Springfield Lakes.
- > **A range of housing types which attract diverse population:** The master planned community development of the Ripley Valley has ensured that a range of housing types have been provided to deliver alternative accommodation for different demographics, in particular different size homes for families. Similarly, the development of Ellenbrook has ensured that smaller dwelling types such as apartments and townhouses have been provided to accommodate the retired, elderly or mobility impaired. The planning regime for Armstrong Creek set out to achieve a greater mix of housing densities and sizes, however to date this has not yet been achieved on the ground. In addition to this there is also a pattern of some master planned communities appealing to migrants and those who are born outside of Australia. This is particularly evident in Selandra Rise where 30% of all residents are born overseas.

¹ Forecast Average Household Size from Forecast ID for 2016

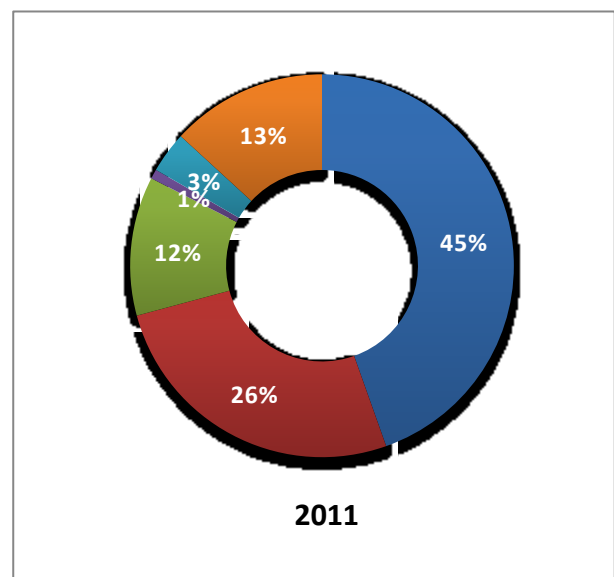
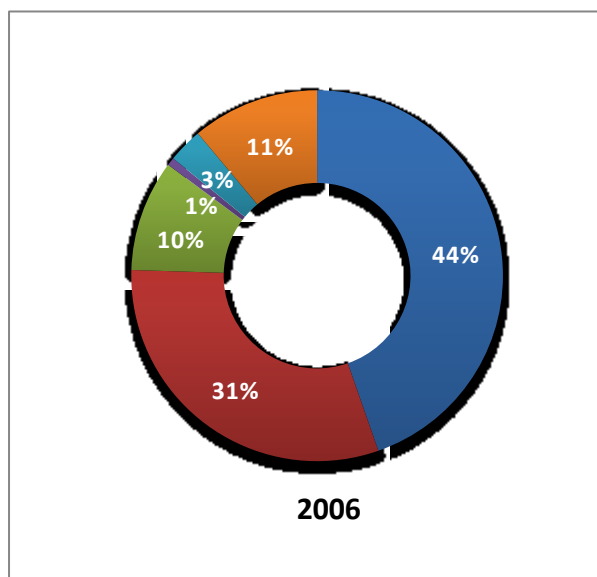
Household Type

Ellenbrook



- Couples with children
- Couples without children
- One parent families
- Other families
- Group household
- Lone person

Springfield Lakes

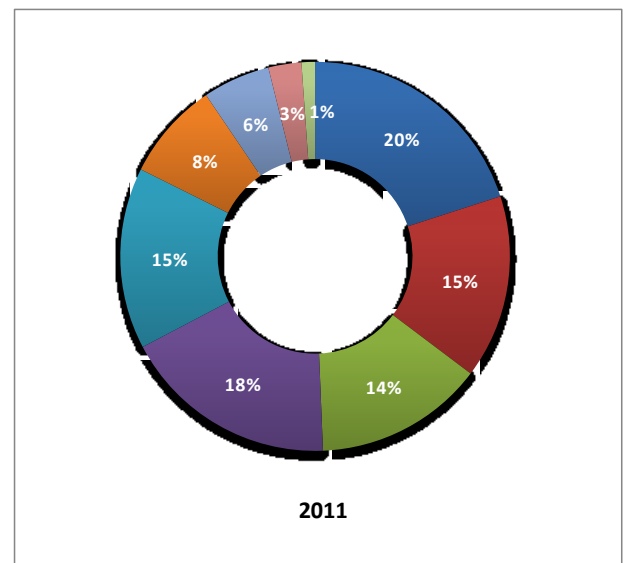
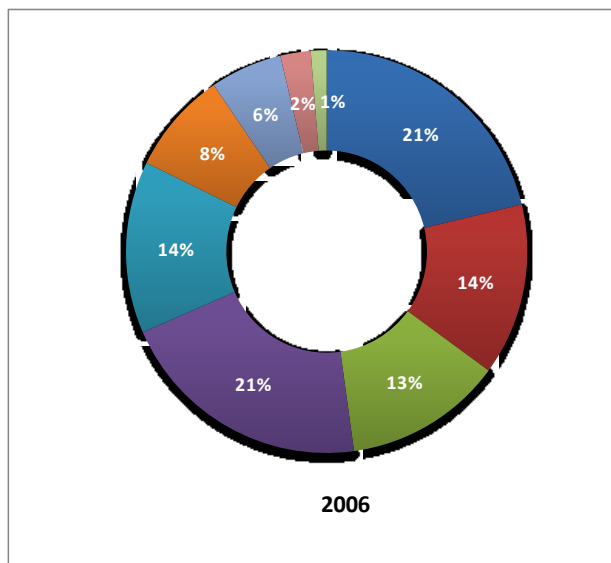


- Couples with children
- Couples without children
- One parent families
- Other families
- Group household
- Lone person

Note: At the time of this report there was no time series data for the newer developments of Armstrong Creek, Selandra Rise and Ripley Valley.

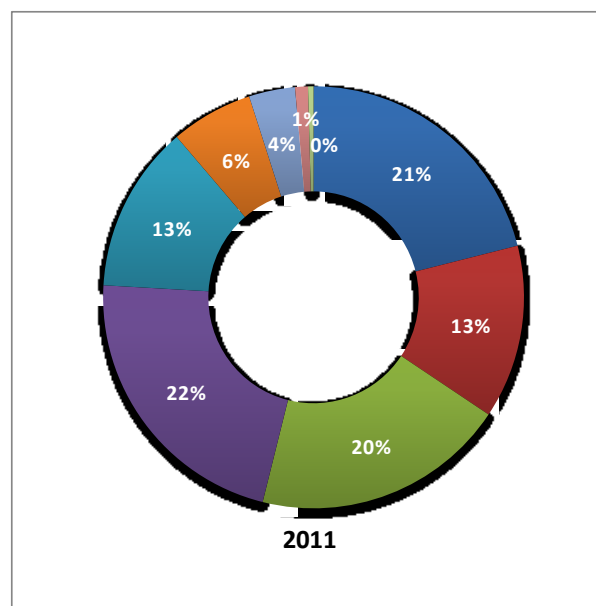
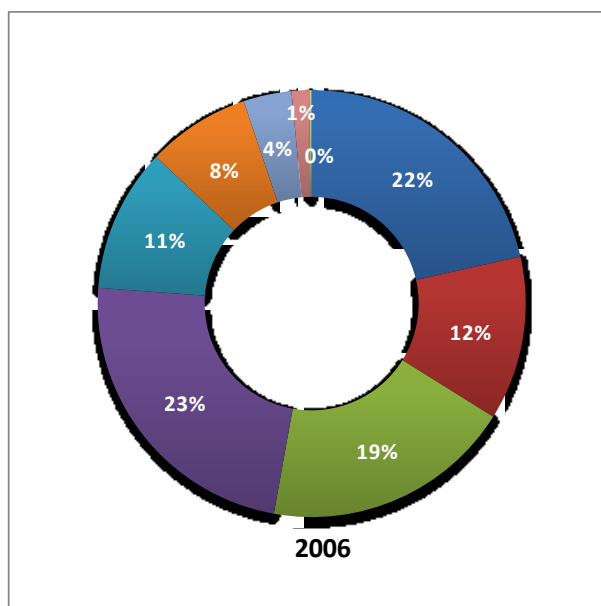
Age Structure

Ellenbrook



■ 0 to 9 ■ 10 to 19 ■ 20 to 29 ■ 30 to 39 ■ 40 to 49
 ■ 50 to 59 ■ 60 to 69 ■ 70 to 79 ■ 80 and over

Springfield Lakes



■ 0 to 9 ■ 10 to 19 ■ 20 to 29 ■ 30 to 39 ■ 40 to 49
 ■ 50 to 59 ■ 60 to 69 ■ 70 to 79 ■ 80 and over

Note: At the time of this report there was no time series data for the newer developments of Armstrong Creek, Selandra Rise and Ripley Valley.

2.2.2 Innovative Models of Social Infrastructure Delivery

The delivery of social infrastructure including health centres, education, parks and recreation facilities is a critical component in the development of master planned communities. The most common form of delivery for social infrastructure identified in the case studies is the early provision of the infrastructure in the community. Whilst each of the case studies used the early provision as a model of social infrastructure delivery, the methods as to which this was achieved varied throughout the case studies. For the development of Selandra Rise, social infrastructure was provided very early in the development of the community with the primary aim of building communities from a 'ground up' approach, allowing residents to become part of the community as they moved into the area. In addition to early social infrastructure delivery, the developers at Selandra Rise extended the process by conducting extensive community engagement practices to identify the most desired attributes in relation to social infrastructure for the local community. The form of this early infrastructure was predominately identified in the delivery pathways, parks and recreation but also included other facilities such as health and education. This pattern was repeated in the other case studies such as Springfield, Ellenbrook and the Ripley Valley where these facilities were provided as development on adjacent land was taking place.

Whilst it is acknowledged that all of the case studies undertook an early provision strategy in the delivery of social infrastructure, the case study of Ellenbrook identified some innovative and unique delivery modes. These included:

- > **Schools in Houses** – The early delivery of education facilities was achieved through the use of homes as school classrooms as it was identified that education providers might be reluctant to invest in the area without proven need. Groups of homes were used as classrooms by both state and private primary schools, which shared a common play area. After support had been received for the development and official education facilities were constructed these homes were converted into conventional dwellings to support the accommodation of residents.
- > **Provision of community facilities** – The Ellenbrook Joint Venture made a decision to incorporate community and retail facilities right at the start of each 'village' project and small, accessible local shopping centres were built even before the houses. Each village is based on the WA Liveable Neighbourhoods design framework and pathways and bike tracks ensure that no house is more than 400-800 metres away from a local shopping centre. The land sales offices were the first tenants in the retail buildings and these premises were later taken over by local businesses.
- > **Early provision of parks and paths** – Along with other community facilities, parks were planned and constructed at the beginning of the development process for each village at Ellenbrook so that new homeowners have a focus for their future community. Given that the most popular form of exercise in Ellenbrook is walking and cycling, shared paths have been constructed around the whole development, which afford exercise options as well as easy access to sports, retail, and other facilities.

In the case of Selandra Rise, a key focus was early delivery of some facilities and services. The earlier delivery of a bus to service residents, construction of a community centre (Selandra Community Place), good walking and cycling paths and access to open space within 300 metres from all dwellings were delivered at Selandra Rise. A longitudinal study undertaken of the development found the community centre reduced social isolation for some residents; provided a meeting place for new mothers and residents planning the community garden; and was a hub for other community development activities.

The public realm features strongly in a number of developments:

- > Robelle Domain is a central parkland located in Greater Springfield. The parkland offers a free play water play, cafes, interactive playgrounds and open space. It is situated on 24 hectares and contains more than 11km of boardwalks, sporting fields, walking tracks and playgrounds. The parkland adjoins Orion Lagoon which provides pools of varying depths. A 5,000-capacity amphitheatre is also located on site and provides a venue for public events of all scales.

- > Splash 'n' Play Water and Adventure Park (similar to Robelle Domain) located in Rippley Valley offers water play for all ages. Located next to the park is the versatile grassed amphitheatre which is used for concerts, family gatherings etc.

2.2.3 Community Development Initiatives for Building Social Cohesion

A key challenge for the effective delivery of master planned communities is building social cohesion in the local environment. As a result of this challenge, community development initiatives have been incorporated in a number of developments to counteract the occurrence of segregation, isolation, enclaves and disconnectedness in Master Planned Communities. Through an analysis of the five case study sites it has been identified that there are a number of community development initiatives that have been undertaken to build social cohesion and integration in the local community and have been successful in achieving outcomes.

Place Planning (stakeholder engagement)

The City of Swan instituted place planning of the various districts in their local government boundaries in 2003. The Ellenbrook/Vines/Egerton (Vale) Place Plan was the pilot for this project, which utilised community and stakeholder engagement to develop a picture of the place that is Ellenbrook and to identify challenges and successes in this new community. *“Place planning involves seeing things from the point of view of the community at the Place level. It is an approach that shifts the focus of the City organisation from outputs of a function to that of outcomes in the Place. Therefore, place planning is based on stakeholder involvement to ensure an integrated approach. Place planning can be defined as a pro-active process of integrating social, environmental, physical, and economic planning” (City of Swan, 2004).*

Similarly, developers for Selandra Rise employed extensive local community engagement to help determine key project elements such as parks and community services in the early stages of development.

Community Development Officers

An initiative employed by the developer of Ripley Valley, Ellenbrook and Armstrong Creek (Warralily) to build social capital was the appointment of a community development officer based on site. Similarly, The Springfield Land Corporation & Delfin Lend Lease employed a community liaison officer to program community development initiatives in Springfield Lakes.

- > As part of the Ripley Valley community development initiative, a full-time Community Development Officer has been appointed and is based at the Providence Sales and Community Centre. The role of the Community Development Officer is to welcome new residents and help settle them into the new community, coordinate a variety of community programs, events and activities for all age groups living in the community, making sure that the community is informed about what is going on in Providence; and support the community to come together to participate in local initiatives and improve community wellbeing.
- > A Community Development Officer, whose role was to help facilitate the early provision of relevant facilities and services, was appointed in 1995. In the early days of Ellenbrook this role was part of Ellenbrook Management's function. As Ellenbrook has reached maturity and the population has grown to 20,000, this role has been handed over to the City of Swan to bring Ellenbrook in line with the Council's overall community development policies. There is now a Community Development Officer, two Youth Officers and a Place Manager all employed by the City of Swan and based in Ellenbrook Town Centre in the City of Swan's offices.
- > What appears to be the enduring outstanding characteristic of Delfin Lend Lease (DLL) is its considerable human resourcing of community development and the influence that these staff members wield in terms of the development of a project. The result of such investment is an ever-present hive of activity, including

many generic events typical of most Delfin communities including a 'welcome' loyalty and community development program; community liaison officers, links to social service providers, social and sporting clubs, sponsorships, resident advisory groups, community intranet, community events, resident seminars and volunteer programs.

- > Warralily in Armstrong Creek has an onsite Community Development Officer whose role is to connect residents to services and networks. The Community Development Officer is employed by the developers (Warralily) and works in close partnership with the Warralily Residents Groups to plan and host community events and activities, support skills in event management, recruiting volunteers and gaining sponsorship etc.

Community Hubs

Most case studies provided some form of community centre/hub at the outset of development to encourage community participation.

- > In Selandra Rise, a sustainable living hub (Selandra Community Place) that residents could visit and discover ways to conserve energy, reduce water consumption and learn sustainable landscaping practices is provided. The centre is an Australian-first, interactive, eight-star, zero energy building, delivered in partnership with Stockland, Henley Properties Group, and the South-East Councils Climate Change Alliance (SECCCA) who were supported by CSIRO, VicHealth and Sustainability Victoria. In addition to the sustainability focus, the centre also provides residents with sustainability information, access to health and wellbeing activities and a small business centre as soon as they move in, along with promoting opportunities for residents to meet and connect with their neighbours.
- > Club Armstrong (which is currently being built by Villawood) will be a state of the art facility for exclusive use to eligible Armstrong residents. Facilities include, lap and resort style pools, gymnasium, cafe and lounges, tennis courts, meeting and functions spaces (annual fee).
- > DLL co-ordinate and fund a number of activities, festivals, and events most notably through the Kath Dixon Family Centre, which operates several programs for parents with infants including playgroups and a toy library. Other initiatives underway include finalising a "Safety for 0-5 year olds" community education kit & seminar for a pilot at Springfield Lakes to be tested with playgroup mums and users of the community centre, and the 'Safe Communities' theme for the new display village that is due to open in 2017 has involved working closely with the organisation Kidsafe.
- > Providence Centre at Ripley Valley is a community hub that offers a community room for groups to meet, with the capability to transform into a large space with indoor cinematic screen, as well as opening up onto the deck for larger gatherings, a gallery space to showcase local artists and displays, an electronic Community Video Screen, a kitchenette with tea and coffee facilities for community meetings and a family friendly urban café, Forty West.

2.2.4 Implementation Including Collaboration and Partnerships

Through an analysis of the case studies it can be concluded that the success of Master Planned Communities is inherently reliant on the collaboration between key stakeholders and government bodies associated with the project. However, the method of collaboration can vary significantly in the development of Master Planned Communities. Predominately, partnerships between the local government and the developer or the deliverer of the project are highly successful and this is clearly evident in the case study sites. An example of a high degree of collaboration occurring can be highlighted in the development of Ellenbrook and the Ripley Valley. In both scenarios, the developer became a part of the project highlighting the dedication towards effective and successful community outcomes. In the case of Ellenbrook, LWA Properties located their head office in the town centre, allowing the planning and development team to ensure ongoing sustainability of the local community through the lifetime of the project. This dedicated collaboration between local governments and the developer is also

highlighted in the Ripley Valley where Sekisui House Taku Hashimoto (the developer of ECCO-RIPLEY a separate precinct) presented \$1.5billion towards the development of the Ripley Valley Town Centre.

In addition to the collaboration between developers and local government bodies, the success of the case studies has also been reliant on the vertical integration between different levels of government. Despite the fact that the Ripley Valley is a designated Priority Development Area (PDA), the development assessment powers have been allocated to the Ipswich City Council, highlighting the success of vertical integration in the government sector. In addition to this the ULDA is working with a number of key stakeholders including landowners, education providers and developers to ensure the best outcomes for the community in Ripley Valley. Lastly, it has also been identified that in the case studies there was also collaboration with non-government bodies such as Planning Institute of Australia (PIA). The primary example of this occurring is highlighted in Selandra Rise where the PIA were involved in collaboration with the Victorian State Government to create innovative design standards for suburbs of the future.

2.2.5 Funding Models for Social Infrastructure

The funding models for social infrastructure included in each of the case studies varied significantly. Whilst some sites relied significantly on support for social infrastructure from the state government such as Springfield, other case studies employed the use of public and private funding models. This method was evident in Ripley Valley, Armstrong Creek and Selandra Rise. For the Ripley Valley, infrastructure will be incorporated through the use of infrastructure charges that are associated with the PDA. Alternatively, the capital investment for social infrastructure in Armstrong Creek will be achieved through an infrastructure “Place Based” model relying on both private and government sector investment. However, the most innovative solution that was identified in the case study sites was the funding model for social infrastructure utilised in Ellenbrook. Through the use of joint venture model a levy of \$300 of every block sold is used to provide social infrastructure. In addition, the joint venture matched these funds with those available from state and federal governments and non-government organisations to finance construction of a recreation centre and other community facilities.

2.2.6 Planning Principles and Community Development Principles

A key component of the development of master planned communities is the planning principles that are used to design and develop the communities. It was identified in the case studies reviewed that there are several common elements that are shared in relation to planning principles and community development principles including:

- > Effective and sustainable transport links
- > Diversity and mix of housing type
- > Early community formation
- > Early provision of social infrastructure
- > Mixed use town and villages
- > Site sensitive and environmentally responsive design

2.3 Social Infrastructure Planning Framework

2.3.1 Hierarchy

As noted in the City of Greater Geelong SIP (2015), community facilities generally operate within a hierarchy of provision, with different scales of infrastructure servicing varying sized catchments in terms of the area and number of people serviced. For example, primary education, child care centres and general practitioners generally service local catchments; secondary schools and community health centres generally service district catchments; and hospitals, universities and correctional centres will service a local government area or region.

The SIP adopts the following basic model of community facility provision:

- > The local area level - as a guide usually between 5-10,000 people;
- > The district level - generally between 20-30,000 people, although in some cases districts of up to 50,000 people can be identified; and
- > The LGA wide level, or in some cases sub-regional or regional level – in this document we will refer to this as the regional level.

These levels of service provision have been adopted in the development of benchmarks for the community facilities in the NWGGA. It should be noted that local and district level benchmarks only have been applied to the analysis of future facilities requirements for the Northern and Western Growth Areas separately. A gap analysis for regional facilities has also been undertaken utilising the combined NWGGA and Geelong LGA as the defined geographic region.

Table 2. Hierarchy of Social Infrastructure

Hierarchy	Description	Expected Population Catchment	Relevant Activity Centres
Regional Level	Social infrastructure at the regional level meets most health and community support needs, offers the full range of education, training and employment avenues, fosters community participation and cultural expression, and offers a high level of expertise in supporting quality of life. This includes health infrastructure such as hospitals, community health services and specialist health services such as mental, paediatric and geriatric health; education facilities / spaces such as universities and TAFE institutes with satellite campuses; the full range of government services (local, State and Commonwealth); cultural infrastructure such as entertainment centres; and major sporting facilities. In some instance regional level facilities / spaces may service more than one local government area. Such infrastructure is generally planned and funded at State or Commonwealth level, usually with local government participation. As such, regional social infrastructure has an important role in resourcing and supporting facilities / spaces and services at district and local level.	This catchment can cater for a population in the order of 150,000 +	Regional Centre
District Level	At a district level, social infrastructure is expected to address the range of universal needs, support people's lifecycle needs (from maternal health to comprehensive in-home services for older people) and address issues of disadvantage. Planning at district level	This catchment caters for up	Sub-Regional Centres

Hierarchy	Description	Expected Population Catchment	Relevant Activity Centres
	therefore needs to consider a diverse range of community needs—health, education, training, support, employment assistance, emergency services, participation and service delivery requirements. The provision of hubs is appropriate at district level to support local health, learning, and support networks. The catchment of district-level social infrastructure generally ranges from 20,000–30,000 people and often encompasses several local centres. In some cases, larger districts of up to 50,000 people can be identified, depending on urban form. The scale of facilities / spaces is larger to accommodate a larger population and geographical area, and higher-order services. Areas designated in council's Activity Centres Hierarchy as Sub-Regional Centres will increasingly assume a district provision role.	to 50,000 people.	
Local Level	Local level social infrastructure is provided to meet health, learning, and support needs and foster participation and social capital at a local level. With the exception of State-provided facilities, local social infrastructure is usually planned in partnership between community organisations and local governments (and with developers in the case of major development areas) Planning for new local areas needs to include a facility / space, which will act as a catalyst for developing social capital. Depending on the scale of development, this may range from provision of a park with club house facilities, to the conversion of a sales office to a neighbourhood house, to construction of a small multi-purpose centre. Such centres can provide access to social infrastructure such as information and services through community networks and computer access. Areas designated in council's Activity Centres Hierarchy as Neighbourhood Centres and Town Centres will increasingly assume a local provision role. Example of local level infrastructure includes community hall, primary school and child care.	This catchment caters for up to 10,000 people.	Neighbourhood Centres Town Centres

Source: City of Greater Geelong Social Infrastructure Plan, 2015

2.3.2 Provision Rates for Community Facilities

Benchmarks

The concept of benchmarking has been used over many years to indicate a best practice standard, or target, for the provision of community facilities and services. Benchmarks are a powerful tool to enable forward planning, co-ordination and negotiation between respective community facilities providers. They also enable monitoring of the adequacy of infrastructure provision and its contribution to developing social capital.

The benchmarks used to assess social infrastructure requirements for the NWGGA has been adopted from the Greater Geelong Social Infrastructure Plan, 2015 together with other reliable sources. It is recommended that new development, particularly in respect of any new cities, towns and villages, provide high standards of social infrastructure. Table 1 outlines the recommended benchmarks for the provision of community facilities in NWGGA at a local, district and regional level. Benchmarks are provided as a ratio of one community facility to 'x' thousand people, except where otherwise noted.

It is important to note that benchmarks are minimum best practice standards and more detailed structure or local area planning in respect of any new cities, towns and villages may require higher standards that are more suited to the specific circumstances of a particular locality.

While benchmarking provides some useful indicators of the type and quantity of social infrastructure within a given area, or to serve a given population, factors that need to be considered alongside benchmarks include:

- > That social infrastructure planning is not a static event but an ongoing process
- > The limitations of using benchmark analysis for services provision (for example counselling service, meals on wheels, etc.) as these services can operate out of a number of facilities. Planning for services provision should be explored in conjunction with facility provision
- > Benchmarks can provide a guide for provision of facilities but need to be balanced with consideration for local social, political, and economic conditions and the needs and priorities of surrounding communities
- > Consideration of boundaries and the interplay between local government areas and neighbourhood catchments. No area can be considered in isolation when determining the provision of social infrastructure
- > Consideration of ultimate facility requirements provides a broader and more robust context in which to consider shorter term, priority requirements. In particular, consideration of the timing of threshold populations required to support higher levels of facilities provision may provide a rationale for bringing forward future facilities demand, as further opportunities for co-location can be realised.
- > Geographic barriers such as rivers, roads etc.

The following should be read in conjunction with Table 3:

- > No benchmarks have been provided for early years infrastructure as the City of Greater Geelong has a slightly different approach for determining overall need for children services in Geelong (refer to Section 2.2.3).
- > ~ The Department of Education and Training (DET) provision rates for public schools are as follows, 3000 dwellings per government primary school, and 10,000 dwellings for one government secondary school. The dwelling figures have been converted to population figures by applying an average 2.5 persons per dwelling. The average household size figure of 2.5 has been derived from the overall State average household size as it is representative of broader community. In addition, the provision rates for schools have been lowered to reflect non-government provision of schools which anecdotally accounts for 30% of overall school's provision.

Table 3. Benchmarks for Community Facilities/Spaces

Facility/Space	Benchmarks
Cultural Facilities	
Central Library	150,000
Branch Library	50,000
Arts and Cultural Centres	40,000
Regional Museum	200,000
Museum	30,000
Regional Performing Arts/Theatre/Cultural Centre	300,000
Convention Centre/Exhibition Centre	200,000
Civic Centre	120,000
Regional Art Gallery	150,000
Education & Training ~	
Primary Schools	5250
Secondary Schools	17,500
TAFE Regional Facility	150,000
University	150,000
Health, Safety & Emergency Services	
Hospital	200,000
Community Health Centres	40,000
Police	40,000
SES	40,000
Fire	40,000
Ambulance	40,000
Targeted Support (Youth, Seniors, CALD)	
Aged Care/Respite Centre	20,000
Seniors Centre	20,000
Youth Centre/Space	20,000
Men's Shed	20,000
Migrant Resource Centre	45,000
Aboriginal Service Centre	45,000
Community Centres & Spaces	
Neighbourhood Community Centre	10,000
Multipurpose Community Centre	20,000
Community meeting rooms/Halls	4,000
Community Gardens	20,000

Source: City of Greater Geelong Social Infrastructure Plan, 2015

Thresholds

As well as determining benchmarks of provision, thresholds need to be established to determine when the infrastructure should be physically provided, this is particularly relevant to new emerging growth areas. That is, it is important to decide what proportion of the catchment population is required to be resident in the locality before the community facility is provided. Often infrastructure is not provided until 100% of the population is in the catchment and by the time the facility is provided, it is at or near capacity. Having a threshold acts as a trigger for early planning and provision. This is an important decision as, ideally, even the first resident within an area should have access to a certain level of infrastructure.

It should be further noted that for most community facilities, planning should begin two to three years before the date required in relation to the relevant population thresholds. Longer lead times apply to some community facilities, for example:

- > An estimated 3 year lead time for the development of primary schools;
- > An estimated 5 year lead time for high school provision;
- > Up to 5 years for library service provision;
- > Up to 3 years for the development of community hubs; and
- > Facilities involving multiple stakeholders and the satisfaction of multiple uses may take up to five years to bring to fruition.

The study team recommends the use of threshold in the provision of community facilities in the NWGGA in order to ensure that the highest level of social cohesion and the development of social capital are achieved, consistent with the suggested desired outcome and best practice planning principles. This will ensure that social infrastructure leads development through early provision and does not lag too far behind development. As noted in Table 4 the following has been recommended.

Table 4. Proposed Thresholds for Community Facilities Provision in Growth Areas

Level	Proposed Threshold	Rationale
Local	20%	Local social infrastructure is vital for establishing community development and social cohesion within a new community. Therefore, the provision of these facilities should be provided at the outset of development. It is acknowledged that in some cases, this may not be possible and it is therefore recommended that a 20% threshold be used as the absolute threshold for local infrastructure.
District	60%	District facilities provide essential services that cater to a wide population. Many of these facilities are required to support a growing population and should be provided to the community as the population matures. It is recommended that district facilities be triggered when 60% of the catchment is in place.
Regional	80%	Regional level infrastructure requires a large population to sustain its development. However, it is recognised that regional significant infrastructure is needed to maintain/ encourage growth and development. In this regard, it is recommended that planning for regional facilities be triggered when population catchment reaches 80%.

2.3.3 Provision Rates for Early Years Infrastructure

Council's early childhood planning estimates acknowledge and include the likelihood that a large proportion of child care and kindergarten within the estimated required service levels will be provided by the commercial and NGO sectors (including schools in relation to kindergarten provision). Council's current level of long day child care provision represents about 11.7% of the total level of provision across the municipality. Notwithstanding the role of the private market in delivering child care, it will be important for Council to provide early years infrastructure in the early stages of development as these are unlikely to be delivered by the private market until development matures enough to support the facility. This is particularly relevant for the Northern Growth Area where there is evidence of an already disadvantaged community.

The provision rate for Kindergartens has been informed by the recent VPA Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas. Based on the VPA methodology, the provision rate for Kindergartens in NWGGA is **1 Kindergarten room (double room) per 5729 Dwellings**. The following assumptions have been made in determining the kindergarten provision rate:

- The Geelong percentage for session-based day care which is 64%
- The proportion of 4-year-olds is based on the Armstrong Creek figure of 1.8% as an average for both peak period and long term.

In addition to the kindergarten provision rate, the following assumptions have been used to determine the provision for other early years infrastructure such as maternal child health, child care etc.

Table 5. Early Years Infrastructure Provision Rates

Service Type	Minimum Provision	Description	Total Current CoGG Provision	Avg Provision Rate per pop. Children aged 0-4 years
Maternal and Child Health	Dual Nurse Centre - 2 consulting rooms	One EFT Nurse per 140 births per year.		
Centre Based Child Care	Licensed for 120 places		4154	3.4
Occasional Child Care	Room licensed for 33 children		302	46.6
Playgroups	Multi-purpose Room with outdoor playground	Weekly playgroups sessions	200	70.4
Outside School Hours Care	N/A	Based average provision rate for children aged 5-11 years	3281	6.1

Source: CoGG, 2017

2.3.4 Provision Rates for Open Space

Ten percent of the net developable land for residential use is to be available as open space for active and passive recreation purposes. Two percent of the net developable land in an employment area is to be set aside as open space. An additional amount of land is required for the provision of indoor sport facilities. All open space is to be unencumbered and to be of a size and shape that allows for flexibility of use and diversity across a range of activities.

Open space will be allocated to different classifications that reflect the usage type—whether the open space is to be used for active purposes such as sport or whether it is to be used for passive purposes such as play and picnicking.

The classification and provision ratios used in this study were prepared in June 2017 by Australian Social & Recreation Research Pty Ltd (ASR) with input from Geelong City Council Officers. Council officers further refined the provision ratios in July 2018 and these updated provision ratios have been used in this study.

Classification is broadly related to whether the land is for active or passive pursuits. It is further refined reflecting the hierarchy (catchment) that the open space will serve—from local level (or district in the case of active open space) to regional level. Typically, the level of embellishment rises as the hierarchy increases. Table 6 sets out the agreed land provision rates for the NWGGA.

The nomenclature for the hierarchy of open space used by the City of Greater Geelong does not correlate with the terminology used in the preparation of Infrastructure Contribution Plans. It should be noted that for the purposes of consideration in a future Infrastructure Contributions Plan, the open space facilities which are classified as local, district or subregional are effectively all serving a local catchment and are eligible to be included in any future Infrastructure Contribution Plan. Regional infrastructure as described in this report is outside the Infrastructure Contribution Plan system.

Table 6. Open Space Benchmarks

Classification	Provision Ratio	Comments
All open space for passive and active parkland	10% of unencumbered residential land	
All open space (unencumbered) in an employment area	2% of unencumbered land in employment areas	
All active open space	6% of unencumbered land	Located within 1km of 95% of all dwellings. Evenly distributed taking barriers into account. Co-located with maximum one school each and only where distribution/accessibility is not affected. Fields/courts to run north-south and be side-by-side rather than end-to-end where possible.
District active open space	1:5,000 residents	District active open space to be minimum size of 9.5ha. Sub-regional active open space to be 10-20ha. Road frontages to be a minimum three (3) sides. Other characteristics as per Sustainable Communities Infrastructure Development Guidelines.
Sub-regional active open space	1:30,000 residents	
Regional Active Open Space	1:200,000 residents	Variable size, configuration and location. Location to suit the specific activity. Combine the open space with regional passive open space where appropriate. Road frontage to all sides. Other characteristics as per Sustainable Communities Infrastructure Development Guidelines.
All passive open space	4% of unencumbered land	Within 400m walking distance of all households. Evenly distributed taking barriers into account. Configuration is a regular size and shape (i.e. as square as possible). Where it is unencumbered, contiguous and of regular size and shape, passive open space can be co-located with active open space or encumbered land (i.e. waterways, drainage, easements). Other characteristics as per Sustainable Communities Infrastructure Development Guidelines.

Classification	Provision Ratio	Comments
Local passive open space	1:1,497 residents in Northern Growth Area and 1:1,711 in Western Growth Area (see Note 1).	1ha min. in residential areas; 0.5ha min. when co-located with encumbered open space and 0.3ha min. when in activity centre, employment or mixed use area. Road frontages to minimum three sides.
District passive open space	1:5,000 residents	Minimum size is 2ha. Variable locations which may take advantage of a specific landscape feature. Configuration is a regular size and shape (i.e. as square as possible). Road frontages to minimum three sides. Typically the open space adjoins a district active open space.
Regional passive open space	1:200,000 residents	Generally located within a 20 minute drive of residents. Size and shape are variable taking into consideration the landscape and landform. Combine with regional active open space where appropriate. Road frontages to all sides.
Note 1: The variation is due to population density and landforms. The trigger for a local passive open space is related to the design of the urban structure i.e. that all residents are within 400 metres of a local passive open space. The benchmarks reflect the number of local passive recreation open spaces CoGG has estimated that are required to meet this provision ratio. Note 2: Local, District and Sub-regional open space are classified as local and will be included in a future ICP (Infrastructure Contributions Plan)		

Source: Adapted from the NWGGAs Ratios-Benchmarks Project Final Report, ASR Research, 2017

2.3.5 Provision Rates for Outdoor and Indoor Facilities

Land for indoor recreation centres and indoor aquatic and leisure centres is separate from open space for passive and active recreation. For indoor recreation centres land is to be provided at the rate of one hectare per 12,000 residents. The land will generally be provided adjacent to or as part of a state school.

For indoor aquatic and leisure facilities an appropriate site of 15,000m² is required for every 60,000 residents.

There are separate benchmarks for the provision of facilities that will be provided on passive and active open space land. For the most part they are active facilities (i.e. they will be located on active open space). The exceptions to this are playgrounds and skate parks which will generally be provided on passive open space land.

The provision rate for these facilities is shown in Table 7. Where facilities have a provision rate that is greater than 1:250,000 people they have not been included.

For guidance on the embellishment of passive and active open space readers are directed to the Sustainable Communities - Infrastructure Guidelines.

Table 7. Provision rate for outdoor recreation facilities in NWGAA

Facility	Provision Ratio (population)	Comments
Cricket oval	4,000	Cricket ovals will commonly be associated with opposite season sports such as AFL and soccer. Two to three synthetic cricket practice nets also to be provided. Field sports will generally be 2-4 fields with north-south orientation.
Australian Rules football oval	5,000	
Soccer field	5,000	
Baseball field	40,000	Not to be provided in NWGGA
Softball field	40,000	Not to be provided in NWGGA
Hockey field (synthetic)	100,000	Not to be provided in NWGGA
Rugby field	100,000	Not to be provided in NWGGA
Lacrosse field	100,000	Not to be provided in NWGGA
Dedicated tennis complex	50,000	An eight to ten court complex associated with another activity e.g. netball or lawn bowls
Dedicated netball court	7,070	Eight to ten courts for a dedicated facility or two courts where it is a football/netball facility. Co-locate with another activity.
Lawn bowls green	20,000	Co-locate with another sport
Athletics track (all weather)	100,000	Not to be provided in NWGGA
Pavilion	Active Reserve	The provision rate is a pavilion for each active open space reserve. The design should allow for use by other groups where possible.
Equine/canine spaces	100,000	Dog off leash areas are to be determined in design stages
Skate park	50,000	Within district or regional open spaces
Local playground	1,500	Generally associated with local passive open space and active open space as required. Not to be placed in employment area open space
District playground	5,000	District to regional level playgrounds will be located on district level passive open space in many instances. The Moorabool River represents an opportunity to provide a regional level open space
Sub-regional playground	30,000	
Regional playground	60,000	

Source: Adapted from the NWGGAs Ratios-Benchmarks Project Final Report, ASR Research, 2017

2.3.6 Models of Delivery Relevant to Growth Areas

A review of innovative delivery models for social infrastructure for growth areas was undertaken to identify leading practice examples of how social infrastructure is currently being delivered in other high growth areas. Literature, emerging case studies, and policy directions strongly support the move towards a holistic approach to **integrated social infrastructure**. Such an approach brings together the three critical components of social infrastructure (community facilities, human services, and social networks) as part of an interrelated system where each component links to, supports, and relies on each other.

The following summarises the service and delivery models considered applicable to the NWGGA development.

- **Hubs:** Increasingly, governments and communities are realising the benefits of co-locating and integrating services and facilities through creation of “hubs”. A community hub can be a multipurpose building, a collection of services or a locality. The primary objectives of community hubs are service coordination and delivery, place making, community building and space and access for activities, programs, and services

to address social needs². A good example of a successful community hub is the Potato Shed, an arts and cultural hub in Geelong.

- > **Community Precincts:** Community precincts are areas where a number of facilities are co-located. In most cases, precincts are envisaged around anchor facilities, such as, schools, sporting clubs and community based facilities. To make these precincts work more effectively, dedicated community development is required to establish programs, support community groups and networks, link groups and programs with existing facilities and identify capital and safety improvements. Other emerging precincts include emergency precincts where emergency services co-locate e.g. Pakenham Emergency Precinct in Victoria.
- > **Health and Wellbeing Hubs:** The health hub concept will see a range of health services and wellbeing programs provided at the same location (a single building or a cluster of buildings). They may offer primary and ambulatory programs and outpatient clinics, oral health, counselling, social work, preventative health, research and training and information and referral services. To have the most impact, Health and Wellbeing Hubs will be combined with capacity building and community development with local partners who may include non-government partners and potentially space for physical activity and rehabilitation programs. These partners may be located on site or may be located elsewhere but service the hub's catchment. Potential partners include Department of Health, Family, and Domestic Violence Unit, private health and rehabilitation providers, dentists, community health agencies and others.
- > **Schools as Community Centres:** Schools are critical social infrastructure providing not just education and learning facilities, but vital local employment and community building opportunities within their local communities³. How schools are built and managed is changing. In the United Kingdom, schools are being reshaped as hubs for community services supporting a wide range of activities and services. In the State of Victoria, schools are being opened up for shared community use in partnership with local communities. A good example of Schools as community centres is Doveton Community College located in the City of Casey. Some non-Government schools provide a range of services in proximity to or within the school site including recreation programs and social support.
- > **"Schools-in-house" and "Schools-in-Shop":** An innovative way of delivering schools into developing communities is through 'Schools-in-Houses' and 'Schools-in-Shops' where the education provider lease a commercial building or residential house, and then deliver teaching and resources at that location. This initiative has been trialled in WA in the Ellenbrook Development.
- > **Public Private Partnerships:** Schools are one example of public private partnerships. These partnerships have been effective in reducing duplication and maximising facility use. These education providers also described a preference for the Co-location of education services and the sharing of facilities. In addition, DET has a history of sharing arrangements with Councils and the private sector as well (Victoria has delivered 11 schools with a further 15 schools via PPPs).
- > **Community Management:** In large scale master planned estates, the developer has provided the community facility such as recreation or community hall facilities and then worked with residents to build community management structures for the facilities. Among other objectives, this investment by developers in building community governance supports the sustainability of community facilities. A viable local community management capability facilitates the transition of community facilities from the developer to the community, when the developer exits the site.

² Elton Consulting (2007), Feasibility Study of Community Hubs for the Parramatta Local Government Area – Briefing Paper, 25 September 2007, p.2

³ Fine M., Pancharatnam, K. and Thomas, L (2005) Coordinated and Integrated Human Service Delivery Models, SPRC Report 1/05, Sydney: Social Policy Research Centre, University of New South Wales

2.4 Principles & Considerations for NWGGA

The sections above have provided a number of key considerations in relation to the provision of social infrastructure for NWGGA. Considerations that will be pertinent to informing the NWGGA Framework Plan have been summarised as guiding principles for the delivery of social infrastructure and are detailed below.

Table 8. Guiding Principles for delivery of Social Infrastructure in NWGGA

Guiding Principles		
P1	Build social capital	Community activities and events promote community cohesion and resilience. They can provide important opportunities for residents to meet, interact socially and create new friendships and support networks. > The development of social infrastructure in its own right will enable the programming of activities and events such as arts and crafts and dance classes held in a community centre or an outdoor concert held at a local park. Building social capital will in turn create a desirable environment where people want to live, visit and work > Considerations for Place Planning and the role of Community Development Manager in each of the Growth Areas should be considered within the context of a Community Development Strategy (could either be developer led or council led or a joint partnership).
P2	Early provision of social infrastructure	A place for the community to meet is a basic prerequisite for community development. These places help to create a sense of belonging and responsibility for an area that supports community wellbeing and safety. > To enhance the social value of new communities, it will be critical to invest in community building activities (community development, place making, social infrastructure provision, service coordination, partnering and planning) in the early stages of development. > Social infrastructure can be an attractor (e.g. schools and community centres) for new residents and thereby accelerate the take-up of land and housing- 'social infrastructure led development' is possible in an environment of early and planned social infrastructure investment. Thresholds for early provision could be adopted to achieve this outcome. > Considerations for the early provision of community centre in each of the Growth Areas to facilitate social capital.
P3	Setting aside land for social infrastructure	Securing the land and identifying service models early will save costs in the future and ensure the most accessible sites for community facilities. > Early planning for a facility will contribute to affordable outcomes as setting aside land at the outset of development is more cost-effective than trying to purchase land once a catchment is full. > The planning and development process for Social Infrastructure projects is best served by timely and thorough land capability assessment. > Assessment of proposed development sites can assist in selecting locations that suit the services or activity to be provided. > Equally essential assessment can be provided through a review of likely impacts on surrounding development, existing or proposed, whether this be flood, drainage, site configuration issues or access and traffic related matters. > Considerations for identifying and documenting site constraints for land designated for social infrastructure at the outset to ensure project planning does not encounter

Guiding Principles		
		unnecessary or costly problems and delays that may have been avoidable through early recognition.
P4	Actively engage in partnerships with the private and public sector and the community to deliver affordable and accessible community facilities	The development of innovative pathways for the delivery of community facilities \ spaces should consider a range of public and private mechanisms. > For example, partnerships with other spheres of government, the private sector and community organisations to achieve an integrated service system and facility network. > Considerations for the ongoing role of the Social Infrastructure Technical Reference Group and ongoing involvement/communication with non-government service providers.
P5	Shared use of social infrastructure	Innovative models of infrastructure delivery includes shared use of social infrastructure where community groups are able to use schools, clubs, multi-arts spaces , libraries etc. outside of core hours. > Community facilities \ spaces are more than just buildings. The planning of new facilities \ spaces must also involve the implementation of sustainable management frameworks to ensure that the use and life of the facilities \ spaces is maximised and particularly in shared use environment. > Considerations where possible and appropriate for facilities \ spaces such as schools, libraries etc to be developed under a model of shared use with main users and the general community. Co-locate uses with like uses.
P6	Access to public transport, bike and walking path	Public transport may be poor or non-existent, especially in the early stages of development. Walkable access to local facilities will therefore be important. > Community facility \ space location is one of the primary determinants of function and usage. Maximum patronage is facilitated by integrating community facilities \ spaces within the broader range of uses found in an Urban Centre. > An active, high profile location will also increase real and perceived safety for potential community facility / space users. > The location should also maximise accessibility to the community facilities/spaces target market through good access to public transport, bike and walking paths. > Considerations for walkability to community facilities should be encouraged by subdivision and urban design initiatives to ensure people who do not drive, people with disabilities and single-car households have good access to local services.
P7	Developing flexible, multi-purpose community facilities \ spaces which can incorporate a range of commercial and community services and change over time as the community matures	Multi-purpose facilities will provide the best use of scarce resources and allow the needs of the whole community to be accommodated, especially in the early stages of development. > In many cases, it is not feasible or appropriate to provide stand-alone community facilities \ spaces for the exclusive use of specific community or socio-demographic groups. Multipurpose facility/spaces will be site and community specific, recognising that not 'one size fits all'. > In addition to providing multiple community services and functions, consideration should be given to the ability and appropriateness of incorporating commercial functions such as office or studio space, function venues and café/coffee shop that can be leased to community organisations, government agencies or the private sector and can assist in offsetting the capital and operating costs of a community facility. > Considerations wherever possible and appropriate, several services and needs should be delivered via a flexible multi-purpose facility and the inclusion of commercial spaces.

Guiding Principles		
P8	Create adaptable community facilities \ spaces appropriate to the level of service demanded	The NWGGA will be expected to serve a number of functions for social infrastructure including regional, district, and local to cater for a diverse population over time. > Generally, community facilities \ spaces serving a local catchment should have a 'neighbourhood' feel, provide relatively informal spaces, have pedestrian access. > District and regional level community facilities \ spaces should provide a broader range of structured and semi-structured spaces for community use. This should include the provision of spaces to support a range of program and service delivery needs. > Considerations for the design of facilities \ spaces to be flexible, innovative and adaptable to meet the needs of the future population. A citizenship model of engagement and responsibility is promoted.
P9	High quality design outcomes and universal access for community facilities\spaces	The development of community facilities/spaces should incorporate high quality urban design outcomes that are inspiring (e.g. through public art) and incorporate features of universal design. > Building design will need to be assessed on value for money where lowest cost alone is not a sufficient indicator. A balance will be achieved between the impact on the environment such as greenhouse emissions, economic considerations which include ongoing performance costs and social considerations such as achieving healthy productive environments. Any building designs should achieve best practice environmentally sustainable design standards. > Facilities \ spaces should be physically accessible and useable by people with different abilities. > Considerations for creating a socially inclusive community, design places that cater for multiple users (all ages and abilities) and which encourage active lifestyles and social interaction. > Considerations for the development of an overall Public Art Masterplan for NWGGA.
P10	Technologically responsive	Community facilities \ spaces need to be planned to maximise the contribution of new technologies. > Information and communication technologies (ICT) are becoming increasingly effective in delivering social infrastructure, providing access to education and training, and in community development. > The role of ICT in facilitating integrated approaches and cost-effective solutions is expanding, and is particularly important in non-metropolitan areas where distance impedes access. > This includes those supporting creative industries, to service delivery, learning and community building. > Considerations for technologies such as WIFI to be part of all facilities and community space.

3.0 Location & Demographic Context of NWGGA

3.1 Location

3.1.1 The Northern Geelong Growth Area

The Northern Geelong Growth Area (NGGA) is located in the Lovely Banks area and generally bounded by Staceys Road to the north, Evans Road to the west and adjoining Rural Living zoned lots north of Plantation Road and west of Bacchus Marsh Road. Areas to the north of Staceys Road have been considered. The study area is approximately 1200 hectares (ha) and the land affected by the Urban Growth Zone is approximately 1,100ha. The predominant land use in this area is farming. There are 4 precincts identified within the Northern Growth Area.

3.1.2 The Western Geelong Growth Area

The Western Geelong Growth Area (WGGA) is located west of the Geelong Ring Road and extending through parts of Batesford from the Ballarat – Geelong rail line in Bell Post Hill to the north, to the Barwon River in Fyansford, and extending to Dog Rocks/Friend in Hand Roads in the west. The study area is approximately 2300 hectares.

The area includes a mix of land uses including a non-government school, recreation reserve, active quarry and farmland. The land is generally flat to gently undulating with the exception of the Batesford quarry pit and Moorabool River Escarpment and contains a number of major waterways.

3.2 Expected Demographics

In planning for social infrastructure, it is important to understand the demographics of the study area. This in turn provides insights into the likely key areas of demand and future need.

As evidence from the case study review in Section 2.2, master planned communities generally attract more couple families with children given the early provisions of education and other facilities/services that are conducive to family life. While a range of household types (e.g. singles, couples) would be expected to comprise the population over time, couple families are most likely to make up the majority of the NWGGA community during the early stages of development, and planning needs to be focused accordingly.

It should be noted that the expected demographics for the Growth Areas will be heavily influenced by the **housing mix and price points** which is often at the discretion of the developer. Housing mix refers to a range of dwelling types (detached, multiunit, town houses, villas, duplexes, flats, etc.) and price points include to purchase, low cost purchase, rental, short stay, managed housing, supported housing, etc. As people move through different stages within their life cycle, they often demand different types of housing to suit their particular needs and situations.

3.2.1 Population Characteristics of Surrounding Community in the North

The social infrastructure planning areas (as defined by the SIP 2015) which are considered relevant to the Northern Growth Area include, Planning Area 13 – Corio, North Shore, Norlane, Planning Area 14 – Lara and Planning Area 15, Anakie and Lovely Banks. Analysis of the demographic characteristics in these adjoining communities provides insights into the potential people that may choose to reside in the Northern Growth Area (refer to Table 9).

- > **High proportion of couple families** in the surrounding communities, particularly Anakie and Lovely Banks which had the highest proportion across the Geelong LGA. This trend will most likely continue and manifest in the new development. Planning for the new growth areas should be mindful of the needs of families with young children.
- > Corio, North Shore and Norlane had **the highest number and proportion of Aboriginal and Torres Strait Islander** people compared to the other Planning Areas and Lara had the second highest.
- > Corio, North Shore and Norlane and Lara had the equal **lowest median age** of any of the planning areas at 36 years (compared to 39 for Geelong LGA and 41 for regional Victoria). The young population is consistent with high proportions of families and points to the need to ensure access to a range of services and facilities.
- > The surrounding community of Corio, North Shore and Norlane is **culturally diverse** with high proportions of people born overseas when compared to Geelong LGA and Regional Victoria. This points to the need to consider appropriate facilities and services are available to culturally diverse groups who may look to move into the new development.
- > Very **low rates of volunteering** were recorded in Corio, North Shore and Norlane (the lowest across the LGA). This points to a need for a focus on social capital and community building outcomes in the Northern Growth Area.
- > Corio, North Shore and Norlane had the **lowest median weekly household income** of any of the planning areas as well as high rental rates and correspondingly low home ownership. This points to a need to consider affordable housing options in the new development for low income earners.
- > **Ageing of the population** is expected across the surrounding communities. This points to a need to consider age services including age retirement accommodation.
- > Corio, North Shore, Norlane has higher proportions of **vulnerable children** compared to Geelong LGA and Victoria. This points to the need to provide early intervention programs and services as well as early years infrastructure.

Table 9. Selected Demographic Indicators for Surrounding Communities - NGGA

	Plannin g Area 13	Plannin g Area 14	Plannin g Area 15	Geelong LGA
POPULATION & AGE				
Current Population 2014	23,351	13,810	4,456	
Population 0-14 (%)	20.6%	21.1%	21.3%	18.5%
Population 15-19 (%)	8.8%	7.2%	7.9%	6.7%
Population 20-24 (%)	6.6%	5.9%	5.9%	6.4%
Population 25-34 (%)	12.0%	13.6%	10.1%	12.1%
Population 35 - 44 (%)	12.9%	17.0%	13.8%	13.5%
Population 45 - 54 (%)	13.2%	13.6%	17.2%	13.6%
Population 55 - 64 (%)	11.7%	11.2%	11.6%	12.3%
Population 65 - 74 (%)	7.9%	5.9%	7.6%	8.5%
Population 75 - 84 (%)	5.1%	3.2%	4.0%	5.8%
Population 85 + (%)	1.3%	1.4%	0.6%	2.5%
Percentage of Indigenous Persons 2011	2.2%	1.3%	0.3%	0.8%

	Plannin g Area 13	Plannin g Area 14	Plannin g Area 15	Geelong LGA
FORECAST - ERP				
ERP - 2011 - Forecast ID	24139	14154	4295	215146
Population Forecast 2031	26,721	21,902	5,969	
10 Year Average Annual Population Forecast Growth 2011-2021	0.7%	2.5%	2.1%	1.7%
10 Year Average Annual Population Forecast Growth 2021-2031	0.3%	1.9%	1.3%	1.6%
SOCIO-DEMOGRAPHIC				
Median Age Persons 2011	36	36	38	39
Median Weekly Household Income (\$) 2011	\$751	\$1,388	\$1,283	\$1,049
Persons/Household (Not the same as Median Household Size) - 2011	2.6	3.0	3.0	2.6
Percentage Born Overseas 2011	21.5%	15.2%	16.8%	15.9%
Percentage Speaks a language other than English at Home 2011	58.9%	35.8%	51.2%	43.0%
Percentage who helps out as volunteer 2011	11.6%	15.7%	16.4%	18.5%
Percentage Core Activity Need for Assistance 2011~	7.5%	4.2%	3.9%	5.6%
Percentage Core Activity Need for Assistance 2011 - <75 years	6.1%	2.9%	3.0%	3.5%
Percentage Core Activity Need for Assistance 2011 - 75+ years	27.6%	31.2%	24.7%	29.0%
Percentage of Couple Families with No Children 2011	21.4%	27.8%	27.2%	27.1%
Percentage of Couple Families with Children 2011	23.6%	39.2%	41.3%	29.1%
Percentage of One Parent Families 2011	20.6%	12.6%	10.6%	12.0%
Family Households 2011	67%	80%	80%	69%
HUMAN CAPITAL, LABOUR UTILISATION & EDUCATION				
Unemployment rate 2011	11.7%	4.4%	4.7%	5.6%
Youth (15-24) unemployment rate 2011	20.0%	10.4%	7.1%	11.9%
Labour Force Participation Rate 2011	48.7%	62.9%	62.7%	58.8%
Labour Force Participation Rate (65 years plus) 2011	4.6%	6.8%	16.3%	7.7%
Percentage who did not complete year 12 2011	62.3%	48.1%	52.8%	48.5%
HOUSING				
Median Weekly Rent 2011	\$184	\$272	\$212	\$231
Percentage Home Ownership 2011	26.7%	46.7%	42.0%	36.2%

Source: CoGG Social Infrastructure Plan, 2015

3.2.2 Population Characteristics of Surrounding Community in the West

The social infrastructure planning areas (as defined by the SIP 2015) which are considered relevant to the Western Geelong Growth Area include, Planning Area 11 – Bell Park, Bell Post Hill, Geelong North and Planning Area 12 – Hamlyn Heights, Herne Hill, Fyansford. Analysis of the demographic characteristics in these adjoining communities provides insights into the potential people that may choose to reside in the Western Growth Area (refer to Table 10).

- > **High proportion of couple families** in the surrounding communities, particularly in Bell Park, Bell Post and Geelong North. This trend will most likely continue and manifest in the new development. Planning for the new growth areas should be mindful of the needs of families with young children.
- > The surrounding community of Bell Park, Bell Post Hill and Geelong North is **culturally diverse** with the highest proportions of people born overseas across the municipality. This points to the need to consider appropriate facilities and services are available to culturally diverse groups who may look to move into the new development.
- > **Ageing of the population** is expected across the surrounding communities particularly in Bell Park, Bell Post and Geelong North. This points to a need to consider age services including age retirement accommodation.

- > Fyansford has higher proportions of **vulnerable children** compared to Geelong LGA and Victoria. This points to the need to provide early intervention programs and services as well as early years infrastructure.

Table 10. Selected Demographic Indicators for Surrounding Communities - WGGA

	Planning Area 11	Planning Area 12	Geelong LGA
POPULATION & AGE			
Current Population 2014	13,320	9,646	
Population 0-14 (%)	16.2%	16.6%	18.5%
Population 15-19 (%)	5.8%	6.5%	6.7%
Population 20-24 (%)	6.3%	7.1%	6.4%
Population 25-34 (%)	12.9%	13.5%	12.1%
Population 35 - 44 (%)	12.5%	14.1%	13.5%
Population 45 - 54 (%)	12.9%	13.7%	13.6%
Population 55 - 64 (%)	12.5%	10.7%	12.3%
Population 65 - 74 (%)	10.4%	7.6%	8.5%
Population 75 - 84 (%)	7.3%	7.4%	5.8%
Population 85 + (%)	3.2%	2.8%	2.5%
Percentage of Indigenous Persons 2011	0.8%	0.4%	0.8%
FORECAST - ERP			
2011 - Forecast ID	13385	9776	215146
Population Forecast 2031	15,595	13,498	
10 Year Average Annual Population Forecast Growth 2011-2021	1.0%	1.4%	1.7%
10 Year Average Annual Population Forecast Growth 2021-2031	0.5%	1.8%	1.6%
SOCIO-DEMOGRAPHIC			
Median Age Persons 2011	42	39	39
Median Weekly Household Income (\$) 2011	\$906	\$977	\$1,049
Persons/Household (Not the same as Median Household Size) - 2011	2.6	2.4	2.6
Percentage Born Overseas 2011	28.4%	14.3%	15.9%
Percentage Speaks a language other than English at Home 2011	71.0%	49.1%	43.0%
Percentage who helps out as volunteer 2011	12.8%	18.6%	18.5%
Percentage Core Activity Need for Assistance 2011	9.2%	5.0%	5.6%
Percentage Core Activity Need for Assistance 2011 - <75 years	5.1%	2.8%	3.5%
Percentage Core Activity Need for Assistance 2011 - 75+ years	44.4%	23.1%	29.0%
Percentage of Couple Families with No Children 2011	27.4%	24.9%	27.1%
Percentage of Couple Families with Children 2011	27.1%	25.4%	29.1%
Percentage of One Parent Families 2011	13.2%	11.5%	12.0%
Family Households 2011	69%	63%	69%
HUMAN CAPITAL, LABOUR UTILISATION & EDUCATION			
Unemployment rate 2011	6.3%	4.9%	5.6%
Youth (15-24) unemployment rate 2011	16.6%	10.1%	11.9%
Labour Force Participation Rate 2011	53.0%	59.9%	58.8%
Labour Force Participation Rate (65 years plus) 2011	6.2%	5.2%	7.7%
Percentage who did not complete year 12 2011	51.5%	49.1%	48.5%
HOUSING			
Median Weekly Rent 2011	\$231	\$218	\$231
Percentage Home Ownership 2011	28.9%	31.8%	36.2%

Source: CoGG Social Infrastructure Plan, 2015

3.3 Population & Dwelling Projections

The following table provides a breakdown of the expected dwelling yield and anticipated population for the growth areas.

Table 11. Population and Dwellings Projections

Northern Geelong Growth Area									
LAND USE BUDGET - hectares									
Precinct Structure Plan	Gross Developable Area (GDA)	Drainage	Conservation	Easement	Servicing & Utility	Net Developable Area (NDA)	Modelled Transport / Social / Open Space (15% GDA)	Anticipated Dwelling Yield	Anticipated Population
Elcho Road East	485.2	80.8	0.0	6.4	0.0	398.0	305.9	4,640	12,993
Heales Road West	466.8	38.2	0.0	3.4	0.0	425.1	361.4	5,420	15,177
Elcho Road West	436.5	18.8	98.3	2.5	0.0	316.9	269.4	4,040	11,313
Heales Road East	700.5	48.1	0.0	35.8	12.4	604.1	388.0	3,006	8,418
TOTAL	2088.9	185.9	98.3	48.2	12.4	1744.1	1324.7	17,108	47,901
Western Geelong Growth Area									
LAND USE BUDGET - hectares									
Precinct Structure Plan	Gross Developable Area (GDA)	Drainage	Conservation	Easement	Servicing & Utility	Net Developable Area (NDA)	Modelled NDA (85%)	Anticipated Dwelling Yield	Anticipated Population
Creamery Road	349.9	87.6	0.0	0.0	0.0	262.3	223.0	3,344	9,365
Batesford North	434.6	83.5	0.0	0.0	0.0	351.1	269.9	3,671	10,278
Merrawarp Road	373.5	179.1	0.0	15.1	0.0	179.4	152.4	2,287	6,403
McCanns Lane	409.2	58.0	0.0	0.0	0.0	351.2	298.5	3,476	9,733
Batesford South	1677.3	470.8	127.8	43.9	0.0	1034.8	786.4	9,217	25,806
TOTAL	3244.5	878.9	127.8	59.0	0.0	2178.8	1730.2	21,995	61,585

Source: CoGG, 2018

3.4 Existing Social Infrastructure in Surrounding Communities

As part of this study, existing local, district and regional social infrastructure (facilities and services) in surrounding communities have been mapped. The purpose of the mapping is to provide a spatial perspective of social infrastructure that is within a 5km radius of the NWGGA sites. This analysis provided a general overview of the capacity of existing infrastructure to service demand generated by the NWGGA, particularly in the early stages of development.

In line with the scope of this study the following facilities have been mapped:

- > Community Spaces
- > Cultural
- > Early Years
- > Education & Training
- > Health, Safety & Emergency Services
- > Leisure & Recreation
- > Targeted Support
- > Open Space

The sections below provide a summary of the existing facilities within a 5km radius of the NWGGA.

3.4.1 Community Spaces

Northern Growth Area

There are 3 community spaces located within 5km of the Northern Growth Area. All three are located within the Corio, North Shore and Norlane Planning Area (Planning Area 13). Two of these facilities are local level community meeting space located on Sutcliffe Reserve. The Serbians & Austrians Group own the buildings which are not accessible to general public and have a land lease (renewal every 3 years) with council.

The third facility is a district level Multipurpose Community Centre (Cloverdale Community Centre) which incorporates a Maternal and Child Health Centre. Information from the CoGG Social Infrastructure Plan indicates that the Cloverdale Community Centre, which offers a variety of education, fitness, recreational, social and community development programs, is operating at capacity. It was noted that the building configurations limit the type of activities and programs that can take place at the facility.

Western Growth Area

Located within 5km of the Western Growth area are 3 local level and 1 district level community space.

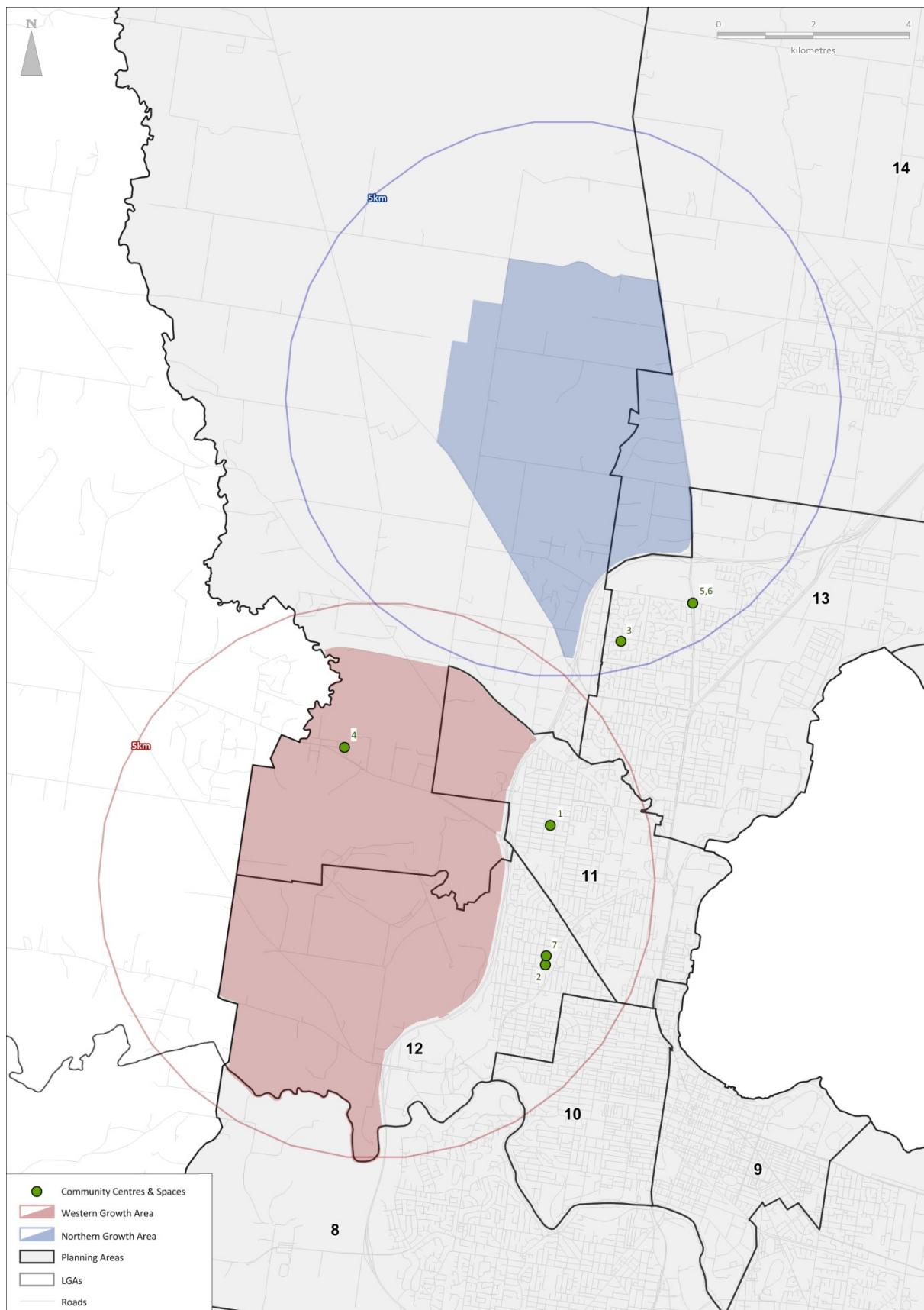
- > Vines Road Community Centre (and library) – recently redeveloped incorporating library, seniors and neighbourhood house program. The space is generally well utilised and there is an active seniors group. Building is estimated to be at 75% capacity.
- > Pettit Park Hall is located on large open space parcel. There is an opportunity for site redevelopment / master planning. There is capacity for further use and the facility / space is considered adequate and car parking is good. The Pettit Park Hall lease with Lith group is due for renewal next year. Pettit Park Hall is well utilised. Adjacent (in the same parcel of open space) is Cobradah House which is available for group

bookings, used by seniors group amongst others. Both Petit Park Hall and Cobradah are dated facilities. Cobradah is an old homestead with meeting rooms, kitchen etc which should possibly be demolished and relocated incorporating a hall (to replace Petit Park Hall). The buildings are poorly sited in the middle of the recreation reserve which impinges on the use of the reserve. The reserve is surrounded by property fences and does not have road frontage.

- > The Ballroom (Hamlyn Park) – Further investigations required for the ballroom facility / space, which is considered in poor condition and not fit for purpose.
- > Batesford Public Hall is underutilised and not fit for purpose and is in poor location.

Table 12. Community Spaces Within 5km Radius of NWGGA

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
3	NORTH	13	District	Multi-purpose Community Space	Cloverdale Community Centre / MCH
5	NORTH	13	Local	Community Meeting Room/Hall	Sutcliffe Reserve Austrian Club
6	NORTH	13	Local	Community Meeting Room/Hall	Sutcliffe Reserve Serbian Club
1	WEST	11	Local	Community Meeting Room/Hall	Pettit Park Hall
2	WEST	12	District	Multi-purpose Community Space	Vines Road Community Centre
4	WEST	15	Local	Community Meeting Room/Hall	Batesford Public Hall
7	WEST	12	Local	Community Meeting Room/Hall	Ballroom

Figure 3. Community Spaces Within 5km Radius of NWGGA

Source: Thao Ashford Planning, 2016

3.4.2 Cultural Facilities

Northern Growth Area

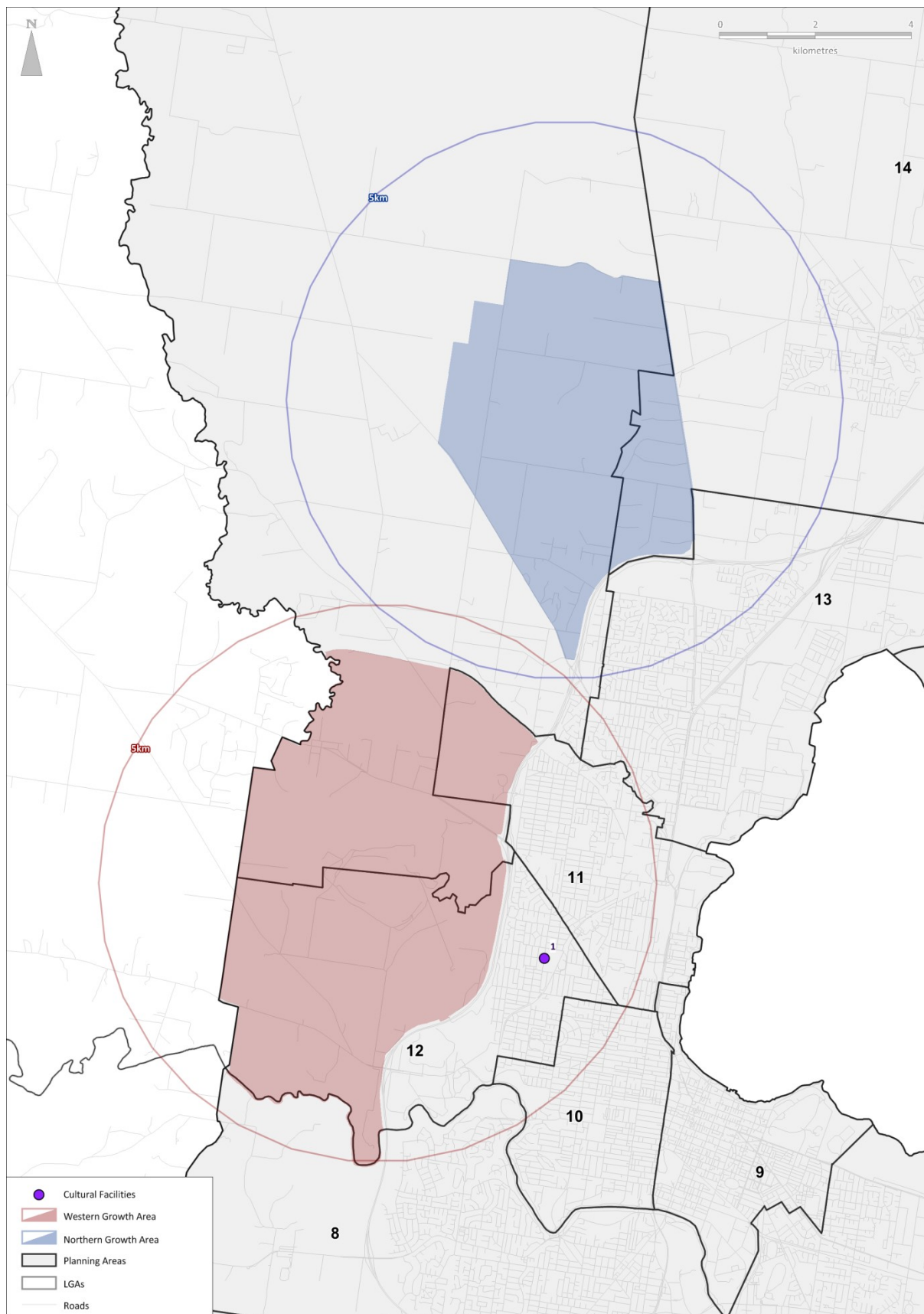
There are no cultural facilities located within 5km of the Northern Growth Area.

Western Growth Area

The Western Heights Library (located with the Vines Road Community Centre) is located within 5km of the Western Growth Area. The Vines Road Community Centre was recently redeveloped incorporating library, seniors and neighbourhood house program. There is limited capacity to support further growth as a result of NWGGA.

Table 13. Community Facilities Within 5km Radius of NWGGA

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
1	WEST	12	District	Branch Library	Vines Road Library

Figure 4. Cultural Facilities Within 5km Radius of NWGGA

Source: Thao Ashford Planning, 2016

3.4.3 Early Years⁴

Northern Growth Area

There are 4 early childhood facilities located within 5km of the Northern Growth Area, three of which are owned by Council. Facilities include a kindergarten, 1 long day care centre, maternal and child health, and outside school hours' care. The following demand and capacity information from the CoGG Municipal Children's Services Infrastructure Plan 2013-2030 is noted:

- > **Corio Kindergarten:** Double room kindergarten built in mid 1970s licensed for 58 places. Building requiring major upgrade. Opportunity for further expansion of existing facilities on adjacent recreation reserve.
- > **City Learning and Care, Corio:** Forty year old building, licensed for 60 places, with no scope for expansion or further development on existing site.
- > **Corio West MCH Centre:** The MCH Centre is located within Cloverdale Community Centre with single consulting room. Current facilities do not meet service standards requirements.
- > **Northern Bay College (Wexford Court P-8 Campus) Outside School Hours Care:** OSHC program is currently operated by Camp Australia Pty Ltd and licensed for 100 places for children enrolled at NBC.

Existing early childhood service provision is sufficient to meet current population requirements, with some limited capacity to accommodate additional future demand.

The following are planned replacement and additional facilities in proximity to the Northern Growth Area:

- > Proposed development of a new Integrated Child and Family Centre adjacent to Northern Bay College Wexford Court P-8 Campus in Purnell Road, to replace and expand the capacity of exiting early childhood services.
- > Two additional early childhood and community facilities are proposed for development within the Lara West Precinct which will provide for population growth within the immediate vicinity and surrounding area.⁵

Western Growth Area

Within 5km of the Western Growth Area there is a number of early years facilities including 10 kindergartens, 6 long day care centres, 3 maternal child and health centres, 1 occasional care and 9 outside school hours care. The following demand and capacity information from the CoGG *Municipal Children's Services Infrastructure Plan 2013-2030* have been noted:

Kindergartens:

- > **Bell Park Kindergarten:** Double room kindergarten licensed for 72 places situated in area of high vulnerability amongst young children. Potential development in conjunction with other complementary services and possibly local school to enhance local service provision and replace ageing infrastructure.
- > **Bell Post Hill Kindergarten:** This is a double room kindergarten, licensed for 50 places. The building is over 40 years old, located adjacent to the local primary school, and situated in area of high vulnerability amongst young children.
- > **William Parker Memorial Kindergarten:** Single room kindergarten licensed for 27 places, in relatively poor condition with asbestos cladding. Building over 55 years old located in built up area, with no capacity

⁴ Information from this section of the report has been provided by CoGG, 2016

⁵ Lara West Precinct Structure Plan 2013 (page 18)

for further expansion on current site. Increasing local service demands reflecting young families relocating to area.

- > **Rix Street Kindergarten:** This is a single room kindergarten licensed for 26 places. Site is currently being examined for expansion to enable the kindergarten to increase capacity to 66 places with a consulting room and other ancillary program spaces in order to meet increasing local demand. Potential expansion remains subject to securing required capital funding.
- > **Norlane West Kindergarten:** Double room kindergarten licensed for 56 places, well located adjacent to local primary school. Capacity to accommodate additional demand.
- > **Early Learning Centre@Rosewall (Wathaurong Children's Centre):** Temporary location of the Early Learning Centre@Rosewall, licensed for 27 places. Future operation of this kindergarten on current site is presently subject to review pending completion of the new Hendy Street Child and family Centre in Corio.
- > **Herne Hill Kindergarten:** Relatively new facility located within the grounds of the Herne Hill primary School. The kindergarten is licensed for 58 places and generally operates at capacity.
- > **Covenant College Kindergarten:** Kindergarten operated by independent K-12 school with license capacity of 30 places.
- > **Kardinia International College Kindergarten:** Kindergarten operated by independent K-12 school with license capacity of 75 places.
- > **Geelong College Early Learning Centre:** Kindergarten operated by independent K-12 school with license capacity of 39 places.

Child Care:

- > **City Learning and Care, Norlane:** Small centre licensed for 39 places and located within a 40 year old building. Located just outside the 5km catchment radius.
- > **Kardinia Kids Early Learning and Care:** Large not-for-profit child care and kindergarten centre licensed for 245 places operated by the Kardinia Church.
- > **One World Children's Centre:** Commercial child care centre situated in North Geelong, licensed for 125 places.
- > **Geelong World of Learning:** Commercial child care centre situated in Herne Hill, licensed for 116 places.
- > **Community Kids Geelong Early Education Centre:** Commercial child care centre situated in Norlane, licensed for 132 places.
- > **Elements Child Care and Early Learning Centre:** New commercial child care centre on the corner of Church Street and Shannon Avenue. Centre is licensed for 93 places.

Occasional Child Care:

- > **Geelong West Occasional Care:** Small independent occasional child care centre, established in 1988, and currently licensed for 31 places. The centre operates from a single room, located within refurbished Scout Hall in Herne Hill.

Outside School Hours Care:

- > Manifold Heights Primary School OSHC – licensed for 75 places
- > Holy Spirit Primary School (Manifold Heights) OSHC – licensed for 24 places
- > Team Holiday - Manifold Heights – school holiday program licensed for 39 places
- > Herne Hill Primary School OSHC – licensed for 61 places
- > Kardinia International College OSHC – licensed for 49 places
- > Rollins Primary School OSHC – licensed for 40 places
- > Hamlyn Banks Primary School OSHC – licensed for 45 places
- > Northern Bay College Peacock Avenue Campus OSHC – licensed for 60 places
- > Geelong College Junior School OSHC – licensed for 40 places. This service also operates school holiday programs.

Maternal & Child Health Centre

The existing MCH Centres at Bell Park, Bell Post Hill, Hamlyn Heights as follows, have been classified as being in relatively poor condition in meeting current service requirements and standards. However, options and opportunity for the development of new early childhood facilities in these areas are severely restricted with lack of suitable available sites on which to consolidate MCH service provision alongside other early childhood facility development priorities consistent with policy and contemporary service modelling.

- > **Hamlyn Heights MCH Centre:** Isolated single room MCH Centre, poorly located, and under-utilised operating 2 days per week. Facility does not meet MCH service standards and requirements. Consideration should be given to the relocation of the centre to a new integrated Early Learning Centre with other early childhood services.
- > **Bell Park MCH Centre:** Isolated single room MCH Centre, poorly located, and under-utilised operating 2 days per week. Facility does not meet MCH service standards and requirements. Consideration should be given to the relocation of the centre to a new integrated Early Learning Centre with other early childhood services.
- > **Bell Post Hill MCH Centre:** Isolated single room MCH Centre, poorly located, and under-utilised operating 3 days per week. Facility does not meet MCH service standards and requirements. Consideration should be given to the relocation of the centre to a new integrated Early Learning Centre with other early childhood services.

There are two **Family Support** agencies located within the 5 km catchment area, which provide a range of early childhood and family support services and programs – Bethany Family Support (located at 16 Ballarat Road Hamlyn Heights) and the Wathaurong Aboriginal Cooperative Children's and Health Centre/s (located at 62 Morgan Street, North Geelong). Diversitat also operate their Northern Community Hub, located 25-41 Arunga Avenue, Norlane (just outside the 5km catchment area), which provides an extensive range of support services and training for local CALD communities, new arrivals and refugee groups.

Existing early childhood service provision is sufficient to meet current population requirements, with some limited capacity to accommodate additional future demand in some locations.

The following are planned replacement and additional facilities in proximity to the Western Growth Area:

- > A new early childhood and community facility is proposed for development within the Fyansford Precinct which will provide for population growth within the immediate vicinity and surrounding area.
- > The development of a new integrated Early Learning Centre to consolidate and replace existing ageing early childhood service infrastructure in Bell Park, Bell Post Hill, and Hamlyn Heights has also been proposed as a critical priority, but most likely remains subject to identification of a suitable site and land acquisition.

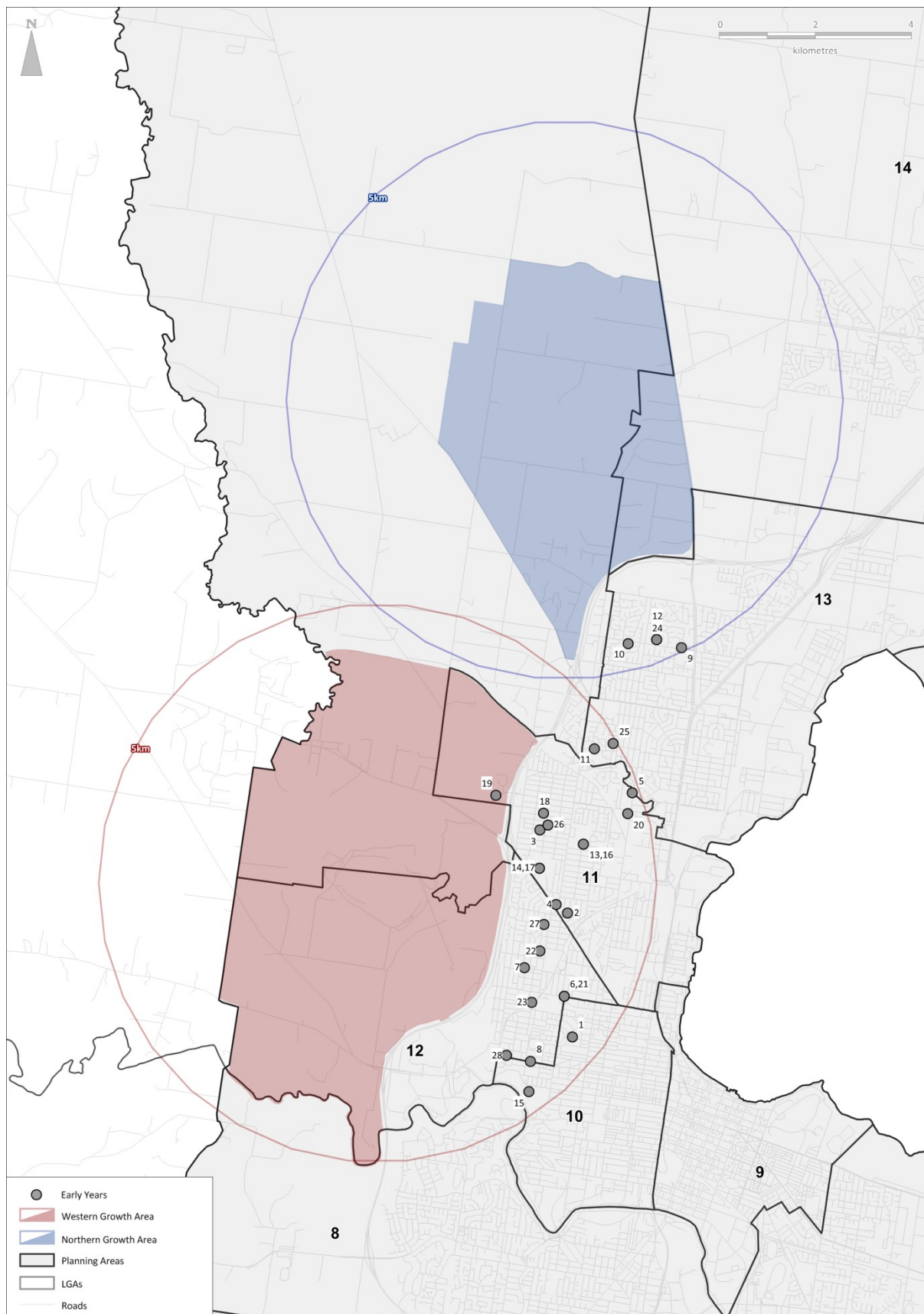
The Department of Education and Training opened the new North Geelong Special Developmental School known as Hamlyn Views constructed on the former Western Heights College, Quamby Avenue campus in Hamlyn Heights. The school provides specialist education services and first class facilities for children and young people with a disability from ages 5 to 18. The brand new facilities include:

- > A hydrotherapy pool which will deliver health benefits including relaxation, strength development, sensory stimulation and physical exercise, and which can also be accessed by other SDS schools and community groups;
- > A games hall and sensory gym area to support sensory movement, mobility and therapy activities for students including support beams for swings, slings and hammocks and wall padding to minimise any impact risk;
- > Sensory gardens with winding paths, seating, bird feeders and tactile play features to interact and engage with natural settings;
- > Sensory rooms as an inclusive space equipped with interactive equipment to provide visual, auditory and tactile activities;
- > Sensory pressure poles to enrich the sensory environment and provide calming support for students

- > A playground liberty swing to give students in wheelchairs the opportunity to enjoy the fun and recreation of swinging, and
- > Dedicated spaces for healthcare professionals so students can access services such as speech pathology, physiotherapy and occupational therapy at school.

Table 14. Early Years Facilities Within 5km Radius of NWGGA

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
24	NORTH	13	Local	Kindergarten	Corio Kindergarten
9	NORTH	13	Local	Long Day Care Space	City Learning and Care - Corio
10	NORTH	13	Local	Maternal and Child Health	Corio West MCH - Purnell Road
12	NORTH	13	Local	Outside School Hours Care	Northern Bay P-12 College (Wexford Court Campus)
15	WEST	10	Local	Kindergarten	The Geelong College Early Learning Centre
16	WEST	11	Local	Kindergarten	Bell Park Kindergarten
17	WEST	11	Local	Kindergarten	Kardinia International College Kindergarten
18	WEST	11	Local	Kindergarten	Bell Post Hill Kindergarten
19	WEST	11	Local	Kindergarten	Covenant College Kindergarten
20	WEST	11	Local	Kindergarten	Wathaurong Children's Centre
21	WEST	12	Local	Kindergarten	Herne Hill Kindergarten
22	WEST	12	Local	Kindergarten	William Parker Memorial Kindergarten
23	WEST	12	Local	Kindergarten	Rix Street Kindergarten
25	WEST	13	Local	Kindergarten	Norlane West Kindergarten
4	WEST	11	Local	Long Day Care Space	Kardinia Kids Early Learning and Care
5	WEST	11	Local	Long Day Care Space	One World Children's Centre
8	WEST	12	Local	Long Day Care Space	Geelong Kids Child Care and Kindergarten
11	WEST	13	Local	Long Day Care Space	Bellmore Drive Early Learning Centre
2	WEST	11	Local	Maternal and Child Health	Bell Park MCH
3	WEST	11	Local	Maternal and Child Health	Bell Post Hill MCH
7	WEST	12	Local	Maternal and Child Health	Hamlyn Heights MCH
28	WEST	12	Local	Occasional Care Space	Geelong West Occasional Care
1	WEST	10	Local	Outside School Hours Care	Manifold Heights Primary School OSHC
6	WEST	12	Local	Outside School Hours Care	Herne Hill Primary School OSHC
13	WEST	11	Local	Outside School Hours Care	Bell Park North Primary School OSHC
14	WEST	11	Local	Outside School Hours Care	Kardinia International College OSHC
26	WEST	11	Local	Outside School Hours Care	Rollins Primary School OSHC
27	WEST	12	Local	Outside School Hours Care	Hamlyn Banks Primary School OSHC

Figure 5. Early Years Facilities Within 5km Radius of NWGGA

Source: Thao Ashford Planning, 2016

3.4.4 Education & Training Facilities

Northern Growth Area

There are 2 primary schools (one government and one non-government) and a non-government secondary school within 5km of the Northern Growth Area. Data received from the Department of Education and Training (DET) indicated that in 2016 the Northern Bay Wexford P-8 campus has 484 Primary School and 121 secondary students, and this site has the capacity to cater for future growth in its area. The capacity of the Wexford P-8 Campus is 550 primary and 175 secondary with sufficient site capacity to add relocatables to cater for any demand beyond this number. The demand from within the designated neighbourhood area indicates that 816 students could choose to enrol at the Wexford Campus by 2018.

It should be noted that there was no readily available information on the demand of non-government schools located in proximity to the Northern Growth Area. The following capacity (enrolment numbers) information has been sourced from MySchool website⁶:

- > Geelong Baptist College – In 2015 total enrolments were 281 students, this is an increase from previous year (2014) which recorded total enrolments of 246 students.
- > St Francis Xavier Primary School – In 2015 the school had 416 students enrolled which is similar to the 2014 enrolment numbers.

Western Growth Area

Within 5km of the Western Growth Area there are 7 government and 3 non-government primary schools, 2 government secondary schools and 4 non-government schools. The following demand and capacity information from the CoGG Social Infrastructure Plan 2015 have been amended for currency:

- > Manifold Heights Primary has capacity to accommodate growth over the next four years.
- > Bell Park North Primary School has capacity for 325 students, the current enrolment for 2016 is 196 students and the demand from within the designated neighbourhood area is forecast to be around 258 students by 2018.
- > Rollins Primary School is a two-campus school. It has capacity for 425 students at its main campus and 50 students at its Batesford campus. The current enrolment at the main campus is 264 students and 30 at the Batesford Campus. The demand from within the designated neighbourhood area is forecast to increase to 385 students by 2018.
- > The Hamlyn Banks Primary School has capacity for 450 students, current enrolments for 2016 is 420 students and the demand from within the designated neighbourhood area is forecast to decrease to around 277 students by 2018.
- > Herne Hill Primary School has capacity for up to 275 students, current 2016 enrolment is 231 students and the demand from within the designated neighbourhood area is forecast to increase to 267 students by 2018.
- > In 2016 there are around 807 enrolments at North Geelong Secondary College and it is expected that enrolments will increase to 904 students in 2018 due to the very high percentage of students being enrolled at the school from outside of the school's designated neighbourhood area. The demand from within the designated neighbourhood area by 2018 is half of its current enrolment. The college has capacity to cater for up to 975 students and based on the planning figure being used to guide the capital works program to commence in 2017, the school will have capacity to meet increased demand well into the future.

⁶ <https://www.myschool.edu.au/>

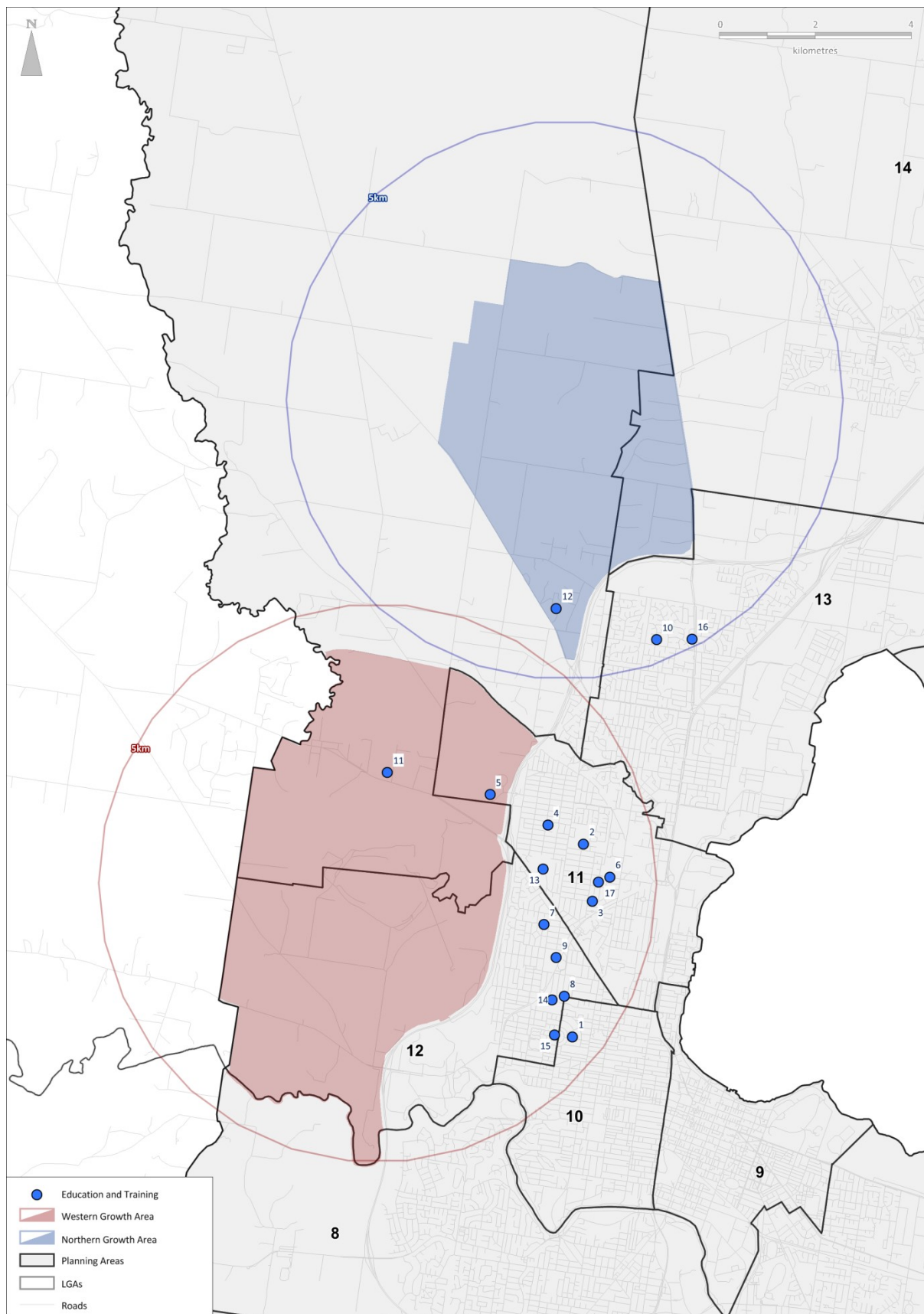
- > The Western Heights Secondary College operates on Vines Rd campus with a gym on its former Quamby campus. In 2016, the enrolment is 609 students. The college has capacity to cater for up to 950 students and projections show that the school will have capacity to meet future demand in student enrolments over the next four years at least.

It should be noted that there was no readily available information on the demand of non-government school located in proximity to the Western Growth Area. The following capacity (enrolment numbers) information has been sourced from MySchool website:

- > Covenant College – In 2015 total enrolments were 529 students, this is an increase from previous year (2014) which recorded total enrolments of 492 students.
- > Kardinia International College – In 2015 the school had 1749 students enrolled which is slightly higher to the 2014 enrolment numbers of 1713.
- > Clonard College – In 2015 the school had 817 students enrolled which is slightly lower to the 2014 enrolment numbers of 822.
- > Holy Spirit School (Primary) – In 2015 the school had 289 students enrolled which is slightly lower to the 2014 enrolment numbers of 300.
- > Holy Family Primary School – In 2015 the school had 326 students enrolled which is slightly higher to the 2014 enrolment numbers of 307.

Table 15. Education & Training Facilities Within 5km Radius of NWGGA

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
10	NORTH	13	Local	Primary School	Northern Bay P-12 College (Wexford Court P-8 Campus)
12	NORTH	15	District	Non-Government School	Geelong Baptist College
16	NORTH	13	Local	Non-Government School	St Francis Xavier Primary School
1	WEST	10	Local	Primary School	Manifold Heights Primary School
2	WEST	11	Local	Primary School	Bell Park North Primary School
3	WEST	11	Local	Primary School	Nelson Park School
4	WEST	11	Local	Primary School	Rollins Primary School
5	WEST	11	District	Non-Government School	Covenant College
6	WEST	11	District	Secondary School	North Geelong Secondary College
7	WEST	12	Local	Primary School	Hamlyn Banks Primary School
8	WEST	12	Local	Primary School	Herne Hill Primary School
9	WEST	12	District	Secondary School	Western Heights Secondary College (Vines Road)
11	WEST	15	Local	Primary School	Rollins Primary School (Batesford Campus)
13	WEST	11	District	Non-Government School	Kardinia International College
14	WEST	12	District	Non-Government School	Clonard College
15	WEST	12	Local	Non-Government School	Holy Spirit School
17	WEST	11	Local	Non-Government School	Holy Family Primary School

Figure 6. Education & Training Facilities Within 5km Radius of NWGGA

Source: Thao Ashford Planning, 2016

3.4.5 Health, Safety & Emergency Services

Northern Growth Area

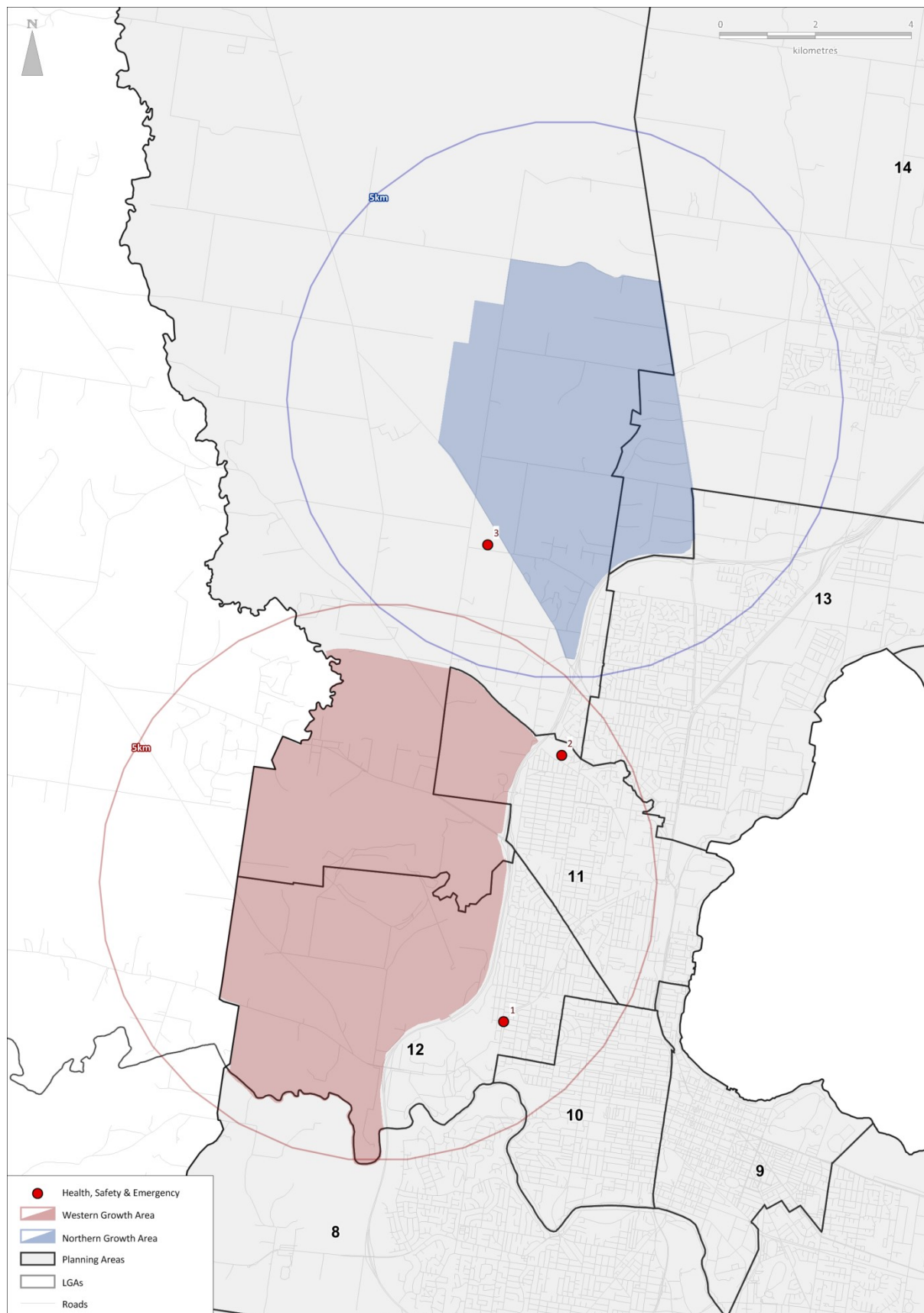
The Lovely Banks Fire Station is located on the South West border of the Northern Growth Area. No information at the time of this study in relation to existing demand and capacity.

Western Growth Area

The Geelong West Fire Station and Corio SES Unit are located in the Western Growth Area. No information at the time of this study in relation to existing demand and capacity.

Table 16. Health, Safety & Emergency Services Within 5km Radius of NWGGA

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
3	NORTH	15	District	Country Fire Station	Lovely Banks Fire Station
1	WEST	12	District	Country Fire Station	Geelong West Fire Station
2	WEST	11	District	SES Shed	Corio SES Unit

Figure 7. Health, Safety & Emergency Facilities Within 5km Radius of NWGGA

Source: Thao Ashford Planning, 2016

3.4.6 Leisure & Recreation

Northern Growth Area

There are 3 local pavilions/club rooms located in close proximity to the Northern Growth Area. The following demand and capacity of each facility has been noted:

- > Corio Reserve soccer clubrooms are in poor condition and the club is seeking funding for an upgrade to these facilities.
- > The Cheshire Reserve marching pavilion building needs some work and a decision is required in relation to its future use.
- > No readily available information on Abe Wood Reserve Hall.

Western Growth Area

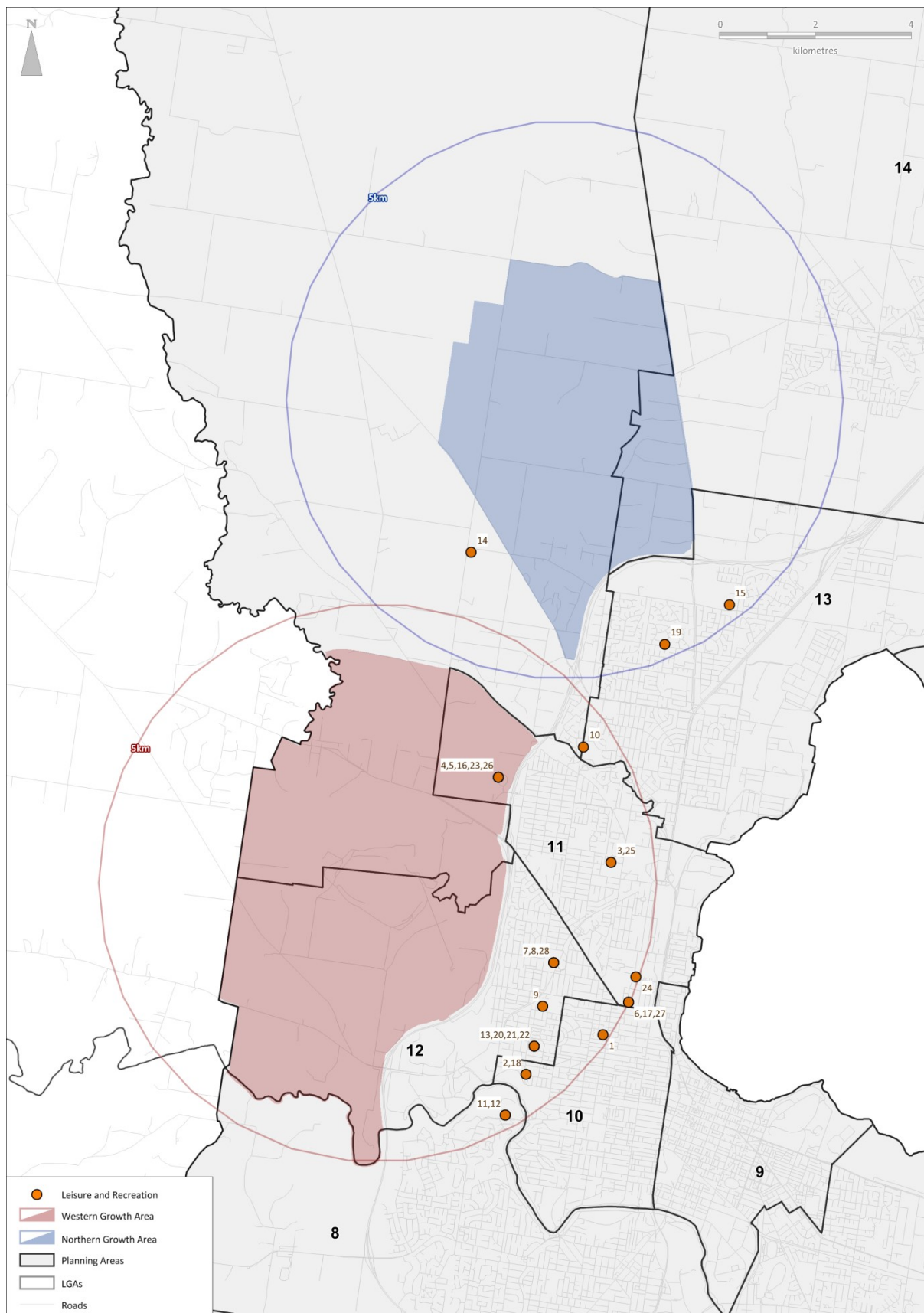
Within 5km of the Western Growth Area there are 23 local level pavilions/club rooms and 1 district level indoor sport and recreation centre.

- > The Corio Leisuretime Centre attracts users from across northern Geelong from Lara through to Herne Hill, Manifold Heights and Norlane. Centre occupancy reviews indicate there is capacity to cater for more users at this centre as well as significant area for development of more courts over outdoor court areas if needed in the future.
- > Queens Park Sporting Complex is utilised by the Newtown & Chilwell cricket clubs for six months of the year, is home to the Geelong Amateurs Football and Netball Club and by Geelong over 60s and other groups on demand. The facility / space is underutilised and there is an opportunity for it to be used for other activities and programs.
- > No readily available information at the time of this report in relation to existing demand and capacity for other pavilions/clubrooms.

Table 17. Leisure & Recreation Facilities Within 5km Radius of NWGGA

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
14	NORTH	15	Local	Pavilions/Club Rooms	Abe Wood Reserve Hall
15	NORTH	13	Local	Pavilions/Club Rooms	Corio Community Reserve change rooms
19	NORTH	13	Local	Pavilions/Club Rooms	Cheshire Reserve Marching Pavilion
1	WEST	10	Local	Pavilions/Club Rooms	Bakers Oval Amenities & Social Rooms
2	WEST	10	Local	Pavilions/Club Rooms	Elderslie Reserve Social/Amenities Rooms
3	WEST	11	Local	Pavilions/Club Rooms	Hume Reserve Amenities
4	WEST	11	Local	Pavilions/Club Rooms	Myers Reserve Football Social Rooms
5	WEST	11	Local	Pavilions/Club Rooms	Myers Reserve Tennis C'Rooms
6	WEST	11	Local	Pavilions/Club Rooms	Western Oval Social Rooms
7	WEST	12	Local	Pavilions/Club Rooms	Hamlyn Park Reserve
8	WEST	12	Local	Pavilions/Club Rooms	Hamlyn Reserve Tennis Clubroom
9	WEST	12	Local	Pavilions/Club Rooms	Hurst Oval Reserve Pavilion
10	WEST	13	District	Indoor Sport and Recreation Space	Corio Leisure Time Centre
11	WEST	8	Local	Pavilions/Club Rooms	Queens Park Social Rooms/Amenities/Toilet
12	WEST	8	Local	Pavilions/Club Rooms	Queens Park Netball Pavilion
13	WEST	12	Local	Pavilions/Club Rooms	Herne Hill St Josephs Social & Amenities
16	WEST	11	Local	Pavilions/Club Rooms	Myers Reserve Soccer Social Rooms

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
17	WEST	11	Local	Pavilions/Club Rooms	Western Oval Netball Pavilion
18	WEST	10	Local	Pavilions/Club Rooms	Newtown Netball Changerooms
20	WEST	12	Local	Pavilions/Club Rooms	St Josephs Changerooms - TB Building
21	WEST	12	Local	Pavilions/Club Rooms	Drew Reserve Football and Netball Club
22	WEST	12	Local	Pavilions/Club Rooms	Herne Hill Reserve - Walker Pavilion - St Peters Cricket Club
23	WEST	11	Local	Pavilions/Club Rooms	Bell Post Hill Tennis club rooms
24	WEST	11	Local	Pavilions/Club Rooms	Elderslie Reserve Netball Pavilion
25	WEST	11	Local	Pavilions/Club Rooms	Hume Reserve Soccer Social rooms
26	WEST	11	Local	Pavilions/Club Rooms	Myers Reserve Bowling Clubrooms
27	WEST	11	Local	Pavilions/Club Rooms	Western Oval – Flower Stand
28	WEST	12	Local	Pavilions/Club Rooms	Hamlyn Park – Alex Rizun Pavilion

Figure 8. Leisure & Recreation Facilities Within 5km Radius of NWGGA

Source: Thao Ashford Planning, 2016

3.4.7 Targeted Support

Northern Growth Area

There are no targeted support facilities located within 5km of the Northern Growth Area.

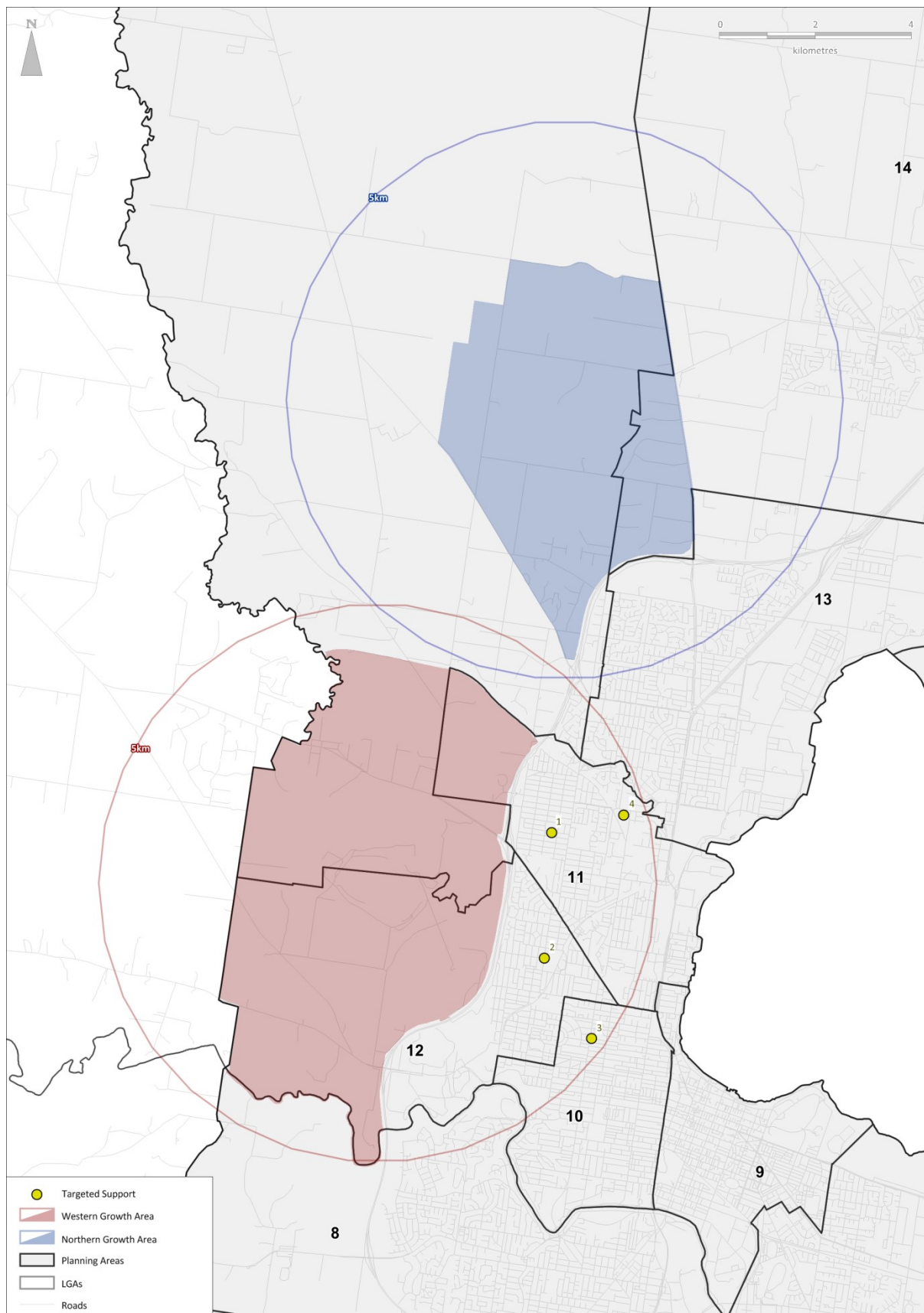
Western Growth Area

Within 5kms of the Western Growth Area there 2 senior citizens centre, a men's shed and an Aboriginal Service Centre.

- > The Seniors Centre is co-located with the Vines Road Community Centre, which has recently undergone redevelopment.
- > The Cobradah Seniors Citizens operates out of the Cobradah Hall and provide one of the few opportunities for facility / space and service expansion in this Planning Area Cobradah Hall and Pettit Park are both located on large open space parcel. There is an opportunity for site redevelopment / master planning. Cobradah is managed by COGG with a few regular user groups including seniors. There is capacity for further use and the facility / space is considered adequate and car parking is good. (refer to Section 3.4.1).
- > Information received from Wathaurong indicates the organisation has a \$30 million redevelopment plan for the Morgan Street site which the Wathaurong Health and Early Childhood is also located. The organisation has grown overtime and current spaces are not adequate. The organisation is currently seeking funding support to deliver expansion plan.

Table 18. Targeted Support Facilities Within 5km Radius of NWGGA

MAP #	Growth Area	Planning Area	Hierarchy	Facility Type	Name
1	WEST	11	District	Seniors Centre	Cobradah - Senior Citizens Clubrooms
2	WEST	12	District	Seniors Centre	Vines Road Senior Citizens Club
3	WEST	10	District	Men's Shed	Bakers Oval Mens Shed
4	WEST	11	District	Aboriginal Services Centre	Wathaurong Health and Early Childhood

Figure 9. Targeted Support Facilities Within 5km Radius of NWGGA

3.4.8 Open Space

Northern Growth Area

The following table provides information on the existing open space within 5km of the Northern Growth Area. The information below has been provided for completeness and will be updated accordingly.

Table 19. Existing Opens Space within 5km of the Northern Growth Area

ID CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
BE11	11	TED WILSON TRAIL (CREAMERY RD - ANAKIE RD)	District	BOTH AREAS. Linear reserve with shared path along Geelong Ring Road.
CO81	13	ARMALITE - FIELDMAN WALKWAY RESERVE	Local	Walkway, back/side fences
CO31	13	BANSKIA SQUARE RESERVE	Local	Powerline easement reserve
CO75	13	BECKLEY PARK	Regional	Private harness racing facility
CO51	13	CABARITA - CALDERMEADE WALKWAY RESERVE	Local	Walkway, back/side fences
CO53	13	CABARITA - CRANBOURNE WALKWAY RESERVE	Local	Walkway, back/side fences
CO34	13	CANN - BONANG WALKWAY RESERVE	Local	Walkway, back/side fences
CO58	13	CARDROSS - CLOVERDALE WALKWAY RESERVE	Local	Walkway, back/side fences
CO55	13	CARMARTHEN - BREN WALKWAY RESERVE	Local	Walkway, back/side fences
CO30	13	CHAFFEY SQUARE RESERVE	Local	Powerline easement reserve
CO01	13	CHESHIRE RESERVE	Local	Large local passive open space. Adjacent to Northern Bay College Wexford Ct Campus. A planned integrated child and family care will occupy the whole reserve.
CO02	13	CLOVERDALE COMMUNITY CENTRE RESERVE	Local	Local open space with very narrow street frontages. Site includes the Cloverdale Community Centre.
CO15	13	CLUNIES RESERVE	Local	Very small local open space with playground. Narrow street frontage, side fences. Adjacent to powerline easement reserve.
CO16	13	COHUNA RESERVE	Local	Small local reserve joining 3 cul-de-sacs. Playground. Very narrow street frontages, side fences.
CO03	13	CONNECTIONS PARK	Local	Large linear reserve with very narrow connections to surrounding cul-de-sacs, minimal street frontages, extensive rear and side fences. Playground. Adjacent to Rosewall Neighbourhood House.
CO04	13	CORIO COMMUNITY RESERVE	District	Recreation reserve with rectangular field, disused tennis courts and open space. Reserve includes William Hovell Preschool, Hendy St Hall, and future Hendy St Child and Family Centre (to replace existing MCH and scout hall).
CO80	13	CORIO POWER RESERVE (COX - BANKSIA)	Local	Powerline easement reserve
CO28	13	CORIO POWER RESERVE (CRANBOURNE - PLANTATION)	Local	Powerline easement reserve
CO27	13	CORIO POWER RESERVE (PURNELL - CRANBOURNE)	Local	Powerline easement reserve
CO67	13	COX - WYOMING WALKWAY RESERVE	Local	Walkway, back/side fences

ID_CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
CO73	13	CROSSLEY - PLANTATION WALKWAY RESERVE	Local	Walkway, back/side fences
CO06	13	DETROIT RESERVE	Local	Small local reserve with playground
CO40	13	DONAX RESERVE	Local	Small local reserve with playground
CO78	13	EPSOM - MINEHAN WALKWAY RESERVE	Local	Walkway, back/side fences
CO10	13	FLINDERS PEAK RESERVE	District	Large undeveloped recreation reserve. Current project to develop 2 sports fields and pavilion to commence late 2016. Adjacent to former Flinders Peak Secondary College (now mostly vacant land). Good connectivity to North GA via Plantation and Bacchus Marsh Rds.
CO08	13	GENISTA - BROWALLIA WALKWAY RESERVE	Local	Walkway, back/side fences
CO62	13	GLENDYE - CLOVERDALE WALKWAY RESERVE	Local	Walkway, back/side fences
CO35	13	GLENELG RESERVE	Local	Very small local open space primarily serving as connection between streets.
CO70	13	GOLDSWORTHY - PAULSON WALKWAY RESERVE	Local	Walkway, back/side fences
CO09	13	GOLDSWORTHY RESERVE	District	Recreation reserve with athletics track, grandstand and pavilion. Extensively used by local schools for athletics carnivals. Adjacent to Nelson Park School. Easy connectivity to North GA via Cox and Bacchus Marsh Rds.
CO29	13	HORNE SQUARE RESERVE	Local	Powerline easement reserve
CO21	13	HOWITT RESERVE	Local	Small local open space with playground.
CO22	13	KANOOKA RESERVE	Local	Small local open space with playground.
CO66	13	KINGSLEY RESERVE	Local	Local open space with narrow street frontages. Primarily serves as a connection between streets. Rear/side fences.
CO14	13	LANDALE CT RESERVE	Local	Local open space with playground and narrow street frontages. Primarily serves as a connection between streets. Rear/side fences.
CO23	13	LINCOLN RESERVE	Local	Local open space with playground. Rear/side fences.
CO24	13	MCKINLEY RESERVE	Local	Local open space with very narrow street frontages. Primarily serves as a connection between streets. Rear/side fences.
CO76	13	MCMANUS RD BASIN RESERVE	Local	Not useable space. Industrial area.
CO25	13	MCSHANE RESERVE	Local	Local open space with playground and narrow street frontage off cul-de-sac. Rear/side fences.
CO26	13	MEATH RESERVE	Local	Small local reserve joining 2 cul-de-sacs. Playground. Very narrow street frontages, side fences.
CO07	13	NIGELLA AV DRAINAGE RESERVE	Local	Not useable space.
CO18	13	PALEY RESERVE	Local	Local open space with playground and connections to cul-de-sacs.
CO72	13	PEMBROKE - ARMALITE WALKWAY RESERVE	Local	Walkway, back/side fences
CO41	13	PRINCESS RESERVE	Local	Local open space.
CO44	13	REMINGTON RESERVE	Local	Local open space with playground.
CO61	13	ROCKLEY - CLOVERDALE WALKWAY RESERVE	Local	Walkway, back/side fences
CO19	13	RODBROUGH RESERVE	Local	Local open space with playground. Side fences.

ID_CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
CO17	13	ROTELLA RESERVE	Local	Small local open space with playground. Essentially a traffic island.
CO42	13	SHELL RESERVE	District	Recreation reserve with 1 oval, netball, pavilion, open space area and playground. Adjacent to the Shell Workers' Club.
CO77	13	STAPLEDON - WILKINS WALKWAY RESERVE	Local	Walkway, back/side fences
CO38	13	STREETON CLOSE PLANTATION RESERVE	Local	Not useable space.
CO45	13	SUTCLIFFE RESERVE	Local	Large undeveloped reserve. Includes 2 community buildings: Austrian Club and Serbian Club. Good access via Plantation and Bacchus Marsh Rds.
CO20	13	TALONA RESERVE	Local	Small local open space with playground. Essentially a traffic island.
CO46	13	TED WILSON TRAIL (BACCHUS MARSH RD - PLANTATION RD)	District	Linear reserve with shared path along Geelong Ring Road.
CO47	13	TED WILSON TRAIL (BRODERICK RD - BACCHUS MARSH RD)	District	Linear reserve with shared path along Geelong Ring Road.
CO49	13	VERMONT RESERVE	Local	Undeveloped local open space.
CO50	13	VIGAR RESERVE	Local	Small local reserve joining 3 cul-de-sacs to busy road. Very narrow street frontages, side fences.
CO79	13	VIRGILLIA SQUARE RESERVE	Local	Powerline easement reserve
LA55	14	BATH - BUCKINGHAM DRAINAGE RESERVE	Local	Drainage reserve, provides connection but not otherwise useable.
LA10	14	ELCHO PARK	District	Recreation reserve including golf course and pony club.
LA12	14	FLINDERS MEMORIAL PARK CEMETERY	Local	Lara Cemetery
LA59	14	FUTURE PASSIVE RESERVE	Local	Lara West Growth Area future POS
LA60	14	FUTURE PASSIVE RESERVE	Local	Lara West Growth Area future POS
LA61	14	FUTURE PASSIVE RESERVE	Local	Lara West Growth Area future POS
LA62	14	FUTURE PASSIVE RESERVE	Local	Lara West Growth Area future POS
LA14	14	G.R.E.P. BASIN RESERVE	Local	Not useable space. Industrial area.
LA09	14	GIBBONS RD DRAINAGE RESERVE	Local	Not useable space. Industrial area.
LA16	14	HOUSTON RD DRAINAGE RESERVE	Local	Linear/easement reserve in rural area.
LA64	14	LARA WEST CONSERVATION RESERVE	Local	Lara West Growth Area future POS
LA58	14	LARA WEST POWERLINE EASEMENT	Local	Lara West Growth Area future POS
LA57	14	LARA WEST RECREATION RESERVE	District	Lara West Growth Area future POS
LA63	14	LARA WEST WATERWAY RESERVE	Local	Lara West Growth Area future POS
LA44	14	MELISSA - EASTLAKES WALKWAY RESERVE	Local	Walkway, back/side fences
LA33	14	MOORHEN - MATHIESON WALKWAY RESERVE	Local	Walkway, back/side fences
LA43	14	SPRINGWATER - EASTLAKES WALKWAY RESERVE	Local	Walkway, back/side fences
LA51	14	STULLE RESERVE	Local	Drainage reserve, not useable space.
LA54	14	WESTLAKES RESERVE	Local	Large waterway reserve with path connections.
LB01	15	ABE WOOD RESERVE	District	Recreation reserve with large open space and disused tennis courts. 1 pavilion. Site includes CFA.
LB03	15	COAKLEY CR LINEAR RESERVE	Local	BOTH AREAS. Not useable space
LB05	15	COX RD DRAINAGE RESERVE	Local	Not useable space.

ID_CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
LB08	15	ENDECA CT BASIN RESERVE	Local	Not useable space.
LB09	15	ENDECA CT RESERVE	Local	Very small undeveloped open space adjacent to Ted Wilson Trail.
LB07	15	HAUGH ST DRAINAGE RESERVE	Local	Not useable space.
LB12	15	PEART CT DRAINAGE RESERVE	Local	Not useable space.
LB15	15	TED WILSON TRAIL (PLANTATION RD - PURNELL RD)	District	Linear reserve with shared path along Geelong Ring Road.
LB13	15	TOWERHILL DR DRAINAGE RESERVE	Local	Not useable space.
LB16	15	VALLEYSIDE - CUDDIHY WALKWAY RESERVE	Local	BOTH AREAS. Walkway/easement in rural area
NO04	13	IBIS RESERVE	Local	Small local open space with playground. Essentially a traffic island.
NO09	13	MAYNOOTH RESERVE	Local	Very small local open space with playground. Adjacent to former Norlane High School (now vacant land).

Source: CoGG, 2016

Western Growth Area

The following table provides information on the existing open space within 5km of the Western Growth Area. The information below has been provided for completeness and will be updated accordingly.

Table 20. Existing Opens Space within 5km of the Western Growth Area

ID_CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
BP03	11	ANAKIE RD PLANTATION RESERVE (HAMMERSLEY - FURNER)	Local	Not useable space
BP14	11	ASHLEIGH - CARRAMAR WALKWAY RESERVE	Local	Walkway, back/side fences
BP18	11	CARRAMAR - KORAKIN WALKWAY RESERVE	Local	Walkway, back/side fences
BP01	11	CASTLE RESERVE	Local	Small local open space with playground. No street frontage but adjacent to Tom McKean Linear Trail and local walkway reserves.
BP04	11	FOUNTAIN OF FRIENDSHIP PARK	District	Large passive open space along Cowies creek, native vegetation, paths and skate bowl for advanced skaters. Existing path connects underneath the Geelong Ring Road to the potential northern edge of the West Growth Area on the north side of the Geelong-Ballarat rail line at Bluestone Bridge Road.
BP05	11	HAMMERSLEY RESERVE	Local	Small local open space with playground. Also serves drainage function. Access from two cul-de-sacs.
BP06	11	HEDGELEY RD BASIN RESERVE	Local	Not useable space
BP07	11	HUME RESERVE	District	Recreation reserve with 3 soccer pitches, bocce, playground and open space. 1 pavilion. Minimal street frontage, residential and industrial back fences interface.
BP08	11	HUME RESERVE LINEAR LINK	Local	Walkway, back/side fences
BP09	11	LIBAU RESERVE	Local	Very small open space area behind back/side fences with walkway connections to local streets.
BP10	11	MALINDA - WOODVALE WALKWAY RESERVE	Local	Walkway, back/side fences

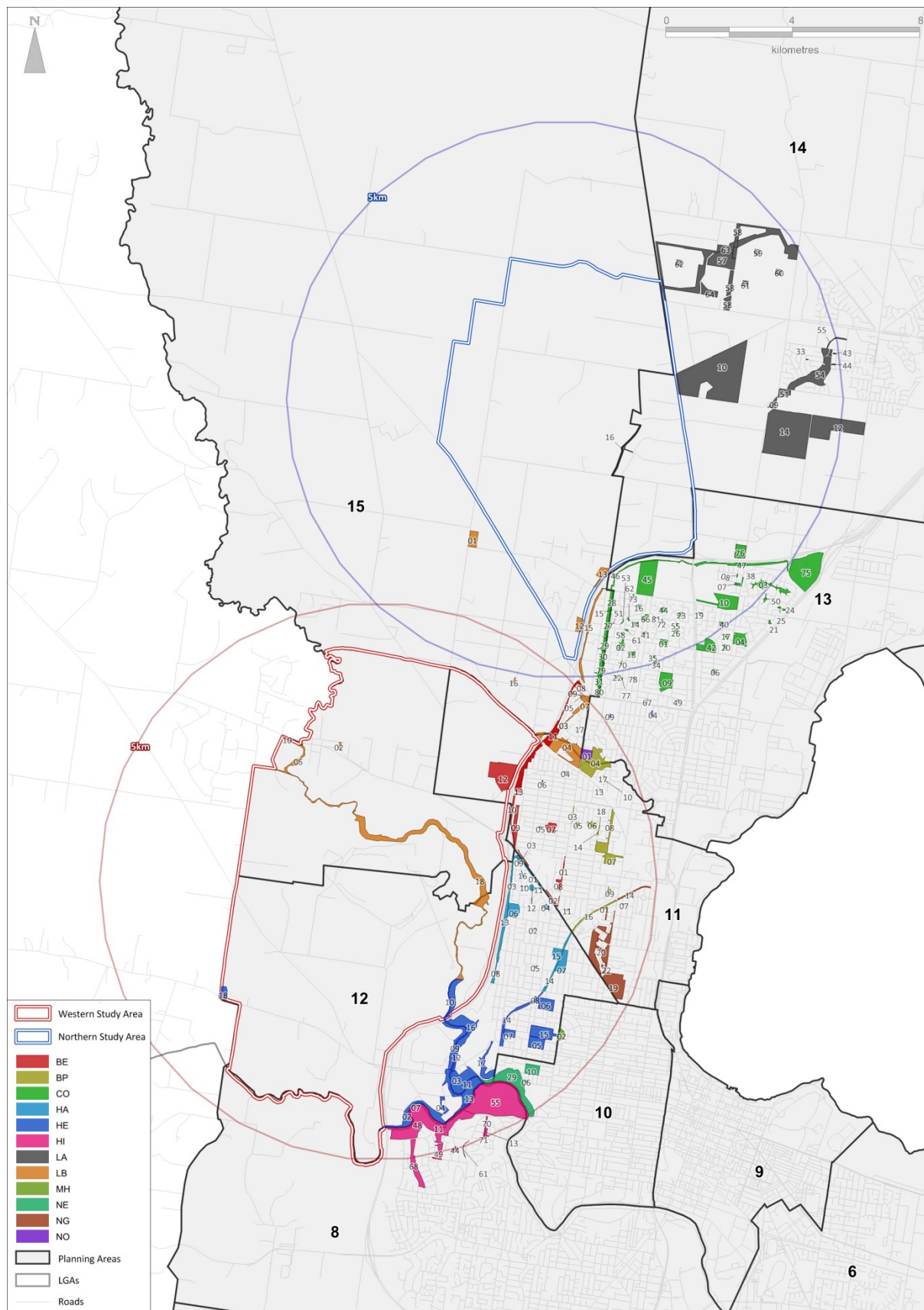
ID CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
BP11	11	MILTON RESERVE	Local	Small local open space with playground adjacent to Bell Park MCH.
BP13	11	NICHOLSON RESERVE	Local	Small local open space with playground adjacent to Geelong-Ballarat rail line (no ped access along rail line).
BP16	11	TOM MCKEAN TRAIL (BALLARAT RD - THOMPSON RD)	District	Linear reserve with shared path along former rail line from Fyansford to Bell Park. Owned by VicTrack with CoGG maintenance.
BP17	11	WOODVALE RESERVE	Local	Landscaped traffic island.
BE01	11	ANAKIE RD PLANTATION RESERVE (THORBURN - GOTEMBA)	Local	Not useable space
BE02	11	BALLARAT RD / ANAKIE RD PLANTATION RESERVE	Local	Not useable space
BE03	11	BALLARAT RD PLANTATION RESERVE (KARDINIA COLLEGE - ROLLINS RD)	Local	Not useable space
BE13	11	BELL POST HILL TENNIS RESERVE	Local	Recreation reserve with 4 tennis courts immediately adjacent to the Ted Wilson Trail and the Geelong Ring Road. Originally part of Myers Reserve before Ring Road construction. Very small clubroom in poor condition to be demolished. No tenant club as at Oct 2016. Good connectivity to north of Western GA via Creamery Road.
BE04	11	EDISON RESERVE	Local	Small local open space with playground.
BE05	11	HOSIE RESERVE	Local	Small local open space with playground adjacent to Bell Post Hill MCH.
BE06	11	KANSAS RESERVE	Local	Small local open space with playground. Minimal street frontage, residential side fence interface.
BE07	11	PETTIT PARK	District	Large passive open space with playground, open grassed area and picnic facilities. Pettit Park Hall and Cobradah Senior Citizens Club buildings are located in the park. Could provide service to Western GA with accessibility off Rollins and Ballarat Rds.
BE08	11	RITA RESERVE	Local	Basin reserve with small adjacent local open space area and playground.
BE09	11	ROLLINS RD RESERVE	Local	To be sold. No value as open space.
BE10	11	TED WILSON TRAIL (BALLARAT RD - CREAMERY RD)	District	BOTH AREAS. Linear reserve with shared path along Geelong Ring Road.
BE11	11	TED WILSON TRAIL (CREAMERY RD - ANAKIE RD)	District	Linear reserve with shared path along Geelong Ring Road.
BE12	11	WH MYERS RESERVE	District	Recreation reserve with 2 ovals, 3 soccer pitches, netball, bowls and open space. 3 pavilions. Cut off from Geelong by ring road but good accessibility via Creamery Rd to Western GA. Adjacent to Covenant College.
HA01	12	BALLARAT RD PLANTATION RESERVE (HERITAGE DR - KEITH PL)	Local	Not useable space
HA02	12	DOWNIE RESERVE	Local	Small local open space with playground.
HA03	12	DUNMOW CR WALKWAY RESERVE	Local	Walkway, back/side fences
HA04	12	EDGECOMBE RESERVE	Local	Local open space with playground, residential back fences to 3 sides.
HA05	12	FAIRLIE RESERVE	Local	Small local open space with playground. Essentially a traffic island.

ID CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
HA06	12	HAINES RESERVE	Local	Large passive open space with playground and revegetation areas, minimal street frontage but adjacent to Ted Wilson Trail.
HA07	12	HAMLIN PARK	District	Recreation reserve with 1 oval, 5 tennis, playground and open space, 3 pavilions (including gaming room), 1 hall (The Ballroom). Adjacent to Tom McKean Trail. Adjacent to Western Heights Secondary College, joint use agreement with additional: oval, netball, skate park.
HA11	12	HERITAGE DR RESERVE	Local	Not useable space
HA08	12	KATOOMBA RESERVE	Local	Small local open space with playground adjacent to Ted Wilson Trail.
HA09	12	KEITH PL WALKWAY RESERVE	Local	Walkway, back/side fences
HA10	12	OLEA - WILKS WALKWAY RESERVE	Local	Walkway, back/side fences
HA12	12	SHARLAND PARK	Local	Small local open space with playground.
HA13	12	TED WILSON TRAIL (CHURCH ST - BALLARAT RD)	District	Linear reserve with shared path along Geelong Ring Road.
HA14	12	TOM MCKEAN TRAIL (CHURCH ST - BALLARAT RD)	District	Linear reserve with shared path along Geelong Ring Road. Owned by VicTrack, maintained by CoGG.
HA15	12	WESTERN HEIGHTS COLLEGE FOOTBALL NETBALL	District	School site with joint use agreement, as per Hamlyn Park.
HA16	12	WILKS - PARKLAND WALKWAY RESERVE	Local	Walkway, back/side fences
HE02	12	BARWON RIVER RESERVE - FYANSFORD	Regional	Linear reserve along Barwon River with shared paths and ultimate connections planned to Moorabool River and Ted Wilson Trail.
HE17	12	CEMENT WORKS ESCARPMENT RESERVE	Local	Not useable space
HE03	12	FYANSFORD COMMON	District	Large passive open space on Moorabool River.
HE04	12	FYANSFORD SHED RESERVE	Local	Undeveloped passive open space.
HE05	12	HERNE HILL RESERVE	District	Recreation reserve with 2 ovals, 2 netball, 2 pavilions, scout hall.
HE06	12	HURST RESERVE	District	Recreation reserve with 2 ovals, 6 netball, 1 pavilion. Adjacent to Tom McKean Trail. Adjacent to St Joseph's College Minerva Rd and Clonard College Church St.
HE07	12	KEVIN KIRBY RESERVE	District	Large passive reserve with playground and natural areas. Adjacent to Tom McKean Trail.
HE08	12	MAURICE RESERVE	Local	Very small local reserve with playground adjacent to Tom McKean Trail, Hurst Reserve and Rix St Kindergarten.
HE09	12	MOORABOOL RIVER (HYLAND ST - LEWIS BANDT BRIDGE)	District	Moorabool River Reserve river banks only, not publicly accessible. To be expanded in future development.
HE10	12	MOORABOOL RIVER (LEWIS BANDT BRIDGE - CHURCH ST)	District	Moorabool River Reserve river banks only, not publicly accessible. To be expanded in future development.
HE11	12	MOORABOOL RIVER (RED GUM ISLAND - HYLAND ST)	Regional	Moorabool River Reserve river banks only, not publicly accessible. To be expanded in future development.
HE16	12	MOORABOOL RIVER RESERVE (ATKINS - CHURCH)	District	Future Moorabool River Reserve as part of current residential developments in Fyansford. Will include extensive passive open space, revegetation and 1 oval.
HE12	12	MOORABOOL RIVER RESERVE (HYLAND ST - ATKINS ST)	District	Moorabool River Reserve river banks only, not publicly accessible. To be expanded in future development.
HE13	12	RED GUM ISLAND	Regional	Passive open space area at junction of Moorabool and Barwon Rivers. Significant Aboriginal cultural heritage place. Native vegetation. Shared pathways.

ID CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
HE18	12	STONEHAVEN RECREATION RESERVE	Local	Privately-owned former recreation reserve. Cricket wicket still exists but no buildings remain onsite. Unsure of current use or plans. On the extreme south-west edge of the Western GA Study Area.
HE14	12	TOM MCKEAN TRAIL (MCCURDY RD - CHURCH ST)	District	Linear reserve with shared path along Geelong Ring Road. Owned by VicTrack, maintained by CoGG.
HE15	12	WESTERN CEMETERY	Local	Geelong Cemeteries Trust. Adjacent to Herne Hill Reserve.
HI07	8	BARWON RIVER (QUEENS BRIDGE - GEOFF THOM BRIDGE)	Regional	Linear reserve along Barwon River with shared paths and ultimate connections planned to Moorabool River and Ted Wilson Trail.
HI11	8	BUCKLEY FALLS PARK	Regional	River corridor and significant natural area with views of heritage industry sites.
HI13	8	CANNES RESERVE	Local	Small local park with playground and no street frontage. Back/side fences. Adjacent to water pipeline reserve.
HI44	8	LEILANI CT RESERVE	Local	Walkway, back/side fences
HI71	8	MONTPELLIER PIPELINE RESERVE (CARROLL - MAIDIE)	Local	Pipeline reserve, back/side fences, no paths
HI70	8	MONTPELLIER PIPELINE RESERVE (MAIDIE - QUEENS PARK)	Local	Pipeline reserve, back/side fences, no paths
HI48	8	MT BRANDON PENINSULA RESERVE	Regional	River corridor and significant natural area and ongoing upgrades to passive recreation facilities and paths.
HI49	8	ORANA RD NORTH GULLY RESERVE (GULLY 3)	Local	Future passive open space.
HI55	8	QUEENS PARK	District	Recreation reserve and golf course with 2 ovals, netball, driving range, 2 pavilions, 1 golf club house.
HI61	8	SCENIC RD PLANTATION RESERVE	Local	Not useable space
HI68	8	VALENCAY AV GULLY RESERVE (GULLY 2)	Local	Future passive/amenity open space with path connection to Barwon River.
LB02	15	BATESFORD HALL RESERVE	Local	Small reserve with tennis courts, open space and Batesford Hall.
LB03	15	COAKLEY CR LINEAR RESERVE	Local	BOTH AREAS. Not useable space
LB04	15	COWIES CREEK RESERVE (ANAKIE RD - BLUESTONE BRIDGE RD)	District	Passive open space along Cowies creek, native vegetation, paths. Adjacent to CoGG's Anakie Rd Operations Centre/Depot. Existing path connects underneath the Geelong Ring Road to the potential northern edge of the West Growth Area on the north side of the Geelong-Ballarat rail line at Bluestone Bridge Road.
LB06	15	DOG ROCKS RESERVE	District	Natural creekside open space
LB17	15	HAYES - MCQUINN WALKWAY RESERVE	Local	Walkway, back/side fences
LB10	15	MIDLAND HWY PLANTATION RESERVE	Local	Not useable space
LB18	15	MOORABOOL RIVER (CHURCH - MIDLAND)	Local	Moorabool River Reserve river banks only, not publicly accessible. Within the Western GA.
LB16	15	VALLEYSIDE - CUDDIHY WALKWAY RESERVE	Local	BOTH AREAS. Walkway/easement in rural area
MH02	10	PETER LOWE RESERVE	District	Primarily passive open space sometimes accommodating sport overflow. Playground.
NE10	10	ELDERSLIE RESERVE	District	Recreation reserve with 1 oval, netball, 2 pavilions, open space area
NE06	10	LOOKOUT RESERVE	Local	Small local reserve with lookout structure
NE29	10	ZILLAH CRAWCOUR PARK	Regional	River corridor and significant natural area with shared paths.

ID CODE	Planning Area	RESERVE	Hierarchy	COMMENTS
NO01	10	CORIO LEISURETIME CENTRE	District	Large passive open space along Cowies creek, playground. Leisuretime Centre indoor sport venue onsite. Expansion planned. Existing path connects underneath the Geelong Ring Road to the potential northern edge of the West Growth Area on the north side of the Geelong-Ballarat rail line at Bluestone Bridge Road.
NG19	11	GEELONG GOLF COURSE	District	Private golf course.
NG22	11	GEELONG GOLF COURSE ESTATE OPEN SPACE	Local	Private passive open space.
NG07	11	OSBORNE AV RESERVE	Local	Very small local open space with playground
NG20	11	RUTLEDGE DRAINAGE RESERVE	Local	Passive open space linear reserve
NG14	11	TOM MCKEAN TRAIL (THOMPSON RD - DOURO ST)	District	Linear reserve with shared path along Geelong Ring Road. Owned by VicTrack, maintained by CoGG.

Source: CoGG, 2016

Figure 10. Open Space Within 5km Radius of NWGGA

Source: Thao Ashford Planning, 2016 and CoGG, 2016

4.0 Social Infrastructure Needs for NWGGA

4.1 Benchmark Analysis

A broad benchmark analysis was undertaken to determine facilities that would be required **at a minimum** to support the NWGGA development.

As noted previously, the benchmark for early years infrastructure has been undertaken by Council using a slightly different methodology. The following should be read in conjunction with Table 23:

- > The early childhood service estimates which have been provided in the table are for total service provision requirements (Council, commercial, NGO, schools, etc.) based on the population estimates available.
- > The provision rate for Kindergartens has been informed by the recent VPA Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas (refer to Section 2.3.3)

Benchmarks for sport, recreation and open space has been undertaken using benchmarks based on ASR Research and is summarised in Table 26 below. Also refer to Appendix F for qualitative assessment undertaken as part of the ASR report.

4.1.1 Community Facilities

The indicative community facilities required for NWGGA is shown in Table 21 for Northern Geelong and Table 23 for Western Geelong.

It is important to note that the findings of the benchmark model alone were not considered an accurate reflection of needs on the NWGGA. They represent a theoretical, qualitative approach to assessing need only. As such, they were only one of the inputs to identifying need (refer to Section 4.3).

In the past, social infrastructure planning has largely focused on creating lists of facilities that are needed based on population numbers – for example one meeting room per 6,000 residents. This report takes into account benchmarking based planning, but adds to it by considering a broader picture of social infrastructure (community facilities, human services, and social networks) captured through community consultation and input.

Government & Non-Government Provision

Planning and delivery of social infrastructure is shared between local governments, State agencies, Commonwealth agencies, community organisations and, increasingly, private providers. For the purposes of this report, benchmark analysis has been provided to show the overall need of a particular infrastructure item – that is there is no distinction between a government facility and a non-government facility. How a facility or service is provided e.g. by government or non-government sector will be determined by the market and further explored through ongoing negotiations and discussions with all stakeholders involved. Examples of where this is relevant is education. Anecdotal evidence suggests that 66% of education needs are catered through government provision with the remaining provision (34%) shared between non-government education providers (Catholic Education accounts for 23% of provision).

Table 21. Community Facilities Benchmark Analysis – Northern Geelong

Category	Facility	Catchment	Benchmark for Provision (1 per X population)	Elcho Road East	Heales Road West	Elcho Road West	Heales Road East	Northern Geelong Growth Area
				12,993	15,177	11,313	8,418	47,901
Cultural	Branch Library	District	50,000					1
	Arts and Cultural Centres	District	40,000					1
	Museum	District	40,000					1
Education & Training	Prep/Primary Schools	Local	5,250	2	3	2	1	8
	Secondary Schools	District	17,500					2
Health, Safety & Emergency Services	Community Health Centres	District	40,000					1
	Police	District	40,000					1
	SES	District	40,000					1
	Fire	District	40,000					1
	Ambulance	District	40,000					1
Targeted Support	Aged Care/Respite Centre	District	20,000					2
	Seniors Centre	District	20,000					2
	Youth Centre/Space	District	20,000					2
	Men's Shed	District	20,000					2
	Migrant Resource Centre	District	45,000					1
	Aboriginal Service Centre	District	45,000					1
Community Space	Neighbourhood Community Centre	District	10,000	1	1	1		3
	Multi-purpose Community Centre	District	20,000					2
	Community meeting rooms/Halls	Local	4,000	3	3	2	2	10
	Community Gardens	District	20,000					2

Source: TAP Consulting Pty Ltd, 2018

Table 22. Community Facilities Benchmark Analysis – Western Geelong

Category	Facility	Catchment	Benchmark for Provision (1 per X population)	Creamery Road	Batesford North	Merrawarp Road	McCanns Lane	Batesford South	Western Geelong Growth Area
				9,365	10,278	6,403	9,733	25,806	61,585
Cultural	Branch Library	District	50,000				1		1
	Arts and Cultural Centres	District	40,000				1		1
	Museum	District	40,000				1		1
Education & Training	Prep/Primary Schools	Local	5,250	2	2	1	2	4	11
	Secondary Schools	District	17,500		1		1	1	3
Health, Safety & Emergency Services	Community Health Centres	District	40,000				1		1
	Police	District	40,000				1		1
	SES	District	40,000				1		1
	Fire	District	40,000				1		1
	Ambulance	District	40,000				1		1
Targeted Support	Aged Care/Respite Centre	District	20,000	1			1	1	3
	Seniors Centre	District	20,000	1			1	1	3
	Youth Centre/Space	District	20,000	1			1	1	3
	Men's Shed	District	20,000	1			1	1	3
	Migrant Resource Centre	District	45,000				1		1
	Aboriginal Service Centre	District	45,000				1		1
Community Space	Neighbourhood Community Centre	District	10,000	1	1	1	1	2	6
	Multi-purpose Community Centre	District	20,000	1			1	1	3
	Community meeting rooms/Halls	Local	4,000	2	2	1	2	6	15
	Community Gardens	District	20,000	1			1	1	3

Source: TAP Consulting Pty Ltd, 2018

4.1.2 Early Years Infrastructure

The table below shows the early years infrastructure requirements for NWGGA based on VPA and Councils modelling.

Table 23. Benchmark Analysis for Early Years Infrastructure – Northern Growth Area

Northern Growth Area (average provision based on 5.6% 0-4 year olds and 8.6% 5-11 year olds)														
		Children aged 0-4 years Estimates	Four year old children Estimates	Children aged 5-11 years Estimates	MCH Nurses	MCH Consult Rooms Required	Kindergarten Centres Licensed @ 66 places	Licensed Centre Based Child Care Places	Centre Based Child Care Centres Licensed @ 120 places	Licensed Occasional Child Care Places	OCC Rooms Based on @ 33 licensed places	Weekly Playgroup Sessions	Playgroup Rooms Required	Licensed Outside Schools Hours Care Places
Precinct	Population	5.70%		8.60%			1 per 5729 Dwellings							
Elcho Road East	12993	741	185	1511	1	2	1	218	2	16	0	11	1	248
Heales Road West	15177	865	216	1765	1	2	1	254	2	19	1	12	1	289
Elcho Road West	11313	645	161	1315	1	2	1	190	2	14	0	9	1	216
Heales Road East	8418	480	120	979	1	2	1	141	1	10	0	7	1	160

Table 24. Benchmark Analysis for Early Years Infrastructure – Western Growth Area

Western Growth Area (average provision based on 5.6% 0-4 year olds and 8.6% 5-11 year olds)														
		Children aged 0-4 years Estimates	Four year old children Estimates	Children aged 5-11 years Estimates	MCH Nurses	MCH Consult Rooms Required	Kindergarten Centres Licensed @ 66 places	Licensed Centre Based Child Care Places	Centre Based Child Care Centres Licensed @ 120 places	Licensed Occasional Child Care Places	OCC Rooms Based on @ 33 licensed places	Weekly Playgroup Sessions	Playgroup Rooms Required	Licensed Outside Schools Hours Care Places
Precinct	Population	5.70%		8.60%			1 per 5729 Dwellings							
Creamery Road	9365	534	133	1089	1	2	1	157	1	11	0	8	1	179
Batesford North	10278	586	146	1195	1	2	1	172	1	13	0	8	1	196
Merrawarp Road	6403	365	91	745	1	2	1	107	1	8	0	5	1	122
McCanns Lane	9733	555	139	1132	1	2	1	163	1	12	0	8	1	186
Batesford South	25806	1471	368	3001	2	2	2	433	4	32	1	21	2	492

4.1.3 Open Space

Northern Geelong

The physical separation of the Northern Growth Area from Geelong's northern suburbs and Lara makes it less likely that residents of the Northern NWGGA will rely on existing facilities to serve their sporting and recreational needs other than in the early years of development. The Northern Growth Area will need to be self-sufficient in terms of sporting, recreational and open space provision.

While the substantial number of easements and other likely encumbered open spaces will provide benefits to connectivity, it cannot be assumed that all open space reserves can be attached to these encumbered reserves; the distribution of unencumbered open space for walkability/ accessibility is more important than co-location.

In terms of the quantity of land the application of the open space land provision ratios sums to more land area than the 10% of unencumbered land to be made available. The reason is that the ratios are applied to different factors: one being the NDA and the other the expected population. The two results need to be aligned as planning is undertaken and this will be achieved mainly through collocation of facilities such that there are savings in the development (e.g. sharing of clubhouses, car parks and access roads).

District level active open space needs to be a minimum of 9.5 hectares and nine reserves are required (a minimum of 85.5 hectares). One sub-regional active open space is to be provided and CoGG has advised that this is to be 17 hectares in size and located to central to the residential areas. A regional active open space, if desired, may be achieved by co-locating a number of lower level active open space areas.

The distribution of passive local open space will need to be determined at the precinct structure planning stage when the demographics and housing density/distribution is better understood. All households should be within 400 metres walk of a passive open space area. District level passive open space needs to be a minimum of 2.0 hectares and nine parks are required (a minimum of 18 hectares). Where possible these areas should be provided as part of a district level active open space area as additional parkland presenting as the one complex.

A regional level passive open space is not required through the application of the provision ratios. If required a regional level passive open space could be delivered via the amalgamation of other passive open space areas. Regional open space could be located in the growth area or in an area proximate to the growth areas which can serve a broader catchment, in the range of 200,000 people. Regional open space should be accessible via a range of transport modes. It should reflect the visions and principles for the growth area which it serves. The need for regional open space could be met through the development of new open space areas or the augmentation of existing open space to increase its useability.

Table 25. Benchmark Analysis for Open Space – Northern Growth Area

Classification	Precinct				Northern (totals in ha or No.)
	Elcho Road East	Heales Road West	Elcho Road West	Heales Road East	
All open space in a residential area (ha)	31	36	27	39	132
All open space (unencumbered) in an employment area (ha)	2.4	-	-	2.4	4.8
All active open space (ha)	18	22	16	23	79
District active open space (No.)	2	3	2	2	9
Sub-regional active open space (No.)	-	1	-	-	1
Regional active open space (No.)	-	-	-	-	-
All passive open space (ha.)	12	14	11	16	53
Local passive open space (No.)	9	10	8	6	32
District passive open space (No.)	2	3	2	2	9
Regional passive open space (No.)	-	-	-	-	-
Indoor Recreation Centre (ha.)	2	2			4

Source: TAP Consulting, 2018

Western Geelong

The Western Geelong growth area has better road connections to the established urban area but will still need to be self-sufficient in terms of recreational infrastructure as nearby clubs and recreation reserves are functioning well and do not have much additional capacity.

While the substantial number of encumbered open spaces associated with the river/s, “quarry lake” and overburden will provide benefits to connectivity, it cannot be assumed that all open space reserves can be attached to these encumbered reserves; the distribution of unencumbered open space for walkability/ accessibility is more important than co-location.

In terms of the quantity of land the application of the open space land provision ratios sums to more land area than the 10% of unencumbered land to be made available. The reason is that the ratios are applied to different factors: one being the NDA and the other the expected population. The two results need to be aligned as planning is undertaken and this will be achieved mainly through collocation of facilities such that there are savings in the development (e.g. sharing of clubhouses, car parks and access roads).

District level active open space needs to be a minimum of 9.5 hectares and 12 reserves are required (a minimum of 114.0 hectares). One sub-regional active open space is to be provided and CoGG has advised that this is to be 20 hectares in size and located as part of a broader river parkland. No determination has been provided for a regional active open space.

The distribution of passive local open space will need to be determined at the precinct structure planning stage when the demographics and housing density/distribution is better understood. All households should be within 400 metres walk of a passive open space area. District level passive open space needs to be a minimum of 2.0 hectares and 12 parks are required (a minimum of 24 hectares). Where possible these areas should be provided as part of a district level active open space area as additional parkland presenting as the one complex.

The Moorabool River presents an opportunity for a large regional passive open space with linear connections to Fyansford area and Batesford and the broader Barwon River Parklands.

Table 26. Benchmark Analysis for Open Space – Western Growth Area

Classification	Precinct					Western (totals in ha or No.)
	Creamery Road	Batesford North	Merrawarp Road	McCanns Lane	Batesford South	
All open space in a residential area (ha)	22	27	15	30	79	173
All open space (unencumbered) in an employment area (ha)	-	-	-	1.6	0.6	2.2
All active open space (ha)	13	16	9	18	47	104
District active open space (No.)	1	2	1	1	5	10
Sub-regional active open space (No.)	-	-	-	-	2	2
Regional active open space (No.)	-	-	-	-	-	-
All passive open space (ha.)	9	11	6	12	31	69
Local passive open space (No.)	5	6	4	6	15	36
District passive open space (No.)	1	2	1	1	5	12
Regional passive open space (No.)	-	-	-	-	-	-
Indoor Recreation Centre (ha.)		2			3.1	5.1
Indoor Aquatic Centre (ha.)					1.5	1.5

Source: TAP Consulting, 2018

4.1.4 Indoor & Outdoor Facilities

In addition to the above land requirements there is also a need for land for indoor recreation centres and indoor aquatic and leisure facilities across NWGGA.

Only one indoor aquatic and leisure facilities is required. A site of 1.5 hectares needs to be provided. For indoor recreation centres there will be a need for 4.0 hectares in the north and 5.1 hectares in the west.

Northern Geelong

Table 27 details the application of the outdoor and indoor recreation facility benchmarks across the Northern Growth Area.

Table 27. Outdoor and Indoor Recreation Facility Needs in the Northern Growth Area

Facility	Precinct				Total Northern Growth Area	Comments
	Elcho Road East	Heales Road West	Elcho Road West	Heales Road East		
Cricket oval	3	3	3	2	11	Six two-wicket cricket ovals. Provide 5 with AFL and one with soccer or another code.
Australian Rules Football oval	2	3	2	2	9	Five two-oval AFL grounds.
Soccer field	2	3	2	2	9	Three 3-pitch soccer grounds. One facility may be co-located with cricket wickets
Dedicated tennis court	4	5	3	3	15	Given demand provide one complex of 10 or more courts will need to be provided.
Dedicated netball court	1	2	2	1	6	Provide as two-court facilities attached to AFL grounds.
Lawn bowls green					2	One two-green facility with expansion provision for a third green
Skate park					1	A dedicated skate park within district or sub-regional level open space
Local playground	8	10	7	6	31	31 local playgrounds
District playground					9	9 district playgrounds
Sub-regional playground					1	One subregional playground on district level open space
Regional playground					-	See Note below
Indoor Multi-purpose Court	1	1	1		4	Provide two 2-court facilities or a single 4-court facility
Sports Pavilions					TBD	At least one pavilion at each outdoor sporting complex

Note: Consider the need for a regional level playground across the NWGGA that may be located in a district open space if there is no regional level open space to be provided.

Western Geelong

Table 28 details the application of the outdoor and indoor recreation facility benchmarks across the Northern Growth Area.

Table 28. Outdoor and Indoor Recreation Facility Needs in the Western Growth Area

Facility	Precinct					Total Western Growth Area	Comments
	Creamery Road	Batesford North	Merr'warp Road	McCanns Lane	Batesford South		
Cricket oval	2	2	2	2	6	15	Eight two-wicket cricket ovals. Provide 6 with AFL and two with soccer

Facility	Precinct					Total Western Growth Area	Comments
	Creamery Road	Batesford North	Merr'warp Road	McCanns Lane	Batesford South		
							or as a multi-use facility. The multi-use fields may accommodate rugby or lacrosse if there is sufficient demand
Australian Rules Football oval	2	2	1	2	5	12	Six two-oval AFL grounds.
Soccer field	2	2	1	2	5	12	Three 4-pitch soccer grounds. Two facilities may be co-located with cricket wickets
Dedicated tennis court	3	3	2	3	9	20	Two complexes of 10 courts
Dedicated netball court	1	1	1	1	4	8	Provide as two-court facilities attached to AFL grounds.
Lawn bowls green						3	One two-green facility with expansion provision for a third green
Skate park						1	A dedicated skate park within district or sub-regional level open space
Local playground	6	7	4	7	17	41	41 local playgrounds
District playground	2	2	1	2	5	12	12 district playgrounds
Sub-regional playground						2	Two subregional playgrounds on district level open space
Regional playground						1	One regional level playground preferably in association with a broader river parkland
Indoor Multi-purpose Court		1			2	6	Provide one2-court facilities and a single 4-court facility
Sports Pavilions						TBD	At least one pavilion at each outdoor sporting complex
Indoor Aquatic and Leisure Centre						1	Co-locate with a 4-court indoor sports centre

4.2 Consultation on Social Infrastructure Needs

In an effort to ascertain the potential needs of the NWGGA community population, the study team undertook a comprehensive consultation strategy as part of the Social Infrastructure Report. The specific objectives of the consultation were to:

- > Identify existing and future needs of the communities surrounding the NWGGA project site
- > Examine stakeholders' perceptions of, and assess the gaps in, social infrastructure
- > Consider the potential needs of the NWGGA community, and how these could be addressed

The consultation phase took place between the 12th September and 21st October 2016. A total of 47 stakeholders from 38 separate organisations including, state and local government, not for profit organisations, peak bodies, private sector and service providers were invited to participate in the consultation for the study. Of the 38 organisations, the team consulted with a total of 33 via key informant interviews (face-to-face and telephone) (refer to Appendix C).

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
Education and Training	Primary & Secondary	> Data from Department of Education & Training (DET) suggests that there is capacity in existing schools to absorb additional growth in the short term. > Long term provision of additional government school infrastructure (i.e. as development matures) will be subject to ongoing monitoring of population growth and demand. > The new P-12 school currently being developed at Bannockburn will provide additional capacity, however further information is required to ascertain whether the new school includes parts of the Western Growth Area within its catchment. > DET are committed to delivery of the new North Geelong Special Developmental School (SDS). > Catholic Education has expressed an interest in establishing a primary and secondary school in both Growth Areas.	Medium to Low	> Consideration for early provision of public schools. > Early provision of schools via non government education providers. > Look at opportunities to create 'early learning centre' hubs with kindergarten, pre-school and primary schools together (and perhaps secondary schools). > Sharing of facilities was seen as a positive model. > School sites should include facilities for special needs, early intervention, community facilities including training and facilities > Taylors Hill West Secondary College that will open in 2018 has been flagged as a potential model for inclusive education > Land requirements, including appropriate parcels of land, configuration and size is another key consideration that should be included
	Tertiary	> Deakin University has the capacity to take on additional demand. There would not be a sufficient population to warrant a new University in the area. > Gordon Institute of TAFE is also not likely to develop a new campus in the NWGGA, as it believed its existing Geelong City, East Geelong and Hoppers Crossing Campus as well as various trade centres would meet the needs of a growing student population in Geelong. > Existing TAFE campuses could be upgraded and developed if the need was there. Any expansion of facilities/services however would depend on emerging new industries that require new area of expertise and training that are not currently catered for within the existing course offering. > Options to consider for expansion - TAFE would firstly consider whether it can cater for new demand within existing structure, the next option would be to look at partnerships with industry to provide training on external site, the last option would be to consider a new build given	Medium	> No new University or TAFE campuses anticipated by stakeholders for NWGGA. > Servicing NWGGA would be through existing facilities and expansion of existing facilities if needed. > Models of delivery to consider for NWGGA include offering courses through school trade training centres for year 11 and 12 students, delivering training in the workplace, on-line and informal learning opportunities such as TED talks require technology interface that can be challenging for students due to lack of resources. > Accessibility linkages between existing communities into new community as well as between campuses. This is particularly important for students who may not have access to reliable transport. > Models to explore for NWGGA include park and ride services as well as free bus services.

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
		the large scale upfront cost associated with new campus. Any expansion would require further funding.		
Health and Emergency	Police	> To service NWGGA, the Victoria Police Geelong division has indicated that a new 24 hour large police facility would be adequate to meet the needs of the Growth Areas.	Medium	> The superstation could be at locations that better service the existing and new Growth Areas. > Ideally located on the Geelong Ring Road at a diamond intersection, preferably near public transit stop. > Co-location opportunities with Justice and DHHS to create a multi-disciplinary centre.
	Ambulance	> The Belmont Ambulance Head Quarters at 120 Settlement Road Belmont is currently a busy station and it will not have the capacity to service new growth to the West of the Ring Road (Western Growth Area). > A new station recently opened (less than 12months) at Bannockburn has the capacity to absorb further demand generated from the Western Growth Area this facility however is currently not a 24hour station but can be changed if the need was there. > Two primary stations in the North (Lara and Norlane) are currently operating at full capacity and further growth in the North would place additional pressure on already stretched services.	Medium to Low	> Western Growth Area to be serviced by the new station at Bannockburn, further considerations to upgrade to 24hour facility. > Further investigation is required to determine how the Northern Growth Area could be serviced, whether through expansion of existing stations or a new station and the availability of resources and funding. > Opportunity to create emergency precincts in new Growth Areas with co-location with CFA and SES
	CFA	> As the bulk of this development is outside of the current Urban Growth Boundary, existing service delivery will be unable to meet this need. > The existing brigades located in Lovely Banks and Stonehaven would likely see an increase in their response numbers and complexity. This would require a review of their existing infrastructure and skills requirements.	Low	> Street infrastructure (e.g. road widths) is an important consideration for CFA. > CFA would be required to provide additional capability by way of two career fire station assets. These would be positioned as one per growth area. > The design of the internal road network is critical to ensuring that the Emergency Service units responding into the area can get to all residences within response times.
	Justice	> Economic downturn affects the number of fine defaulters (increases) and opportunistic and property crime (often increases with increased poverty and less employment).	Medium	> There are currently no plans to build new justice facilities in the Growth Area. > The approach to servicing the Growth Areas would be through outreach and through the existing Department of

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
		> Youth crime is a trend resulting from the disengagement of young people in Geelong.		Justice and Regulation Regional Office for residents in the two Growth Areas.
	Health	> The NWGGA will ultimately place additional demand on existing services including the Corio Community Health Centre, the specialist centre at Northern Arc Health & Wellbeing Hub (not yet constructed) and McKellar facility. > Corio Community Health Centre is operating at full capacity with some services having to outreach from other facilities due to the limited space available. > Once the Northern Arc Health & Wellbeing Hub (Barwon Health North) is built this would alleviate pressure on the Corio Community Health Centre. > Geelong is well serviced by the number of public and private hospitals in the area. > Consensus amongst stakeholders consulted that it is unlikely the NWGGA will trigger a new hospital. > There are plans to develop new wards in the existing public hospital. With additional wards, the capacity of the hospital will increase, however the issue will be securing funding for operational aspects of the new wards. > There is already a demand for GPs in the Northern area and this demand would increase. Less GPs means an increase in presentations at the Geelong Hospital emergency department.	Medium	> No new hospital anticipated for Growth Areas by stakeholders given the existing number of public and private hospitals. New wards (due to open in 2017) in existing hospital will provide additional capacity. > Northern Arc Health & Wellbeing Hub (Barwon Health North) will provide additional capacity to existing northern communities. Yet to be determined whether Barwon Health North would have capacity to service NWGGA. > Outreach and home-based services and smaller more mobile services are preferred models of delivery compared to building a new hospital. > Health services e.g. consulting rooms for OT/speech, immunisation, parenting etc located in schools/early learning centres is also a preferred model. > The Ocean Grove model of shared children services facility is a good example of using infrastructure to provide a range of services in one location. > More GPs needed to service the Northern Area.

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
Targeted Support	Youth	> The existing youth centre (The Fort) and services in the North are operating at capacity and additional resources would be required to support additional youth population. > The Northern suburbs particularly are stretched and would not be able to absorb any further demand. > Youth services in the West are also stretched given the lack of services in suburbs South of Geelong at Highton and Grovedale.	Low	> Existing youth facilities in the North and West are at capacity and there will be a requirement for facilities and services in NWGGA to support youth. > Opportunities for purpose built youth facilities in NWGGA however any new facilities will require additional youth workers. > The Fort is a well-used facility with alternative space that can be used for a variety of uses and is a good model to replicate in new Growth Areas.
	Aged & Disability	> NWGGA will place additional pressure on home care services. > The current waitlist for the Barwon catchment is about 1200 people. > National Disability Insurance Scheme (NDIS) and the transition to My Aged Care may provide further capacity/resources, however the full extent of the NDIS and My Aged Care and impacts on current service delivery is still unknown. > Accessible planning to allow ageing in place and for seniors to stay in their local neighbourhood.	Low	> The future trend is for multipurpose community hubs incorporating recreational opportunities, intergenerational space, activities and programs such as U3A rather than standalone seniors centre. > Many organisations are moving towards a mobility model whereby services are provided in multipurpose centres e.g. consulting rooms and activity rooms. > Considerations for appropriate, affordable housing which includes single level self-contained apartments that are well designed should be a priority. > Development of the Norlane Integrated Community Hub on Robin Avenue (Baptcare Development).
	Cultural	> The numbers of asylum seekers seeking support services is not stable. > The Aboriginal population in the Geelong area is growing and current needs are not met. > Wathaurong will be impacted by population growth in the NWGGA as the organisation is not able to meet current demand for medical and support services. > The service has increased from 62 to 95 staff in the last few years with little additional operational space.	Low	> Service requirements for refugees and asylum seekers. > If cultural services were required in the new Growth Area than this would be achieved through outreach from another facility. > Wathaurong has a \$30 million redevelopment plan for the Morgan Street site at North Geelong including acquisition of Vic Roads land around the site.

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
Leisure & Recreation	<i>Leisure & Aquatics</i>	> Further consideration is needed on appropriate/alternative location (more central location) of Northern Arc Leisure facility as there is the view the current site may not be big enough, with poor accessibility and parking would be an issue for that scale of development. This will be explored further in the Aquatics Strategy currently underway. In the short term, the option is to maintain existing leisure facility with medium to long term view to redevelop. > Issues were raised around the need to carefully consider co-location of other community facilities and services with leisure and aquatics.	Medium	> The Northern Arc Project is earmarked to service current community in the North and has the ability to be a subregional facility. Further work as part of the Aquatics Strategy currently underway to determine appropriate location. > Northern Arc, once developed will service existing community and capacity to service new Growth Area will be limited, which points to a need for additional provision in NWGGA.
	<i>Open Space</i>	> Provision of open space in the North is challenging and is seen as inadequate. > There is a need to focus on acquisition and protection of land in the North for open space. > There is currently no program/capital funding for the North. > There is a need for more district/subregional level informal open space and recreation sites in the North. > There is the issue with small pockets of open space which are not useable but too small to rationalise. > There is very limited sub-regional open space and recreation reserve in the North.	Low	> Further improvements to open space are needed in the Northern Area as a stepping stone into the Northern Growth Area. > There is a need for more district/subregional level informal open space and recreation sites in the North. > Stead Park should be developed as a high-quality sports precinct to attract people to the park and local area with the suggestion that there are national sports possibilities for Stead Park. > The current minimum requirement of 10% unencumbered open space is not enough and further consideration should be given to opportunities to acquire open space in excess of the minimum requirement. > Develop linear corridor to link existing urban area to Northern Growth Area.

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
	<i>Sport and Recreation</i>	> Clubs are struggling in the North due to lack of volunteers. > There is a priority in the North in relation to sport and club development this includes improving participation outcomes. > Clubs in the surrounding communities of the Western Growth Area are doing well.	Medium to Low	> In the North, structured participation (club/team base) is not working and there is the view that more informal unstructured participation such as walking, cycling, swimming etc. may be more appealing. > Opportunities and synergies for sport and recreation within the Health and Wellbeing agenda e.g. sport and recreation facilities adjoining hospitals, aged care facilities etc. to achieve health outcomes such as water rehabilitation.
Cultural	<i>Library</i>	> In the North, Lara and Corio branches will both be expanded through redevelopment in the next 5 years although will not cater for demand in the new Northern Growth Area and proximity was seen as a barrier for new residents. > The Western area libraries are considered too small (Highton) or not close enough to the new Growth Areas to be viable for those new residents.	Low	> Ideal to have 2 new sub-regional libraries (one in each of the Growth Areas) with large children's spaces and whole of community areas. > Inclusion of cafes in libraries. > Opportunities for the inclusion of cultural services through libraries. > The use of libraries to access technology. > Larger and flexible spaces are desirable for meeting spaces to book on-line. Some people run their businesses with the support of the library for meeting and working space.

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
	Arts & Culture	> High level of growth anticipated in the arts and culture space in Geelong. > Existing facilities and services are operating at capacity > Potato Shed requires upgrade. > GPAC is progressing development of Stage 2 with Stage 3 yet to commence. > The Art Gallery needs development. > CoGG has received a number of requests/advice around new initiatives from individuals, groups, professionals etc. however there is currently limited capacity/resources to respond to these requests and this is seen as a missed opportunity. > A need in the community for dedicated creative arts space for long term residency.	Low	> Opportunities for dedicated creative arts space in multipurpose facilities in NWGGA, however there is a need for more resources in arts and culture space to respond to unmet demands. > Re-purposing of old heritage/industrial buildings to cater for demand in cultural activities and reusing for the purpose of arts and cultural activities. > The Potato Shed is a good model to look at for any new planned facilities in the Growth Areas. > Recognise that arts and cultural has a pivotal role in nurturing new and existing communities. > Recognise the important role of place making in new communities and access to things like trails, heritage stories etc. > Public art has a role to play in making a significant contribution to community identity & community building
Early Years	Children's Services	> The catchment area surrounding NWGGA reflects a relatively high level of developmental vulnerability amongst young children at school entry. > Existing early childhood service provision in general (within adjacent catchment areas) is sufficient to meet current population requirements, with some limited capacity to accommodate additional future demand in some locations. There are no existing childhood services located within NWGGA. > There are two new (additional) early childhood/community facilities planned within the Lara West Precinct area and a new (additional) early childhood/community facility proposed for Fyansford. All the other proposed developments are replacing existing infrastructure e.g. not providing 'additional facilities'.	Medium to Low	> Impact on existing children's services if the provision of these services in the new Growth Areas lags behind demand. Requirements for children's services in NWGGA. > Land requirement – this includes consideration for appropriate parcels of land, configuration and size (footprint), car parking requirements. > There is a need for some principles around land/site configuration. > Issues around funding gap with DCP. > The need for consideration of ongoing operational cost.

Sector	Sub-sector	Stakeholder Views on Existing Infrastructure and Demand	Capacity to service NWGGA	Key Considerations for NWGGA
Community Space	Community Centres	> Community centres and spaces in the North are very modest and growth from NWGGA will place pressure on existing spaces. > Community centres in proximity to the Northern Growth Area have limited capacity to cater for additional use. Cloverdale Community Centre is operating at capacity. Although expansion is planned for the facility (to cater for existing demand rather than projected growth), however the centre's ability to service the Northern Growth Area would be limited. > There are two buildings on Sutcliffe Reserve (in the North) which are for exclusive use by two community groups and will not be able to service new residents. > In the West, Vines Road Community Centre and Library has recently undergone refurbishment and has some capacity for increased usage, however it's expected that utilisation at this centre will increase in the short term from use within existing community. > Other community spaces in the catchment area to the West require redevelopment due to age and fitness for purpose e.g. Petit Park Hall, Cobradah House, Batesford Hall.	Low	> Consideration for the management models of shared community spaces and the need to recognise the diversity of user groups and the different needs that multipurpose community centres need to cater for. > Requirements for community spaces in NWGGA through innovative delivery models. > Innovations in shared space such as utilisation of classrooms outside of school hours. > Good model to look at for NWGGA is the Doveton Community College, which has similar disadvantages as Corio. The College is a K-9 School and the Principle manages the space including the Kindergarten. The School is used by migrants for English classes, there is a large commercial kitchen used to teach cooking, 2 multipurpose activity rooms, theatrette, stadium, a leadership program for the community and volunteer program is run through the School.

4.3 Summary of Social Infrastructure Needs & Recommendations

The consultant team has utilised both quantitative and qualitative analysis to determine the priority facilities and services required for the NWGGA development. This has involved a study of existing services and facilities as well as consultation with service providers and other key stakeholders. The broader Planning Principles for NWGGA and example delivery models have been used to guide the provision of infrastructure to meet demand.

The future required community facilities for NWGGA identified in Section 4.1 represent facility functions or desired performance and not necessarily individual capital projects required to meet community needs over time. For example, a community meeting room can be delivered through incorporation of appropriate space within a Multipurpose Community Centre, library, sporting club house or similar. As NWGGA is a Greenfield site, there is an opportunity to plan for innovative delivery models that meet the planning principles outlined in Section 2.4 above and in doing so maximise the community building outcomes for NWGGA residents, create synergies between complementary social infrastructures, and derive economic efficiencies in the construction and operating costs of facilities and services. In addition, it is acknowledged that management and governance of facilities, particularly shared use spaces will be critical. Models of delivery will also influence the land and floor space requirements for facilities. Table 29 and Table 30 summarises the preferred delivery models for social infrastructure in NWGGA.

Recommendations for delivery are provided in the Section 4.3.1 for Northern and 4.3.2 for Western. These suggestions are a guide only and will be influenced by a range of factors such as co-location/cross utilisation of space, site planning and detailed design considerations undertaken as part of the Framework Plan.

Table 29. Preferred Hub/Centre Model and Location Requirements

Hub/Centre Model	Co-located Facilities/Services	Location Requirements
Cultural		
Cultural Hub	Library	> Integrated with community/civic facilities and located in predominantly commercial or retail precincts > An active, high profile location to increase real and perceived safety > Maximise accessibility through good access to public transport, bike and walking paths > Locate near open space areas to enhancing utilisation, flexibility of use and providing opportunities for a wider range of community building activities
	Arts & Cultural Space	
	Community Meeting Space	
Community Space & Targeted Support		
Multipurpose Community Centre	Neighbourhood House	> An active, high profile location to increase real and perceived safety > Maximise accessibility through good access to public transport, bike and walking paths > Locate near open space areas to enhancing utilisation, flexibility of use and providing opportunities for a wider range of community building activities > Community garden will require between 600sqm and 800sqm of land.
	Community Meeting Space	
	Youth	
	Aged & Disability, Seniors	
	CALD	
	Community Garden	
Education		
Primary School	Early Years Facilities	> Central location within the catchment they will service, plus good pedestrian, bicycle, vehicular and/or public transport access (where applicable).

Hub/Centre Model	Co-located Facilities/Services	Location Requirements
Secondary School		> Co-location with complementary services (e.g. public open space, neighbourhood activity centres including early years facilities) > Sites that are significantly affected by protected artefacts or vegetation, uneven topography, or other significant constraints are not considered suitable.
Health Safety & Emergency		
Health & Wellbeing Hub	Community Health Centre	> An active, high profile location to increase real and perceived safety > Maximise accessibility through good access to public transport, bike and walking paths > Locate near open space areas to enhancing utilisation, flexibility of use and providing opportunities for a wider range of community building activities.
	Community Meeting Space	
	Youth Space	
	Aged & Disability, Seniors	
	CALD	
Multi-Disciplinary Centres	Police	> Located on the Geelong Ring Road at a diamond intersection, preferably near public transit stop.
	Justice	
Emergency Hub	CFA & SES	> Direct access as close as possible to major roads and thoroughfares > Public profile main road frontage, is preferred but not essential > Multiple entries required > Not located in or near school zones or near creeks > Priority is ease of egress for response, traffic congestion, obstacles. > Standard design for 4 bay facility, including training pads, vehicle turning access, volunteer facilities, 40+ car parks, 18m-20m tower for drying hoses > 5000 to 6000sqm of land and 2000sqm GFA or 1/3 of land area (2 storey building).
	Ambulance	
Early Years		
Integrated Children’s Centre	MCH	> Maximise accessibility through good access to public transport, bike and walking paths > Locate near open space areas to enhancing utilisation, flexibility of use and providing opportunities for a wider range of community building activities. > Co-location with schools
	Kindergarten	
	Long Day Child Care Centres	
	Occasional Care Centres	
	Playgroup Rooms	
	Community Meeting Space	

Table 30. Preferred Model and Location Requirements for Open Space & Sport and Recreation

Preferred facility delivery model for NWGGA		
Facility/Component	Description	Land area
ALL OPEN SPACE		
All local open space	Unencumbered and of regular size and shape (i.e. as square as possible).	1ha min. when stand-alone 0.5ha min. when co-located with encumbered 0.3ha min. when in activity centre, employment or mixed use area
All local open space in an employment area	Unencumbered and of regular size and shape (i.e. as square as possible).	0.3ha min.
ACTIVE OPEN SPACE		
Local active open space	Location: Within 1km of 95% of all dwellings. Evenly distributed taking barriers (busy roads/train lines, steep slopes, waterways) into account. Co-located with maximum one school each and only where distribution/accessibility is not affected.	9.5ha min. (the old standard of 8ha is too small to accommodate required facilities and buffers.)
District park active reserve (min 8ha)	Configuration: Active open space is min. 9.5ha	
Sub-regional park active (min 10ha)	Fields/courts to run north-south and be side-by-side rather than end-to-end where possible. Design characteristics: Some local sport provision accommodated in larger reserve hubs. Most active open space is designated as 'district'. As per Sustainable Communities Infrastructure Development Guidelines.	
Regional active reserve (variable size)	Location: Variable. As suitable for the specific activity. Configuration: Variable. Design characteristics: Combined with regional passive open space, where appropriate. As per Sustainable Communities Infrastructure Development Guidelines. Regional open space is generally additional and outside of the scope of developer contributions, unless formed by the amalgamation of multiple district reserves serving local needs due to specific site constraints.	Variable
PASSIVE OPEN SPACE		

Preferred facility delivery model for NWGGA		
Facility/Component	Description	Land area
Passive open space	Location: Within 400m walking distance of all households. Evenly distributed taking barriers (busy roads/train lines, steep slopes, waterways) into account. Configuration: Regular size and shape (i.e. as square as possible). Design characteristics: Where it is unencumbered, contiguous and of regular size and shape, passive open space can be co-located with active open space or encumbered land (i.e. waterways, drainage, easements). Can be located adjacent to, not adjoining, community facilities provided it is protected from future encroachment. As per Sustainable Communities Infrastructure Development Guidelines.	As per hierarchy, below
Local park (1ha)	Location: Within 400m (not 500m) walking distance of all households. Evenly distributed taking barriers (busy roads/train lines, steep slopes, waterways) into account. Configuration: Regular size and shape. Longest boundary to be the northern boundary for solar access. Design characteristics: Road frontages to minimum three (3) sides. As per Sustainable Communities Infrastructure Development Guidelines.	1ha min. in residential area 0.5ha min. when co-located with encumbered 0.3ha min. when in activity centre, employment or mixed use area
District park passive (min 2ha)	Location: Variable, i.e. to take advantage of a specific landscape feature. Configuration: Regular size and shape. Longest boundary to be the northern boundary for solar access. Design characteristics: Road frontages to minimum three (3) sides. As per Sustainable Communities Infrastructure Development Guidelines.	2ha min.
Regional passive open space (variable size)	Location: Variable, i.e. to take advantage of a specific landscape feature. Configuration: Variable. Design characteristics: Combined with regional active open space, where appropriate. Road frontages to minimum three (3) sides. As per Sustainable Communities Infrastructure Development Guidelines. Regional open space is generally additional and outside of the scope of developer contributions.	Variable
OUTDOOR RECREATION FACILITIES		

Facility/Component	Preferred facility delivery model for NWGGA	
	Description	Land area
Cricket oval	Location: District active open space Configuration: Cricket/football ovals side-by-side, wicket running north-south. 2 senior ovals, synthetic wicket 2-3 synthetic practice nets Design characteristics: As per Sustainable Communities Infrastructure Development Guidelines.	9.5ha
Australian Rules football oval (local provision in association with netball)	Location: District active open space Configuration: Football/cricket ovals side-by-side, running north-south. 2 senior ovals 2 netball courts Design characteristics: As per Sustainable Communities Infrastructure Development Guidelines.	9.5ha
Soccer field	Location: District active open space. Configuration: 2-3 pitches – district 4 pitches – sub-regional. Pitches to run north-south and where possible side-by-side. Design characteristics: Co-locate with another sport, i.e. rugby, tennis or association netball. As per Sustainable Communities Infrastructure Development Guidelines.	6.5ha – district 8ha – sub-regional
Baseball field	N/A Regional centre provision (Geelong Baseball Centre) and local provision in Lara and Corio.	N/A
Softball field	N/A Regional centre provision (Stead Park)	N/A
Hockey field (synthetic)	N/A Regional centre provision (Stead Park and future Armstrong Creek West) and local provision in Newtown.	N/A
Rugby field	Location: District active open space. Configuration: 2 multi-use rectangular pitches running north-south and side-by-side. Design characteristics: Multi-use fields with uses to be determined based on needs at the time of development, i.e. lacrosse, soccer, touch football. As per Sustainable Communities Infrastructure Development Guidelines.	4.5ha

Facility/Component	Preferred facility delivery model for NWGGA	
	Description	Land area
Lacrosse field	Location: District active open space. Configuration: 2 multi-use rectangular pitches running north-south and side-by-side. Design characteristics: Multi-use fields with uses to be determined based on needs at the time of development, i.e. rugby, soccer, touch football. As per Sustainable Communities Infrastructure Development Guidelines.	4.5ha
Dedicated tennis court	N/A	N/A
Tennis regional venue (12-14 courts)	N/A	N/A
Tennis large community venue (10 courts)	Location: District active open space or adjacent to an activity centre. Configuration: 10 court facility Design characteristics: Co-locate with another sport, i.e. association netball or lawn bowls.	1.5ha
Tennis district venue	N/A	N/A
Dedicated netball court	Location: District active open space. Configuration: 8-10 courts – dedicated netball facility 2 courts – football/netball facility Design characteristics: Co-locate with another sport, i.e. tennis	1.5ha – dedicated netball 0.5ha with football (incl. in AFL size)
Lawn bowls green	Location: Adjacent to an activity centre. Configuration: 2-3 greens – district Design characteristics: Co-locate with another sport, i.e. tennis	1.5ha
Athletics track (all weather)	N/A Regional provision at Landy Field and future Armstrong Creek Horseshoe Bend. Local provision at Goldsworthy in Corio and Drysdale.	N/A
Equine/canine spaces	N/A for equine N/A for dog training facilities Dog parks and dog off-lead areas TBD	N/A
Bike track (criterium)	N/A Provision at Belmont Island and Eastern Park	N/A
Bike track (velodrome)	TBD	TBD

Facility/Component	Preferred facility delivery model for NWGGA	
	Description	Land area
Mountain bike course	TBD if appropriate site (i.e. quarry) is available. Provision exists in Newtown	TBD
Skate park	Location: Within district or regional open spaces Configuration: Variable Design characteristics: Passive surveillance and other CPTED features	N/A
PLAYGROUNDS		
Local playground	Location: Within most local passive open space, except in employment areas. Configuration & design characteristics: As per Geelong Play Strategy and Sustainable Communities Infrastructure Development Guidelines.	N/A
District playground	Location: Within district passive open space Configuration & design characteristics: As per Geelong Play Strategy and Sustainable Communities Infrastructure Development Guidelines.	N/A
Sub-regional playground	Location: Within district passive open space or other with special features Configuration & design characteristics: As per Geelong Play Strategy and Sustainable Communities Infrastructure Development Guidelines.	N/A
Regional playground	Location: Within regional passive open space Configuration & design characteristics: As per Geelong Play Strategy and Sustainable Communities Infrastructure Development Guidelines.	N/A
INDOOR RECREATION CENTRES		
Indoor recreation centre (land)	Location: Adjacent to/on state school land	1ha
Indoor multi-purpose court	Location: Adjacent to/on state school land Configuration: 2-court facility – local Design characteristics: To be delivered in collaboration with Department of Education and Training on or adjacent to school sites	
Dedicated indoor gymnastics facility	Private provision	N/A
Dedicated table tennis venue	Private provision	N/A
Indoor Aquatic and Leisure Centre	One facility located in the west to serve both locations. The form of aquatic facility will be determined by Council at a later date but may comprise an outdoor pool or water play area.	15,000m2

Facility/Component	Preferred facility delivery model for NWGGA	
	Description	Land area
COMMUNITY MULTIUSE SPORTS PAVILIONS		
Pavilion	Configuration: Central pavilion to north of playing fields/courts. Viewing to south or east. Multi-use where possible. Design characteristics: Sport-specific facility guidelines.	N/A

4.3.1 Northern Geelong Growth Area

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
Cultural		
<u>Library</u> > Benchmark analysis indicates a need for the following in the North: – 1 x District/Subregional Library > Stakeholders confirm the need for 2 new sub regional libraries (one in each of the Growth Areas) incorporating large children's spaces and whole of community areas. > Low capacity in existing libraries to service additional growth.	> A cultural precinct encompassing a range of cultural activities such as a library, art centre and museum is the preferred delivery model. > Inclusion of cafes in libraries. > Inclusion of cultural services through libraries. > Larger and flexible spaces are desirable for meeting spaces.	<u>Heales Road East Precinct</u> R1. Make provision for 1 x Subregional Library, co-located with Arts & Cultural Centre to create a cultural precinct.
<u>Arts & Cultural</u> > Benchmark analysis indicates a need for 1 x District Arts and Cultural Centre in the North. > Stakeholders confirmed the need for dedicated creative arts space to respond to unmet demands. > High level of growth anticipated in the arts and culture space in Geelong. > Existing facilities and services are operating at capacity.	> A cultural precinct encompassing a range of cultural activities such as a library, art centre and museum is the preferred delivery model.	<u>Heales Road West Precinct</u> R2. Make provision for 1 x District Arts & Cultural Centre, co-located with Library to create a cultural precinct.
Community Centres		
<u>Community Centres and Multipurpose Centres</u> > Benchmark analysis indicates a need for the following community spaces in the North: – 3 x Neighbourhood Centres – 2 x Multipurpose Community Centres – 10 x Local Community Meeting Rooms/Halls – 2 x Community Garden > Stakeholders confirmed the limited capacity of existing facilities in surrounding communities to service NWGGA > Innovations in shared space such as utilisation of classrooms outside of school hours. > Consideration for the management models of shared community spaces.	> Preferred model for delivery of community space is through Multipurpose Community Centres/spaces/hubs. > Provision of local level community meeting rooms/halls in other facilities such as schools, libraries, Integrated Children's Centres and other hubs and precincts, sports pavilions.	<u>Elcho Road East Precinct</u> R3. Make provisions for 1 x Multipurpose Community Centres in the Elcho Road East Precinct incorporating neighbourhood house, flexible community meeting rooms/space, community garden and co-located with other uses such as seniors centre, arts and cultural centre, youth centre, library and open space. <u>Heales Road East Precinct</u> R4. Make provisions for 1 x Neighbourhood Centre in the Heales Road West Precinct incorporating flexible community meeting rooms/space. <u>Elcho Road West Precinct</u>

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
		R5. Make provisions for 1 x Neighbourhood Centre in the Elcho Road West Precinct incorporating flexible community meeting rooms/space. <u>Heales Road West Precinct</u> R6. Make provisions for 1 x Multipurpose Community Centres in the Heales Road East Precinct incorporating, flexible community meeting rooms/space, community garden and co-located with other uses such as seniors centre, arts and cultural centre, youth centre, library and open space.
Education		
<u>Primary and Secondary School</u> > Benchmark analysis indicates a need for the following primary and secondary schools in the North: - 9 x Primary Schools - 2 x Secondary Schools > Opportunities around private sector provision and innovations such as Schools in Shops and Houses to facilitate the early provision of schools in NWGGA	> Co-location of services and sharing of facilities to create 'early learning centre' hubs with kindergarten, pre-school and primary schools together and perhaps secondary schools. > The provision for one primary school at the outset of development through innovations such as schools in houses.	<u>Elcho Road East Precinct</u> R7. Make provisions for 2 x Primary Schools in the Elcho Road East Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts. <u>Heales Road West Precinct</u> R8. Make provisions for 3 x Primary Schools and 1 x Secondary School in the Heales Road West Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts. <u>Elcho Road West Precinct</u> R9. Make provisions for 2 x Primary School in the Elcho Road West Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts. <u>Heales Road East Precinct</u> R10. Make provisions for 1 x Primary School and 1 x Secondary School in the Heales Road Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts.

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
<u>Tertiary Education</u> > Benchmark analysis does not trigger a need for additional TAFE or University campuses. > No new University or TAFE campuses anticipated by stakeholders for NWGGA. > Stakeholder's views are that servicing NWGGA would be through existing facilities and expansion of existing facilities if needed.		<u>Outside of Growth Area</u> R11. Provision of Tertiary Education will be through existing facilities and expansion of existing facilities if needed.
<u>Health, Safety & Emergency</u>		
<u>Health</u> > Benchmark analysis indicates a need for the following in the North: – 1 x Community Health Centres > No new hospital anticipated for Growth Areas by stakeholders given the existing number of public and private hospitals. > New wards in existing hospital will provide additional capacity. > Northern Arc Health & Wellbeing Hub (Barwon Health North) will provide additional capacity to existing northern communities. Yet to be determined whether Barwon Health North would have capacity to service NWGGA.	> Preferred model of delivery is through shared services facilities such as Health and Wellbeing Hubs, multipurpose community spaces rather than single purpose large health facilities. > Health services e.g. consulting rooms for OT/speech, immunisation, parenting etc. located in schools/early learning centres is also a preferred model.	<u>Heales Road East Precinct</u> R12. Make provisions for 1 x Community Health Centre and adopt the Health and Wellbeing Hub delivery model. <u>Outside of Growth Area</u> R13. Provision of ambulatory services, specialised acute & sub-acute services needs for NWGGA in the short to medium term to be provided through existing hospitals. The need for new services to be monitored over time with providers in the area to assess demand/capacity and to determine appropriate delivery model whether through expansion of existing or new build.
<u>Police</u> > Benchmark analysis indicates a need for 1 x Police Station in the North > To service NWGGA, the Victoria Police Geelong division has indicated that a new 24-hour large police facility would be adequate to meet the needs of the Growth Areas. > The 24-hour large police facility could be at locations that better service the existing and new Growth Areas. > Ideally located on the Geelong Ring Road at a diamond intersection, preferably near public transit stop. > Co-location opportunities with Justice and DHHS to create a multi-disciplinary centre.	> Colocation of services in Multi-Disciplinary Centres is the preferred provision model.	<u>Heales Road East Precinct</u> R14. Make provisions for 1 x Emergency Precincts in the North. It is recommended that the Ambulance, CFA and SES facilities be developed as an emergency precinct within the development area on the Geelong Ring Road to service both Growth Areas. <u>Heales Road West Precinct</u> R15. Make provisions for 1 x Multi-Disciplinary Centre (incorporating Police, Justice, DHHS)
<u>Country Fire Authority</u> > Benchmark analysis indicates a need for 1 x Career Station in the North.	> Co-location of services in Emergency Precinct is the preferred provision model.	

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
> CFA confirmed the need for 2 separate Career Stations to Service NWGGA > Opportunities to collocate with SES and Ambulance		
<u>Ambulance</u> > Benchmark analysis indicates a need for 1 x Ambulance Station in the North. > Further investigation is required to determine how the Northern Growth Area could be serviced, whether through expansion of existing stations or a new station and the availability of resources and funding. > Opportunity to create emergency precincts in new Growth Areas with co-location with CFA and SES	> Co-location of services in Emergency Precinct is the preferred provision model.	
<u>Justice</u> > There are currently no plans to build new justice facilities in the Growth Area. > The approach to servicing the Growth Areas would be through outreach and through the existing Department of Justice and Regulation Regional Office for residents in the two Growth Areas.	> Co-location of services (corrections programs) in Multi-Disciplinary Centres is the preferred provision model.	
Targeted Support		
<u>Youth</u> > Benchmark analysis indicates a need for 2 x Youth Centres/Spaces in the North > Stakeholders confirmed that existing youth facilities in the North and West are at capacity and there will be a requirement for facilities and services in NWGGA to support youth. > The preferred provision model for youth centres/space is co-located with active open space, sport and recreation facilities, and Multipurpose Community Centres.	> Co-location of services in Multipurpose Community Centres is the preferred provision model.	<u>Elcho Road East Precinct, Heales Road East Precinct R16.</u> Incorporate targeted support facilities at Multipurpose Community Centres and Health and Wellbeing Hubs.
<u>Aged & Disability, Seniors</u> > Benchmark analysis indicates a need for the following in the North: - 2 x Aged Care/Respite - 2 x Seniors Centre > The preferred model of delivery is for multipurpose community hubs incorporating recreational opportunities, intergenerational space, activities and programs such as U3A rather than standalone seniors centre.	> Co-location of services in Multipurpose Community Centres is the preferred provision model.	

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
> Many organisations are moving towards a mobile model whereby services are provided in multipurpose centres e.g. consulting rooms and activity rooms.		
Cultural > Benchmark analysis indicates a need for migrant resource centre and aboriginal service centre in each of the Growth Areas. > The preferred model of delivery for cultural services (e.g. refugees, CALD) is through outreach from existing facilities > Wathaurong has a \$30 million redevelopment plan for the Morgan Street site at North Geelong.	> Co-location of services in Multipurpose Community Centres is the preferred provision model.	<u>Elcho Road East Precinct, Heales Road East Precinct</u> R17. Make provisions for cultural services within multipurpose facilities R18. The need for additional Aboriginal services may be catered through redevelopment of existing facilities. Demand needs to be monitored.
Recreation & Open Space^		
Outdoor Recreation Facilities > Benchmark analysis indicates a need for the following in the North: - 11 x Cricket Oval - 9 x Australian Rules Football Oval - 9 x Soccer Field - 15 x Dedicated Tennis Court - 6 x Dedicated Netball Court - 2 x Lawn Bowls Green - 1 x Skate Park Playgrounds > Benchmark analysis indicates a need for the following in the North: - 31 x Local Playgrounds - 9 x District Playgrounds - 1 x Sub-regional Playgrounds Indoor Multipurpose Courts > Benchmark analysis indicates a need for the following in the North: - 4 x Indoor Multi-purpose Courts Sports Pavilions > At least one pavilion at each outdoor sporting complex > Stakeholders confirmed that in the North, structured participation (club/team base) is not working and there is the view that more informal unstructured participation such as walking, cycling, swimming etc may be more appealing.	> Refer to Table 2	R19. The Northern Growth Area will be serviced by the redeveloped Water World, Lara pool and the provision of an aquatic facility in the Western Growth Area. R20. Consider the need for a regional level playground across the NWGGA that may be located in a district open space if there is no regional level open space to be provided. R21. Public dog parks to be considered at framework planning stage when land encumbrances are better understood. Dedicated dog off-leash spaces are a potential use of otherwise undevelopable land R22. Sports pavilion to be determined at framework planning stage. <u>Elcho Road East Precinct</u> R23. Make provisions for: - A network of active open space reserves and facilities throughout the precinct across 18 hectares of unencumbered land

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
> Stakeholders view is that Northern Arc, once developed will service existing community and capacity to service new Growth Area will be limited, which points to a need for additional provision in NWGGA. > Opportunities and synergies for sport and recreation within the Health and Wellbeing agenda e.g. sport and recreation facilities adjoining hospitals, aged care facilities etc to achieve health outcomes such as water rehabilitation. > Current work underway for Aquatic Strategy will inform requirements for NWGGA. All Open Space > Benchmark analysis indicates a need for the following in the North: - 132 ha of open space in a residential area - 4.8 ha (unencumbered) in an employment area Active Open Space > Benchmark analysis indicates a need for the following in the North: - 79 ha active open space - 9 district active open space - 1 sub-regional active open space Passive Open Space > Benchmark analysis indicates a need for the following in the North: - 53ha of passive open space - 32 local passive open space - 9 district passive open space > Provision of open space in the North is challenging and is seen as inadequate. > There is a need for more district/subregional level informal open space and recreation sites in the North. > Further improvements to open space are needed in the Northern Area as a stepping stone into the Northern Growth Area. Further consideration should be given to opportunities to acquire open space in excess of the minimum requirement.		- An indoor recreation centre - Two district active open space areas and a contribution toward a sub-regional sports reserve reserves and facilities equivalent to two hectares of unencumbered land - A network of local, district and linear parks throughout the precinct across 12 hectares of unencumbered land - Local parks in the employment precinct across 2.4 hectares. Heales Road West Precinct R24. Make provisions for: - A network of active sports reserves and facilities throughout the precinct across 22 hectares of unencumbered land - Contribution toward a district-level sports and recreation reserves and facilities equivalent to three hectares of unencumbered land Two district active open space areas and a sub-regional sports reserve reserves of ten hectares of unencumbered land. This requires the reallocation of some active open space from other precincts. - An indoor recreation centre - A network of local, district and linear parks throughout the precinct across 14 hectares of unencumbered land. Elcho Road West Precinct R25. Make provisions for: - A network of active sports reserves and facilities throughout the precinct across 16 hectares of unencumbered land - Two district-level active open space areas - A network of local, district and linear parks throughout the precinct across 11 hectares of unencumbered land.

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
		<u>Heales Road East Precinct</u> R26. Make provisions for: - A network of active sports reserves and facilities throughout the precinct across 23 hectares of unencumbered land - Two district active open space areas and a contribution toward a sub-regional sports reserve reserves and facilities equivalent to five hectares of unencumbered landA network of local, district and linear parks throughout the precinct across 16 hectares of unencumbered land. - Local parks in the employment precinct across 2.4 hectares.
Early Years > Benchmark analysis indicates a need for the following Early Years Facilities in the North: - 4 x MCH Consult Rooms - 4 x Kindergarten Centres (Licensed 66 places) - 7 x Child Care Centres (Licensed 120 places) - 1 x Occasional Care Rooms (Licensed 33 places) - 4 x Playgroup Rooms > Existing early childhood service provision in general (within adjacent catchment areas) is sufficient to meet current population requirements, with some limited capacity to accommodate additional future demand in some locations. There are no existing childhood services located within NWGGA. > Council's model of service provision for early childhood services is based on service integration and therefore infrastructure development would adopt an integrated approach to consolidate (as far as possible) a range of early childhood services on one site, preferably located alongside and/or integrated with primary school provision. This is not however the model adopted by most commercial and or NGO providers and service developers who preference standalone facilities.	> The preferred provision model for early years infrastructure is as follows: - Integrated Child and Family Centres: (e.g. Boorai Centre – Ocean Grove and Leopold Child and Family Centre) sub-regional facility providing a full suite of early childhood services including child care, kindergarten, MCH, family support, playgroups, etc. - Enhanced Early Learning Centre: (e.g. Bop Bop Karrong - Barwon Heads, Norlane Child and Family Centre etc) localized facility providing most early childhood services excluding long day child care. - Stand-alone service facilities: traditional model of service provision which are likely to be retained in some areas. > 40% of early year's infrastructure will be provided through Integrated Child and Family Centres in NWGGA (Council provision), with the remainder provided by NGO/private sector as potentially standalone (which is the preferred	<u>Elcho Road East Precinct</u> R27. Make provisions for 1 x Integrated Children Centre incorporating MCH, child care, occasional care and playgroup rooms and where possible collocate with primary school R28. Make provisions for 1 x childcare centre <u>Heales Road West Precinct</u> R29. Make provisions for 1 x Integrated Children Centre incorporating MCH, child care, occasional care and playgroup rooms and where possible collocate with primary school R30. Make provisions for 1 x childcare centre <u>Elcho Road West Precinct</u> R31. Make provisions for: - 1 x Kindergarten - 2 x Children Centre - 1 x MCH

Social Infrastructure Needs for North	Preferred Delivery Model/s	Recommendations for Framework Plan
	model for NGO/private sector) or ICCs through partnership opportunities with Council. > Co-location with Primary School > Early provision of an Integrated Child & Family Centre at the outset of development in both North & West.	<u>Heales Road East Precinct</u> R32. Make provisions for: - 1 x Kindergarten - 1 x Children Centre - 1 x MCH

4.3.2 Western Geelong Growth Area

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
Cultural		
<u>Library</u> > Benchmark analysis indicates a need for the following in the West: – 1 x District/Subregional Libraries > Stakeholders confirm the need for 2 new sub regional libraries (one in each of the Growth Areas) incorporating large children's spaces and whole of community areas. > Low capacity in existing libraries to service additional growth.	> A cultural precinct encompassing a range of cultural activities such as a library, art centre and museum is the preferred delivery model. > Inclusion of cafes in libraries. > Inclusion of cultural services through libraries. > Larger and flexible spaces are desirable for meeting spaces.	<u>McCanns Lane Precinct</u> R1. Make provision for 1 x Subregional Library, co-located with Arts & Cultural Centre and museum to create a cultural precinct.
<u>Arts & Cultural</u> > Benchmark analysis indicates a need for 1 x District Arts and Cultural Centre in the West. > Stakeholders confirmed the need for dedicated creative arts space to respond to unmet demands. > High level of growth anticipated in the arts and culture space in Geelong. > Existing facilities and services are operating at capacity. > The expected growth in Geelong (taking into consideration NWGGA) will trigger a need for the following regional facilities: – Regional Performing Arts/Theatre/Cultural Centre – Art Gallery – Civic Centre – Convention/Exhibition Centre > The SIP 2015 identifies a Convention Centre and the upgrade of existing regional arts and cultural facilities as key projects for the municipality.	> A cultural precinct encompassing a range of cultural activities such as a library, art centre and museum is the preferred delivery model.	<u>McCanns Lane Precinct</u> R2. Make provision for 1 x District Arts & Cultural Centre co-located with Library and museum to create a cultural precinct.
Community Centres		
<u>Community Centres and Multipurpose Centres</u> > Benchmark analysis indicates a need for the following community spaces in the West: – 6 x Neighbourhood Centres	> Preferred model for delivery of community space is through Multipurpose Community Centres/spaces/hubs.	<u>Creamery Road Precinct</u> R3. Make provisions for 1 x Multipurpose Community Centres in the Creamery Road Precinct incorporating neighbourhood house, flexible community meeting rooms/space,

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
- 3 x Multipurpose Community Centres - 15 x Local Community Meeting Rooms/Halls - 3 x Community Garden > Stakeholders confirmed the limited capacity of existing facilities in surrounding communities to service NWGGA > Innovations in shared space such as utilisation of classrooms outside of school hours. > Consideration for the management models of shared community spaces.	> Provision of local level community meeting rooms/halls in other facilities such as schools, libraries, Integrated Children's Centres and other hubs and precincts, sports pavilions. > Early provision of at least 1 x Multipurpose Community Centre at the outset of development	community garden and co-located with other uses such as seniors centre, youth centre, men's shed and open space. <u>Batesford North Precinct</u> R4. Make provisions for 1 x Neighbourhood Centre in the Batesford North Precinct incorporating flexible community meeting rooms/space <u>Merrawarp Road Precinct</u> R5. Make provisions for 1 x Neighbourhood Centre in the Merrawarp Road Precinct incorporating flexible community meeting rooms/space <u>McCanns Lane Precinct</u> R6. Make provisions for 1 x Multipurpose Community Centres in the McCanns Lane Precinct incorporating neighbourhood house, flexible community meeting rooms/space, community garden and co-located with other uses such as seniors centre, youth centre, men's shed and open space. <u>Batesford South Precinct</u> R7. Make provisions for 1 x Multipurpose Community Centres in the Batesford South Precinct incorporating neighbourhood house, flexible community meeting rooms/space, community garden and co-located with other uses such as seniors centre, youth centre, men's shed and open space. R8. Make provisions for 1 x Neighbourhood Centre in the Batesford South Precinct incorporating flexible community meeting rooms/space.
Education		
<u>Primary and Secondary School</u> > Benchmark analysis indicates a need for the following primary and secondary schools in the West: - 11 x Primary Schools - 3 x Secondary Schools	> Co-location of services and sharing of facilities to create 'early learning centre' hubs with kindergarten, pre-school and primary schools together and perhaps secondary schools. > The provision for one primary school in each Growth Area at the outset of	<u>Creamery Road Precinct</u> R9. Make provisions for 2 x Primary Schools in the Creamery Road Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts.

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
> Opportunities around private sector provision and innovations such as Schools in Shops and Houses to facilitate the early provision of schools in NWGGA	development through innovations such as schools in houses.	<u>Batesford North Precinct</u> R10. Make provisions for 2 x Primary Schools and 1 x Secondary School in the Batesford North Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts. <u>Merrawarp Road Precinct</u> R11. Make provisions for 1 x Primary School in the Merrawarp Road Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts. <u>McCanns Lane Precinct</u> R12. Make provisions for 2 x Primary School and 1 x Secondary School in the McCanns Lane Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts. <u>Batesford South Precinct</u> R13. Make provisions for 4 x Primary Schools and 1 x Secondary School in the Batesford North Precinct with consideration for Co-location of other complimentary services & facilities to create learning precincts.
<u>Tertiary Education</u> > Benchmark analysis does not trigger a need for additional TAFE or University campuses. > No new University or TAFE campuses anticipated by stakeholders for NWGGA. > Stakeholder's views are that servicing NWGGA would be through existing facilities and expansion of existing facilities if needed.		<u>Outside of Growth Area</u> R14. Provision of Tertiary Education will be through existing facilities and expansion of existing facilities if needed.
Health, Safety & Emergency		
<u>Health</u> > Benchmark analysis indicates a need for the Western Growth Area: – 1 x Community Health Centres > No new hospital anticipated for Growth Areas by stakeholders given the existing number of public and private hospitals. > New wards in existing hospital will provide additional capacity.	> Preferred model of delivery is through shared services facilities such as Health and Wellbeing Hubs, multipurpose community spaces rather than single purpose large health facilities. > Health services e.g. consulting rooms for OT/speech, immunisation, parenting etc.	<u>McCanns Lane Precinct</u> R15. Make provisions for 1 x Community Health Centres in the McCanns Lane Precinct to service the Western Growth Area and adopt the Health and Wellbeing Hub delivery model.

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
	located in schools/early learning centres is also a preferred model.	<u>Outside of Growth Area</u> R16. Provision of ambulatory services, specialised acute & sub-acute services needs for NWGGA in the short to medium term to be provided through existing hospitals. The need for new services to be monitored over time with providers in the area to assess demand/capacity and to determine appropriate delivery model whether through expansion of existing or new build.
<u>Police</u> > Benchmark analysis indicates a need for 1 x Police Station in the West > To service NWGGA, the Victoria Police Geelong division has indicated that a new 24 hour large police facility would be adequate to meet the needs of the Growth Areas. > The 24 hour large police facility could be at locations that better service the existing and new Growth Areas. > Ideally located on the Geelong Ring Road at a diamond intersection, preferably near public transit stop. > Co-location opportunities with Justice and DHHS to create a multi-disciplinary centre.	> Colocation of services in Multi-Disciplinary Centres is the preferred provision model.	<u>Creamery Road Precinct</u> R17. Make provisions for 1 x Emergency Precinct in the West. It is recommended that the Ambulance, CFA and SES facilities be developed as an emergency precinct within the development area. <u>McCanns Lane Precinct</u> R18. Make provisions for 1 x Multi-Disciplinary Centre (incorporating Police, Justice, DHHS)
<u>Country Fire Authority</u> > Benchmark analysis indicates a need for 1 x Career Station in the West. > CFA confirmed the need for 2 separate Career Stations to Service NWGGA. > Opportunities to collocate with SES and Ambulance	> Co-location of services in Emergency Precinct is the preferred provision model.	
<u>Ambulance</u> > Benchmark analysis indicates a need for 1 x Ambulance Station in the West. > A new station recently opened (less than 12months) at Bannockburn has the capacity to absorb further demand generated from the Western Growth Area this facility however is currently not a 24hour station but can be changed if the need was there. > Opportunity to create emergency precincts in new Growth Areas with co-location with CFA and SES	> Co-location of services in Emergency Precinct is the preferred provision model.	

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
<u>Justice</u> > There are currently no plans to build new justice facilities in the Growth Area. > The approach to servicing the Growth Areas would be through outreach and through the existing Department of Justice and Regulation Regional Office for residents in the two Growth Areas.	> Co-location of services (corrections programs) in Multi-Disciplinary Centres is the preferred provision model.	
Targeted Support		
<u>Youth</u> > Benchmark analysis indicates a need for 3 x Youth Centres/Spaces in the West. > Stakeholders confirmed that existing youth facilities in the North and West are at capacity and there will be a requirement for facilities and services in NWGGA to support youth. > The preferred provision model for youth centres/space is co-located with active open space, sport and recreation facilities, and Multipurpose Community Centres.	> Co-location of services in Multipurpose Community Centres is the preferred provision model.	<u>Creamery Road Precinct, McCanns Lane Precinct, Batesford South Precinct</u> R19. Incorporate targeted support facilities at Multipurpose Community Centres and Health and Wellbeing Hubs.
<u>Aged & Disability, Seniors</u> > Benchmark analysis indicates a need for the following primary and secondary schools in the West: – 3 x Aged Care/Respite – 3 x Seniors Centre > The preferred model of delivery is for multipurpose community hubs incorporating recreational opportunities, intergenerational space, activities and programs such as U3A rather than standalone seniors centre. > Many organisations are moving towards a mobile model whereby services are provided in multipurpose centres e.g. consulting rooms and activity rooms.	> Co-location of services in Multipurpose Community Centres is the preferred provision model.	
<u>Cultural</u> > Benchmark analysis indicates a need for migrant resource centre and aboriginal service centre in each of the Growth Areas. > The preferred model of delivery for cultural services (e.g. refugees, CALD) is through outreach from existing facilities > Wathaurong has a \$30 million redevelopment plan for the Morgan Street site at North Geelong.	> Co-location of services in Multipurpose Community Centres is the preferred provision model.	<u>Creamery Road Precinct, McCanns Lane Precinct, Batesford South Precinct</u> R20. Make provisions for cultural services within multipurpose facilities <u>Outside of Growth Area</u> R21. The need for additional Aboriginal services may be catered through redevelopment of existing facilities. Demand needs to be monitored.

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
Recreation and Open Space[^] Outdoor Recreation Facilities > Benchmark analysis indicates a need for the following in the West: – 15 x Cricket Oval – 12 x Australian Rules Football Oval – 12 x Soccer Field – 20 x Dedicated Tennis Court – 8 x Dedicated Netball Court – 2 x Lawn Bowls Green – 1 x Skate Park Playgrounds > Benchmark analysis indicates a need for the following in the West: – 41 x Local Playgrounds – 12 x District Playgrounds – 2 x Sub-regional Playgrounds – 1 x Regional Playground Indoor Multipurpose Courts > Benchmark analysis indicates a need for the following in the West: – 6 x Indoor Multi-purpose Courts Indoor Aquatic and Leisure Centre > Benchmark analysis indicates a need for the following in the West: – 1 x Indoor Aquatic and Leisure Centre Sports Pavilions > At least one pavilion at each outdoor sporting complex > Opportunities and synergies for sport and recreation within the Health and Wellbeing agenda e.g. sport and recreation facilities adjoining hospitals, aged care facilities etc to achieve health outcomes such as water rehabilitation. > Current work underway for Aquatic Strategy will inform requirements for NWGGA.	> Refer to Table 2	R22. One aquatic & leisure facility to be co-located with a four-court indoor stadium. Location selection should aim to achieve even distribution of aquatics between existing facilities at Leisurelink and Waterworld. R23. Public dog parks to be considered at framework planning stage when land encumbrances are better understood. Dedicated dog off-leash spaces are a potential use of otherwise undevelopable land. R24. At least one pavilion at each outdoor sporting complex. To be further determined at framework planning stage. <u>Creamery Road Precinct</u> R25. Make provisions for: – A network of active open space reserves and facilities throughout the precinct across 13 hectares of unencumbered land (Note: 2.0 hectares of active open space will be a contribution to a sub-regional active open space in Batesford South Precinct) – One district active open space area and a contribution toward a sub-regional sports reserve reserves and facilities equivalent to two hectares of unencumbered land – A network of local, district and linear parks throughout the precinct across nine hectares of unencumbered land. <u>Batesford North Precinct</u> R26. Make provisions for: – A network of active open space reserves and facilities throughout the precinct across 16 hectares of unencumbered land. (Note: 4.5 hectares of active open space will be a contribution to a sub-regional active open space in Batesford South Precinct)
All Open Space		

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
> Benchmark analysis indicates a need for the following in the West: - 173ha of open space in a residential area - 2.2ha (unencumbered) in an employment area Active Open Space > Benchmark analysis indicates a need for the following in the West: - 104ha active open space - 10 district active open space - 2 sub-regional active open space Passive Open Space > Benchmark analysis indicates a need for the following in the West: - 69ha of passive open space - 36 local passive open space - 12 district passive open space > Further consideration should be given to opportunities to acquire open space in excess of the minimum requirement.		- One district active open space area and to be combined with an indoor recreation centre - A network of local, district and linear parks throughout the precinct across 11 hectares of unencumbered land. <u>Merrawarp Road Precinct</u> R27. Make provisions for: - A network of local sports and recreation reserves and facilities throughout the precinct across nine hectares of unencumbered land - A network of active open space reserves and facilities throughout the precinct across nine hectares of unencumbered land. (Note: 0.5 hectares of active open space will be contributed from other precincts to create a viable district active open space area. - A network of local, district and linear parks throughout the precinct across six hectares of unencumbered land. <u>McCanns Lane Precinct</u> R28. Make provisions for: - A network of active open space reserves and facilities throughout the precinct across 18 hectares of unencumbered land. (Note: 5.0 hectares of active open space will be a contribution to a sub-regional active open space in Batesford South Precinct) - One district active open space area and a contribution toward a sub-regional level sports reserve and facilities equivalent to five hectares of unencumbered land - A network of local, district and linear parks throughout the precinct across 12 hectares of unencumbered land - Local parks in the employment precinct across 1.6 hectares. <u>Batesford South Precinct</u> R29. Make provisions for: - A network of active open space reserves and facilities throughout the precinct across 47 hectares of unencumbered land - Four district-level active sports reserves and facilities provided on 36 hectares of unencumbered land.

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
		- Provide two sub-regional active open space reserves of ten hectares each. To provide this level of active open space requires the reallocation of the "balance" of active is from other precincts. - A network of local, district and linear parks throughout the precinct across 31 hectares of unencumbered land
Early Years		
> Benchmark analysis indicates a need for the following Early Years Facilities in the West: 5 x MCH Consult Rooms 6 x Kindergarten Centres (Licensed 66 places) 8 x Child Care Centres (Licensed 120 places) 1 x Occasional Care Rooms (Licensed 33 places) 6 x Playgroup Rooms > Existing early childhood service provision in general (within adjacent catchment areas) is sufficient to meet current population requirements, with some limited capacity to accommodate additional future demand in some locations. There are no existing childhood services located within NWGGA. > Council's model of service provision for early childhood services is based on service integration and therefore infrastructure development would adopt an integrated approach to consolidate (as far as possible) a range of early childhood services on one site, preferably located alongside and/or integrated with primary school provision. This is not however the model adopted by most commercial and or NGO providers and service developers who preference standalone facilities.	> The preferred provision model for early years infrastructure is as follows: - Integrated Child and Family Centres: (e.g. Boorai Centre – Ocean Grove and Leopold Child and Family Centre) sub-regional facility providing a full suite of early childhood services including child care, kindergarten, MCH, family support, playgroups, etc. - Enhanced Early Learning Centre: (e.g. Bop Bop Karrong - Barwon Heads, Norlane Child and Family Centre etc) localized facility providing most early childhood services excluding long day child care. - Stand-alone service facilities: traditional model of service provision which are likely to be retained in some areas. > 40% of early year's infrastructure will be provided through Integrated Child and Family Centres in NWGGA (Council provision), with the remainder provided by NGO/private sector as potentially standalone (which is the preferred model for NGO/private sector) or ICCs through partnership opportunities with Council. > Co-location with Primary School	<u>Creamery Road Precinct</u> R33. Make provisions for: 1 x Kindergarten 1 x Child Care Centre 1 x MCH <u>Batesford North Precinct</u> R34. Make provisions for 1 x Integrated Children Centre incorporating MCH, child care, occasional care and playgroup rooms and where possible collocate with primary school R35. Make provisions for 1 x childcare centre <u>Merrawarp Road Precinct</u> R36. Make provisions for: 1 x Kindergarten 1 x Child Care Centre 1 x MCH <u>McCanns Lane Precinct</u> R37. Make provisions for: 1 x Kindergarten 1 x Child Care Centre 1 x MCH <u>Batesford South Precinct</u> R38. Make provisions for 1 x Integrated Children Centre incorporating MCH, child care, occasional care and

Social Infrastructure Needs for West	Preferred Delivery Model/s	Recommendations for Framework Plan
	> Early provision of an Integrated Child & Family Centre at the outset of development in both North & West.	playgroup rooms and where possible collocate with primary school R39. Make provisions for 1 x kindergarten R40. Make provisions for 2 x Childcare centre

5.0 References

ABS (Australian Bureau of Statistics) 2013a, 2001.0 - Census of Population and Housing: Basic Community Profile, 2011 Third Release [data], Canberra: Australian Bureau of Statistics.

ABS (Australian Bureau of Statistics) 2013b, 2033.0.55.001 Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011 [data], Canberra: Australian Bureau of Statistics.

ABS (Australian Bureau of Statistics) 2013c, 3218.0 Regional Population Growth, Australia, Canberra: Australian Bureau of Statistics.

ASR Research. 2015. Wollert/Quarry Hills Social and Community Infrastructure Assessment. Available at: <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2012/11/D-15-2382-Addendum-Social-Community-Infrastructure-Assessment-ASR-Research-20-January-2015.pdf>

Australian Social and Recreation Research. 2008. Planning for Community Infrastructure in Growth Area Communities.

Business News .2015. Ellenbrook town centre going micro. Available at: <https://www.businessnews.com.au/article/Ellenbrook-town-centre-going-micro>

Capire. 2015. Plumpton and Kororoit Open Space and Community Infrastructure Needs Assessment. Available at: <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2013/12/PSP-1078-Plumpton-1080-Kororoit-Community-Infrastructure-Needs-Assessment-FINAL-16-April-2015.pdf>

City of Greater Geelong (2009) Armstrong Creek Social Infrastructure Delivery Plan (SIIDP), Geelong: City of Greater Geelong.

City of Greater Geelong (2013) Sustainable Communities - Infrastructure Development Guidelines, Geelong: City of Greater Geelong.

City of Swan. Date unknown. Ellenbrook. Available at <https://www.swan.wa.gov.au/Business-support/Key-business-areas/Ellenbrook>>

City of Greater Geelong. 2010. Armstrong Creek – Whole of growth Area. Available at: <https://www.geelongaustralia.com.au/armstrongcreek/armstrong/article/item/8cfafd49ea31e3f.aspx>

City of Greater Geelong. 2010. Armstrong Creek Urban Growth plan Volume 1. Available at: <https://www.geelongaustralia.com.au/Armstrongcreek/files/ArmstrongCreekUrbanGrowthPlan-Volume1.pdf>

Department of Local Government and Planning.2011. Ripley Valley Urbane Development Area Development Scheme. Available at: <http://www.dilgp.qld.gov.au/resources/plan/pda/ripley-valley-development-scheme.pdf>
Regional Development Australia. Ripley Valley Development. Available at: <http://www.rdaiwm.org.au/news/148-ripley-valley-development>

Ellenbrook, The Vines and Vale Place Plan, City of Swan, 2004 Sense of Place and Community Ownership, Sally Paulin, 2008

Economic Development Queensland. 2015. Infrastructure Funding Framework. Available at: <http://www.edq.qld.gov.au/resources/guideline/pda/infrastructure-funding-framework.pdf>

Griffith University. Growing Old on the Suburban Fringe: Master Planned Communities and Planning for Diversity. Available at: https://www.griffith.edu.au/__data/assets/pdf_file/0018/81207/city-structures-12-walters.pdf

IdForecase2016. Armstrong Creek. Available at <http://forecast.id.com.au/geelong/population-households-dwellings?WebID=100>

*IdProfile*2016. Armstrong Creek. Available at: <http://profile.id.com.au/geelong>

Ipswich City Council. 2007. *Springfield Lakes Design Manual*. Available at: http://www.ipswichplanning.com.au/__data/assets/pdf_file/0008/2051/ips_implementation_guide_17a.pdf

K2 Planning. 2015. *Sunbury South Precinct Structure Plan – Community Infrastructure Needs Assessment*. Available at: <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2014/10/1074-ONLY-Sunbury-South-PSP-1074-Community-Infrastructure-Assessment-May-2015.pdf>

LWP. 2016. *Ellenbrook*. Available at: <https://www.lwppropertygroup.com.au/our-communities/ellenbrook/location-and-facilities>

LWP. 2010. *Creating a Community at Ellenbrook*. Available at: <http://www.wpg.net.au/uploads/682507af-1521-47ca-87b7-3387c95d6d99-Community%20Plan%20Ellenbrook%20-%2020120201.pdf>

Planning Institute of Australia. *Selandra Rise*. Available at: <https://www.planning.org.au/viccontent/selandra-rise>

Property Observer. 2012. *Stockland's Selandra Rise tops Melbourne's house-and-land sales but fewer sales forecast: Colliers*. Available at: <http://www.propertyobserver.com.au/finding/residential-investment/house-and-land/18824-thursday-news-stocklands-selandra-rise-tops-melbournes-house-and-land-sales-but-lower-sales-forecast-ahead-colliers-international.html?start=1>

Prowse Quantity Surveyor. 2014. *Wollert Precinct Structure Plan – Developer Contribution Plan Costing*. Available at: <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2012/11/9929-WOLLERT-PRECINCT-DCP-Stage-A-Ref-9929-02-Appendix-B.pdf>

Realestate. 2016. *South Ripley*. Available at: <http://www.realestate.com.au/invest/house-in-south+ripley,+qld+4306>

REIWA. 2016. *Ellenbrook*. Available at: <http://reiwa.com.au/wa/ellenbrook/6069/>

RMIT University. 2012. *Master Planned Communities and the Re-formation of Cities for Health and Wellbeing: The Case of Selandra Rise*. Available at: http://global-cities.info/wp-content/uploads/2012/04/IMCL_2012_Maller_paper_14022012.pdf

Springfield Lakes Corporation. 2008. *SEQRP and Greater Springfield*. Available at: <https://www.planning.org.au/documents/item/1119>

Stocklands. *Selandra Rise*. Available at: <https://www.stockland.com.au/investor-centre/our-portfolio/residential/selandra-rise>

WA News. 2016. *New 'Perth's worst commute' contender emerges as Ellenbrook outcry builds*. Available at: <http://www.watoday.com.au/wa-news/new-perths-worst-commute-contender-emerges-as-ellenbrook-outcry-builds-20160222-gn0l67.html>

Appendix A – Definitions

Category	Facility /Space	Definition
Cultural Facility	Central Library	A central library operates at a Local Government Area or regional level, offering high-level functions and resources. It shares all collections with branches, as required.
	Branch Library	A branch library caters for a more localised area, offers access to both text and online resources for learning and can also incorporate meeting spaces and areas for study.
	Museums	A building, place or institution devoted to the acquisition, conservation, study, exhibition and educational interpretation of objects with scientific, historical or artistic value.
	Exhibition/Convention Centre	Large, cavernous public building with enough open space to host public and private business and social events. A convention centre includes an exhibition hall, or conference centre. Events held in convention centres can include corporate conferences, industry trade shows, formal dances, entertainment spectacles and concerts.
	Theatre/Performing Arts	Regional Level - Space for arts performance and rehearsal supporting a range of performing arts including plays, operas, musical and other performance. Could be part of civic or cultural centres and meet the professional and community performing and visual arts needs. Typically comprise of large auditorium space/theatres, exhibition space, function rooms, rehearsal areas, studio space and administration. District Level –A space for art rehearsal and performance ranging from small playhouse to a large multi-purpose performance centre supporting a wide range of performing arts (from plays to opera and eisteddfods). Includes arts workshop spaces.
	Civic Centre	Provides premier civic and/or space to serve municipality or wider area. Often includes Council administrative centre, Council chambers, as well as meeting space and space for civic and cultural events. Could be combined with regional performing arts centre.
Education & Training	Art Gallery	Art Galleries provide exhibition spaces, and may offer educational programs, as well as meeting and workshop space for artists. Galleries are often co-located with libraries, civic buildings and museums.
	Prep/Primary Schools	Primary schools are educational facilities offering Preparatory through to Year 6 (P-6) and are attended by children generally aged between 5 and 11.
	Secondary Schools	In Victoria, secondary education begins in Year 7, generally in the year students reach thirteen years of age, and is completed in Year 12. Year 10 marks the end of compulsory schooling for most Victorian students, as they reach 16 years of age during that year, but the majority of students move on to Victorian Certificate of Education (VCE) studies in Years 11 and 12.

Category	Facility /Space	Definition
	P12 (Private & Public)	P–12 schools offer you and your child a unified approach to schooling by combining both primary and secondary school education at the one school, location or campus
	TAFE	TAFE institutions provide a wide range of predominantly vocational tertiary education courses, mostly qualifying courses under the National Training System/Australian Qualifications Framework/Australian Quality Training Framework. Fields covered include business, finance, hospitality, tourism, construction, engineering, visual arts, information technology and community work. Individual TAFE institutions (usually with numerous campuses) are known as either colleges or institutes, depending on the state or territory. TAFE colleges are owned, operated and financed by the various state and territory governments. This is in contrast to the university sector, whose funding is predominantly the domain of the Commonwealth government and whose universities are predominantly owned by the state governments.
	University	Universities are commonly a Commonwealth funded tertiary education facility but can also be private. New universities and campuses of existing universities are generally developed in response to Commonwealth and State Government initiatives. Universities service local, regional, interstate, and international catchments.
Health, Safety & Emergency Services	Hospital (Public & Private)	A hospital is a health care institution that provides day patient, emergency and inpatient clinical, care and treatment for people who are unwell or injured. A range of allied, medical, surgical, preventative, diagnostic and treatment services are generally provided in association with day patient and overnight hospital stays. • In-Patient Services – In-patient services include medical, surgical, paediatric, obstetric and rehabilitation services. Many hospitals also provide mental health services and services for older people • Out-Patient Services – Most hospitals provide out-patient services including emergency services, day procedures, diagnostic and assessment services, and therapy services. Hospitals also support various community based programs to prevent or reduce the need for hospitalisation.
	Community Health Centre	Community health centres offer a range of community health services funded through the Department of Human Services' Community Health Program. Community health centres are located in every local government area within Victoria and offer a range of health services that are tailored to match the needs of the local population. The service is directed towards capacity building and community development, utilising local partnerships with non-government providers on-site or out-reach, and integrated programs with general and specialist medical practitioners such as Indigenous medical services. The services offered vary between community health centres, depending on the needs of the local area but often include: • Counselling and support services • Health promotion activities • Medical and nursing services • Dental health • Allied health, including audiology, dietetics, exercise physiology, physiotherapy, podiatry, occupational therapy and speech therapy • Alcohol and drug programs • Carer respite • Maternal and child health services • Mental health programs

Category	Facility /Space	Definition
		- Disability services - Outreach services - Problem gambling programs - Rehabilitation programs - Support for self-help
	Police	Police stations serve a specific area providing emergency services, primarily in response to situations of a criminal or public safety nature.
	SES	Premises used by community services which respond to emergencies caused by fire, flood, storms, toxic fumes or similar events.
	Country Fire Authority (CFA)	CFA's fire stations are specifically designed to support and facilitate the emergency needs of our fire-fighters and to house our specialist vehicles and equipment. Integrated stations include career fire-fighters who support local volunteers. CFA has 32 integrated fire stations typically servicing large urban centres and housing between 4-6 or more emergency vehicles. Operational support areas in integrated stations include a turn-out area, workshop, Breathing Apparatus cleaning room, laundry and drying areas. Dayroom and bedrooms for staff are included together with meeting room, kitchen and offices. There are two types of stations including: - Urban Fire Station - catering to the needs of larger brigades and including a 3-4 bay drive-through motor room, turn-out area, workshop, Breathing Apparatus cleaning room and drying room. A meeting room and kitchen are provided for training and brigade use together with offices for support functions. - Rural Fire Station - typically housing 2-3 vehicles and brigade equipment. Smaller rural stations include a turn out area, workshop and toilet while larger rural stations also have a meeting room and kitchen.
	Ambulance	These branches are designed to allow paramedics a chance to rest when not responding to calls, as well as to undertake necessary training and debriefs. Branches are also used to store medical equipment, vehicles and supplies. Ambulance branches are designed with built-in sleeping areas for paramedics on night shifts, kitchens, lounge areas, offices, study areas and garages.
Leisure & Recreation	Aquatic Centre	Swimming pools available for the use of the public. Most pools cater for swimming lessons, training, exercise/fitness classes and recreational swimming.
	Indoor Sport & Recreation Centre	Premises used for leisure, sport or recreation conducted wholly or mainly indoors. A multi functional, sport recreation and community meeting place. With court facilities including ancillary changing room space, ancillary storage, café, offices, reception, changing, gymnasium/fitness component etc
	Leisure Centres	Large multi-functional facility that can encompass a wide variety of leisure and recreation facilities including (but not limited to): - Pool - Sports hall

Category	Facility /Space	Definition
		• Gymnasium • Bowls • Squash courts • Health & Fitness suites • Cafe/Restaurant • Offices • Change rooms • Multi-purpose courts • Child minding facilities i.e. creche • Running tracks • Stadium
	Regional Sports Facility	Large multi-functional sports facility (6/7 court facility, gym, aerobics, community meeting rooms, could be combined with aquatic infrastructure). Should be co-located with regional playing fields to minimise management and operational costs.
	Clubrooms^	Club and change room facilities for sporting clubs. Requires consideration of the potential for sharing between sports (i.e. shared club room facilities particular for winter and summer sports). Club room planning should promote local club viability and consider the inclusion of revenue raising space (including hall for hire, kitchen facilities and civic space etc.) where possible. Some areas may need to consider the need for higher order facilities to cater for senior level sports.
Targeted Support	Day Respite Space (Planned Activity Groups)	A facility providing an operational base for services targeted at older and/or younger people such as domiciliary care, Meals On Wheels and other services often including day respite care to frail aged people and younger people with a disability who may be at risk of premature or inappropriate long term residential care. Facilities can cater to individual service providers or a collection of service providers. Services often include transport to and from the centres, meals, and some allied health services. These centres can provide a range of interactive activities for clients and/or a base for outreach services.
	Seniors Centre	Senior citizens centres are recreational and educational facilities provided specifically for older adults (those aged greater than 65). Senior citizens centres typically house a variety of activities such as games, crafts, luncheons and exercise programs. There may also be clubs and groups for older adults that meet regularly at these centres. A place where older adults can congregate to fulfil many of their social, physical, emotional, and intellectual needs (may be combined with youth centre or within broader community facility). Generally not provided at a neighbourhood level as the service provision will normally be accommodated in a generic neighbourhood community centre.
	Youth Centre	The type of youth facilities in a municipality varies depending on the model of service delivery applied by the local government. Youth services can be provided out of dedicated youth facilities that contain spaces for a range of support services, programs, information and referral. These dedicated youth facilities may also perform a drop-in function whereby local young people can use the space at unscheduled times to play games and socialise. The alternative to dedicated youth facilities is to provide youth services and programs within Multipurpose Community Centres or other community facilities such as community health centres, arts centres and non-government facilities including churches. It should also be noted that not all local governments provide youth service directly and some outsource to external providers such as the YMCA.

Category	Facility /Space	Definition
		A centre providing leisure activities and advisory support for young people. To provide space for a youth worker, employment training programs, drop in areas, formal areas and outreach programs.
Community Centres & Spaces	Neighbourhood Community Centre/House	General community use facility providing meeting spaces; social, educational and recreational activities; and/or health, support and information. Includes civic centre, community centre, neighbourhood centre, local hall, neighbourhood house and meeting room . Small local meeting rooms and activity spaces that can be used by local organisations for activities such as dance, fitness and outreach work.
	Multipurpose Community Centre^	Provides a range of flexible, multipurpose spaces that include a variety of activity and program areas as well as space for a diverse range of services to be provided both on a permanent and sessional or outreach basis. Ideally provide a balance between access to support services, information and referral as well as a range of activities and programs that are focused on lifelong learning, healthy living, arts and culture, etc. As well as the structured spaces for formal activities and programs, district Multipurpose Community Centres should also provide space for informal gathering and interaction and be known as community meeting places. With 'anchor' facilities such as libraries and/or recreation centres, and perhaps space for youth activities, could form the foundation of a district 'community hub'. A key benefit of these facilities is that they can easily respond to changing lifecycle and demographic needs. Multi-purpose community facilities may also accommodate community groups in permanent office space or shared meeting and training spaces. It should also be noted that the Department of Planning and Community Development and the Department of Human Services have indicated that neighbourhood houses are particularly important at the neighbourhood level as a provider of adult education and training.
	Community Hall/Meeting Rooms#	Small local meeting rooms and activity spaces that can be used by local organisations for activities such as dance, fitness and outreach work.
	Community Gardens	A shared space for people to come together to grow food, cook, eat and get to know each other. Other activities/ideas for community gardens include: community art, social space, performance space, children's play area, animals, sales area
Early Years	Childcare	There are a range of child care types including: • Long Day Care – Primarily aimed at 0-6 year olds, long day care is usually based in a centre and the education and care programs are created around the developmental needs, interests and experience of each child. Long day care centres typically operate for at least 8 hours a day on normal working days for a minimum of 48 weeks per year. Long day care services may also offer kindergarten programs. • Occasional Care – This type of care is provided in a range of settings on either an hourly basis, or for short periods of time, or at irregular intervals specifically for parents who need time to attend appointments, take care of personal matters, undertake casual or part-time employment, study or have temporary respite from full-time parenting. These services provide developmental activities for children and are aimed primarily at 0–6 year olds. • Outside School Hours Care – Outside school hours care (OSHC) programs are usually located at or close to primary schools, providing care for primary school age children outside school hours and during school vacations. Care is also often provided on student free days. OSHC programs may also be offered in locations such as community centres, halls, neighbourhood houses or recreation centres.

Category	Facility /Space	Definition
		• Family Day Care – Family day care educators provide education and care for other people's children in their own home. Family day care can be for children from birth through to primary school age. This type of care may be available overnight or on weekends for families who are on-call or work shifts. • In-home Care – This service is a targeted form of care where an approved carer provides care in the child's home. It is only available for families who do not have access to an existing child care service, or where an existing service cannot meet their needs.
	Integrated Children's Centre (also known as Early Years Centre/Early Childhood Centres)	Centres are 'one-stop-shops' where children and their families can access integrated early childhood education and care, parenting and family support, and selected health services in one convenient location. The range of services provided available at each Centre varies according to the needs of the local community. Targeted services are also delivered, or negotiated, as needed. Centres are vibrant community places with communal space available for parent support groups and a range of fun activities, such as exercise classes, healthy cooking classes and baby massage.
	Playgroup	Playgroup is an informal session where mums, dads, grandparents, caregivers, children and babies meet together in a relaxed environment. Playgroups are set up and run by parents and caregivers, with children choosing from a range of activities set up to meet their varying needs. Activities at playgroup may include: • Music and singing • Imaginative play • Outdoor and free play • Art and craft activities • Outings. Playgroup can be held anywhere that is safe for children and where groups of people can meet - community and neighbourhood centres, early years centre, health clinics, women's centres, preschools and kindergartens, church halls, parks and playgrounds.
	Maternal & Child Health	Facilities and programs organised for the purpose of providing services for mothers and children. Services include prenatal and postnatal services, family planning care, and paediatric care in infancy. The Maternal and Child Health Service supports families in the areas of parenting, health and development and gives referrals to other professionals. The Maternal and Child Health (M&CH) Service is a universal service available for all families with children from birth to school age (0-6 years). The service is provided through a schedule of consultations at key ages and stages and a range of other activities including parent groups. The target group for the key age and stage component of the M&CH service is children up to 3 years and 6 months of age.
	Kindergarten/Preschool	Kindergartens focus on early learning for children aged 3.5–4.5 years. Children go to kindergarten in the year before school, usually when they are four years old. However, some services and centres also offer kindergarten programs for three-year-old children.

Appendix B– Case Studies

Ellenbrook

Development	Ellenbrook WA
Location/ Council Area	Ellenbrook, City of Swan
Lead Agency – Who undertook in the project	WA Department of Housing LWP Property Group
Brief Description	The Ellenbrook development in WA has won several prestigious awards for its design and community engagement processes and serves as a role model for Greenfield development projects in Australia. In 2015, Ellenbrook was recognised as the best master-planned community in the world by the International Real Estate Federation, and awarded the prestigious FIABCI World Prix d'Excellence Award 2015 Ellenbrook is a master planned Greenfield development undertaken as a joint venture between the WA Department of Housing and the developer, LWP Property Group, in the City of Swan. Relatively isolated from neighbouring suburbs, Ellenbrook has been designed to function as a self-sustainable community. It is situated approximately 25 kilometres north east of the City of Perth and has been designated a Regional Centre in the Metropolitan Regional Scheme. Initial planning for the 15-year joint venture commenced in 1991 and has had a strong community engagement focus from day one.
Size of Development Area (km2 or hectares)	Approx 14.5km2 (1450 hectares)
Development Timeframe (commencement)	1992 to current
Ultimate Population/Population Forecast	Population forecast: > 2016 – 40,285 > 2021 – 50,669 > 2026 – 57,581 > 2031 – 64,214 > 2036 – 70,255
Demographics (e.g. characteristics/ makeup of residents)	> Growth Rate over 10 years – 2.6% > Population in 2011 – 16,284 > Median Age – 29 > Average household size – 3.00 > Age structure: – Below 19 years – 35.9% – 20-64 years – 57.8% – Over 65 years – 6.3% > Households: – Couples without children – 26.3% – Couple family with children – 44.8% – Single parent family – 12.8% – Other families – 0.7% – Lone Person – 13.7% – Group Households – 1.8% > Dwelling Structure:

Development	Ellenbrook WA
	- Houses – 93.2% - Duplex/Villa/Town House – 4% - Flat/Unit/Apartment – 2.8% > Ownership: - Fully owned – 13.3% - Being purchased – 62.3% - Being rented – 24% - Other – 0.4%
Housing Price Points	> Ranging from \$182,000 to \$465,000
Diversity of Housing Product	> Ranging in size from 80sqm to 2,649 sqm > Inclusion of social housing > Inclusion of retirement villages and lower maintenance housing styles for over 55
Community Development initiatives	> The developers have avoided the 'bouncy castle' form of community development (sausage sizzles, cursory needs assessment and consultants working in isolation) in favour of an ongoing programme of support for community organisations, timely provision of community facilities and working alongside and supporting the community to encourage longevity and ultimate community ownership. The success of this program is evidenced by the myriad of community groups, which operate in the development from the community radio station, to the free Windows on Ellenbrook newspaper (inaugurated by the Woodlake Residents Association in 1996), performance, and sporting groups. > The Ellenbrook Cultural Foundation is one such group that has become an active deliverer of arts programmes and concerts, supported by the various members of the development team. An art gallery is situated in the developer's offices in the town centre, emphasising their ongoing links to the community.
Delivery models for social infrastructure (e.g. early provision, place making)	> The City of Swan instituted Place Planning of the various districts in their local government boundaries in 2003. The Ellenbrook/Vines/Egerton (Vale) Place Plan was the pilot for this project, which utilised community and stakeholder engagement to develop a picture of the place that is Ellenbrook and to identify challenges and successes in this new community. > "Place planning involves seeing things from the point of view of the community at the Place level. It is an approach that shifts the focus of the City organisation from outputs of a function to that of outcomes in the Place. Therefore, place planning is based on stakeholder involvement to ensure an integrated approach. Place planning can be defined as a pro-active process of integrating social, environmental, physical, and economic planning" (City of Swan, 2004). > The Ellenbrook community identified several issues such as improved public transport, access to local medical services and support for youth programmes which the developer and the local government subsequently worked together to address. > Early provision of parks and paths –Along with other community facilities, parks were planned and constructed at the beginning of the development process for each village at Ellenbrook so that new homeowners have a focus for their future community. Given that the most popular form of exercise in Ellenbrook is walking and cycling, dual use paths have been constructed around the whole development, which afford exercise options as well as easy access to sports, retail, and other facilities. > Provision of community facilities –One of the cornerstones of a thriving community is the presence of good quality, well used community facilities. The Ellenbrook Joint Venture made a decision to incorporate community and retail facilities right at the start of each 'village' project and small, accessible local shopping centres were built even before the houses. Each village is based on the WA Liveable Neighbourhoods design framework and pathways and bike tracks ensure that no house is more than 400-800 metres away from a local shopping centre. The land sales offices were the first tenants in the retail buildings and these premises were later taken over by local businesses. The presence of business premises and shops gave a sense of belonging to a real place, rather than just a bare housing estate. The pizza shop and deli in one village centre quickly

Development	Ellenbrook WA
	took off with its clients being the tradesmen working in construction, followed by the new residents. > Schools in houses – In the early stages of a Greenfield development, state education departments may not be willing to commit to building new schools until there is a proven need. At Ellenbrook, it was initially suggested by the Education Department that children are bussed to nearby schools. This was deemed counter to the premise of creating a vibrant community and the joint venture pioneered the concept of 'schools in houses'. Groups of homes were used as classrooms by both state and private primary schools, which shared a common play area. Once schools were built, these houses reverted to homes. In later iterations of the program, schools were also housed in offices in the Coolamon village. As the development has grown, both public and non government schools have been built and – in some case – primary schools share playing fields. In one case, the school shares playing fields with the public and they are maintained by the local government.
Collaboration Models	> The developer, LWA Properties, has made a commitment to the success of Ellenbrook through siting their head office in the town centre and through putting together a cohesive team of planners and community development consultants to ensure the ongoing sustainability of the local community as well as their own corporate sustainability. > Ellenbrook Development Plan and Place Plan - At the heart of the vision for Ellenbrook is a Community Development Plan that outlines the evolution of a vibrant and sustainable community. A Community Planning Team that included representatives from the City of Swan and residents from the surrounding communities developed the framework for this Community Development Plan in 1994. In 2003 the City of Swan introduced its Place Planning initiative, designed to enhance the quality of life of areas within the City of Swan and to ensure its social, economic and environmental sustainability. The 'Ellenbrook Place Plan' produced by the City of Swan is based on partnerships and collaboration between the City of Swan and those who live, work, play, learn and invest in Ellenbrook. Following the publication of the Ellenbrook Place Plan in 2004 the original Ellenbrook Community Development Plan was updated and since then it has been the guiding framework for community development at Ellenbrook.
Funding Models	> As part of the community development plan for Ellenbrook, a sum of approximately \$300 from each new block sold was allocated by the developer to the provision of social infrastructure and facilities, with additional contributions from local government and other agencies. From the initiation of the Ellenbrook development plan in 1991, a 'community board' was set up as a consultative committee and to make decisions on how these community reserve funds are spent. The board meets bi-monthly and comprises representatives from the Ellenbrook community, the City of Swan and the LWP Property Group (the developer). > The availability of these funds and in kind contributions was instrumental in gaining government funding for the Salvation Army Recreation Centre – a large active recreation space for the Ellenbrook community. > The Joint Venture instituted a levy on each block sold of approximately \$300 that is used to provide social infrastructure – barbeques, seats etc. In addition, the joint venture matched these funds with those available from state and federal governments and non-government organisations to finance construction of a recreation centre and other community facilities. The availability of developer/private funding for community development is a precursor to successful government grant applications.
Principles for successful master planned communities	Guiding Principles > Community ownership – both from Ellenbrook residents and from residents in the surrounding areas. > Diversity, efficiency and flexibility – creating community facilities that meet the needs of a range of diverse groups. Facilities are designed to be appropriate for a variety of purposes and the opportunities for shared usage are optimized. > Accessibility – residents should have ready access to facilities and this needs to be factored in when planning transport, location and the timing of the creation of community facilities.

Development	Ellenbrook WA
	> Integration with broader community – planning within Ellenbrook must complement broader regional planning and development strategies. Objectives > Creating an integrated community offering the benefits of country living within a city environment. > Providing housing that is financially accessible to and desired by a wide cross section of people. > Establishing strategies that involve the community in the planning and development process. > Fostering a sense of community by the creation of individual villages within Ellenbrook. > Valuing the natural environment. > Integrating all elements of the development – town, district and village centres – to ensure there are strong links between all parts of the Ellenbrook community and foster a sense of ‘belonging’
Challenges & Issues	> Lengthy commute times (3 hours on public transport) into CBD
Information Sources	> https://www.swan.wa.gov.au/Business-support/Key-business-areas/Ellenbrook > https://www.businessnews.com.au/article/Ellenbrook-town-centre-going-micro > http://www.watoday.com.au/wa-news/new-perths-worst-commute-contender-emerges-as-ellenbrook-outcry-builds-20160222-gn0l67.html > http://www.wpg.net.au/uploads/682507af-1521-47ca-87b7-3387c95d6d99-Community%20Plan%20Ellenbrook%20-%2020120201.pdf > http://reiwa.com.au/wa/ellenbrook/6069/ > https://www.lwppropertygroup.com.au/our-communities/ellenbrook/location-and-facilities > Ellenbrook, The Vines and Vale Place Plan, City of Swan, 2004 > Sense of Place and Community Ownership, Sally Paulin, 2008

Springfield Lakes

Development	Springfield Lakes QLD
Location/ Council Area	> Springfield, Ipswich City Council
Lead Agency	> Springfield Land Corporation
Brief Description	> Springfield (also known as Greater Springfield) is situated in one of the fastest growing regions in Australia and is a planned community conceived conceptually in 1991. It is located approximately 25 kilometres southwest of the Brisbane central business district > Springfield Land Corporation conceived and established the Masterplan for Greater Springfield and has nurtured the pillars of the community namely community development, education, information technology and health. These pillars of the Greater Springfield project have ensured a high level of amenity to an area that was previously economically and socially depressed.
Size of Development Area (km2 or hectares)	> 2,860ha
Distance to main CBD	> 15 minutes Indooroopilly > 30 minutes Brisbane CBD > 35 minutes Brisbane Airport > 50 minutes Gold Coast

Development	Springfield Lakes QLD
Development Timeframe (commencement)	> 2001 first lot sold
Ultimate Population/Population Forecast	> There is current approval for up to 65,000 EP (equivalent persons) which equates to an approximate residential population of 45,000. However, current negotiations for development look to increase this population to more than 60,000. According to the Springfield Land Corporation, however, when fully developed Greater Springfield will yield six residential suburbs with an equivalent population of 105,000 (comparable to that of Darwin) by 2030. > 3.3 families a day moving to Greater Springfield
Demographics (e.g. characteristics/ makeup of residents)	> Population in 2011 – 10,148 > Median age – 28 > Average household size – 2.9 > Growth Rate between 2006 and 2011 – 23.9% Age Structure: > 0-4years – 11.9% > 5-4years – 16.7% > 25-34years – 23.3% > 35-44years – 17.3% > 45-54years – 9.1% > Others – 21.6% Dwelling Structure: > Separate House – 97.2% > Semi-detached, row or terrace house, townhouse – 2.8% Tenure: > Being Purchased – 46.6% > Rented – 45.9% > Fully Owned – 7.5%
Housing Price Points	> Median House price - \$415,000 > Median Unit Price - \$385,900
Diversity of Housing Product	> 48,000 dwellings from single storey houses to 30 storey apartments across a range of price points from affordable to premium.
Community Development initiatives	> What appears to be the enduring outstanding characteristic of Delfin Lend Lease (DLL) in comparison to its competitors is its considerable human resourcing of community development and the influence that these staff members wield in terms of the development of a project. The result of such investment is an ever-present hive of activity, including many generic events typical of most Delfin communities including a 'welcome' loyalty and community development program; community liaison officers, links to social service providers, social and sporting clubs, sponsorships, resident advisory groups, community intranet, community events, resident seminars and volunteer programs. > DLL co-ordinate and fund a number of activities, festivals, and events most notably through the Kath Dixon Family Centre, which operates several programs for parents with infants including playgroups and a toy library. Other initiatives underway include finalising a "Safety for 0-5 year olds" community education kit & seminar for a pilot at Springfield Lakes to be tested with playgroup mums and users of the community centre, and the 'Safe Communities' theme for the new display village that is due to open next year has involved working closely with the organisation Kidsafe. > In addition to designing for community and marketing the development, the developer of Springfield Lakes has gone to some lengths to act as a catalyst for the development of place-based associations, activities and social infrastructure. DLL has devoted human and financial

Development	Springfield Lakes QLD
	resources to the establishment of clubs, recreational associations and a small, serviced community centre. The company has organised 'community events' such as outdoor cinema evenings, fairs, fun runs and children's entertainments, all with a view to hastening the development of a sense of place, identity and history for the new residents of Springfield Lakes
Delivery models for social infrastructure (e.g. early provision, place making)	> Early provision of parks and paths – The Springfield Central Parklands is situated between the three main assets of Springfield – Orion Shopping Centre, the Education City and the Nucleus. The Parklands is approximately 22 hectares and is comparable to Brisbane's Roma Street Parklands. The Parklands provide ample active open space and recreational activities for the local community with more than 11 kilometres of boardwalks, walking and cycle tracks, sports fields and playgrounds. Strategically placed, the parklands is close to all amenities including schools and retail centres. > Education City & Woodcrest College – Education City is a pre-planned education precinct that will contain every degree of learning from pre-schooling all the way to the post-graduate level. Also located in Springfield is Woodcrest College. This school is a world leader in innovative teaching methods and incorporating technology with education. The school has no regimented timetable and students study themes rather than subjects. They deal with real world problems and find solutions using real world techniques. The school's students and teachers alike communicate through the use of e-mail and online profiles. 'These students have been made aware that to survive in the new knowledge economy, they must know how to make knowledge products. For in order to sell your knowledge – your Intellectual Property - you need to come up with new ideas, solutions and know-how.' Stuart & Spender (2002). > Health City – The Health City Springfield vision has been prepared by Harvard Medical Consulting, Boston, and will incorporate an integrated service-planning framework across the care continuum with a focus on wellness and prevention. The precinct will become a regional hub for the delivery of health services to the rapidly growing population of the Western Corridor. Health City Springfield is a 52 hectares campus within Springfield Central that is planned to accommodate over 450,000 square metres of allied health, hospital beds, wellness, research, education, retirement and aged care services.
Collaboration Models	> DLL and Springfield Land Corporation have enjoyed a significant partnership, which has been instrumental in developing one of the fastest growing regions within Australia, and more importantly, delivering a special place where people like to call home. > Both Springfield Land Corporation and Delfin Lend Lease have continually worked with Ipswich City Council to develop the region, ensuring the increasing population is supported by the necessary infrastructure features such as world-class retail, business, education and health precincts.
Funding Models	> \$1.2 billion committed in State Government infrastructure for transport , health care & social infrastructure to be delivered by 2015.
Principles for successful master planned communities	> A Green Place - Continue to create the greener open spaces and vegetated backdrops that are valued at Springfield Lakes. > A unique Place - Build a series of unique and special places of recognizable character. > A Safe Place - Plan for safety in walking, playing, cycling and driving > An Integrated Place - Integrate planning, urban design, landscape and engineering goals in decision making and implementation. > An Active Public Realm - Create people friendly streets, parks and village centres where neighbours talk, kids play and cycle or walk to school. > A Responsive Place – Respond to the market with a choice of housing and through innovation. > A Place of Choices & Flexibility - Create a complete community with opportunities to live, work and play. > A Place of Mobility & Connectivity – Make Springfield Lakes an accessible place however we choose to travel.

Development	Springfield Lakes QLD
	> A Place of Partnerships – Achieve results by building rapport and trust between Ipswich City Council, developers and the community. > A Place of Community – Establish a community with a high degree of social capital and social prosperity.
Challenges & Issues	>
Sources of Information	> http://www.ipswichplanning.com.au/data/assets/pdf_file/0008/2051/ips_implementation_guide_17a.pdf > https://www.griffith.edu.au/data/assets/pdf_file/0018/81207/city-structures-12-walters.pdf > https://www.planning.org.au/documents/item/1119 >

Ripley Valley

Development	Ripley Valley QLD
Location/ Council Area	> Ripley Valley, Ipswich City Council
Lead Agency	> Queensland Government Department of Infrastructure Local Government and Planning. > Ipswich City Council > Urban Land Development Authority
Brief Description	The Ripley Valley was declared a Priority Development Area by the Department of Infrastructure and Local Government and Planning on the 8 th of October 2010, and is located in one of the largest industry growth areas in Australia. The primary aim of the Ripley Valley is to provide 50,000 dwellings to support a regional population of 120,000 people as the area provides opportunities for significant residential growth and to achieve the regions affordable housing needs. The Urban Land Development Authority (ULDA) expects that the Ripley Valley will become a 'model' new community embracing or even exceeding 'Best Practice' in Ecological sustainability.
Size of Development Area (km ² or hectares)	> Total area: 4680ha
Distance to Main CBD	> 5km South east of the Ipswich CBD
Development Timeframe (commencement)	> 2015(0-4 Years)-2375 Dwellings development; 2021 (5-10 years) 9,000 dwellings developed; 2057 (Ultimate) 50,000 dwellings
Ultimate Population/Population Forecast	> 120,000 people
Demographics (e.g. characteristics/ makeup of residents)	> Please Note: Statistics are based on the ABS 2011 census SA2, the Ripley Valley is a fast growing area undergoing exponential growth. As such Statistics may be an inaccurate representation of the population demographics currently present in Ripley. Ripley (SA2)

Development	Ripley Valley QLD
	> Population in 2011 – 2845 > Median age – 33 > Average household size – 3.1 > Growth Rate over 10 years – 17,700 by the year 2021 Households: > Couples without children – 30.8% > Couple family with children – 57.7% > Single parent family – 10.5% > Other families – 0.9% > Lone Person – 9.8% > Group Households – 1.6% Age Structure: > 0-4years – 7.8% > 5-9years – 8.2 % > 10-19 – 18.6% > 20-24 – 5.1% > 25-34years – 12.7% > 35-44years – 16.8% > 45-54years – 16.0% > 55-64years- 10.0% > 65-74years- 3.9% > 75-84years- 0.8% > 85+years- 0.2% Dwelling Structure: > Separate House – 100% > Semi-detached, row or terrace house, townhouse – 0% Tenure: > Owned outright- 26.7% > Owned with a mortgage- 54.7% > Rented- 16.7%
Housing Price Points	> Median House Price – Ripley: \$342,000 – Ripley South: \$445,000
Diversity of Housing Product	> Housing choice and diversity to meet the needs of the community, through a mix of densities, types, design, tenures and level of affordability, to cater for a range of lifestyles incomes and life cycle needs as the community matures. As a result of this vision the ULDA has established 3 key stretch targets that will be initially reviewed for five years and every two years thereafter ○ Greater than 25% of housing that is affordable for key workers and first home buyers in accordance with the income targets in the ULDA Housing strategy. ○ Greater than 10% accessible housing and; ○ 5% Social Housing
Community Development initiatives	> Compact and walkable neighborhoods where residents are with a 5-minute walk (400m) of a community focal point. Clusters of Neighborhoods are designed to support a community focal point. These focal points must comprise of at least a local recreation park but can also include a public transit stop, community facility or local shop. > Communities are designed to promote active modes of active transport (walking and cycleability) with a highly legible and connected street pattern. This design feature ensures that public transport, schools, parks and community facilities and neighborhoods are highly integrated and

Development	Ripley Valley QLD
	connected with one another. These neighborhoods also embrace CPTED principles to ensure safe public spaces and environments. > Varieties of dwelling types are available for residents to promote affordable and accessible housing.
Delivery models for social infrastructure (e.g. early provision, place making)	> Social infrastructure Delivery Models Guidelines - o Parks, Open Space, Playing Fields and Plazas: To be delivered in accordance with the requirements of the scheme and ULDA Guidelines. To be provided at the time the adjacent development is being taken place. - o State School Sites: To be delivered in accordance with the requirements of the scheme and ULDA Guidelines. To be provided at the time the adjacent development is being taken place. - o State and Council community facilities sites: To be delivered in accordance with the requirements of the scheme and ULDA Guidelines. To be provided at the time the adjacent development is being taken place.
Collaboration Models	> Delegation of development assessment powers to the Ipswich City Council; as a result as of the 30th September 2013 the Ipswich City Council is responsible for the assessment of development applications. > The ULDA will work with developers to produce suitable housing designs to meet the suitable housing price points and to monitor the dwelling prices to ensure that a suitable amount of affordable housing is produced. > The ULDA will work with landowners and education providers and the community to deliver active transport strategies and facilitate pilot community urban agriculture projects. > The ULDA will work with government agencies, the council and landowner to: formulate employment generation strategies, facilitate the design and development of centers for knowledge, community and commerce prior to the development of each neighborhood. In addition the ULDA will also work with these groups to facilitate wireless internet connection for these centers. > The ULDA will work with land owners government agencies, Ipswich city council and other organization to: outline the specific social infrastructure in a development agreement prior to development taking places, facilitate the delivery of community, health recreation and services and facilities as identified in the community development strategy. Investigate the establishment of a community development fund. Identify a range of service delivery options to meet the education needs of the community and monitor the delivery of this infrastructure. > The ULDA will work with the Ipswich City Council to facilitate the development land development in the Ripley Valley through collaboration with small land owners to ensure that broader design outcomes are achieved, prepare infrastructure plans, undertake studies to understand broad issues; and arrange funding for catalyst infrastructure.
Funding Models	> As the Ripley Valley is a designated PDA the infrastructure funding framework, infrastructure framework credits and offset arrangements and other infrastructure arrangements are in accordance with the Economic Development Act 2012, establishing the fix charges and other terms for the priority of infrastructure in PDA's. As such the following charges apply in the Ripley Valley PDA. For a full list of infrastructure charges please see: http://www.edq.qld.gov.au/resources/guideline/pda/infrastructure-funding-framework.pdf > Queensland State Government \$12m to boost the development potential of the Ripley Valley in the construction of a bridge > Sekisui House Taku Hashimoto and Nikki Grundy (ECCO-RIPLEY) presented \$1.5billion towards the development plans of the Ripley Valley Town Centre.
Principles for successful master planned communities	> The Ripley Valley Urban development area Development Scheme contains six guiding themes for development in the region; - o A Living Valley: Each resident in the Ripley Valley is connected to the valley community and likewise, local residents rely on the valley for cultural activities, entertainment, recreation, education and their unique lifestyle.

Development	Ripley Valley QLD
	○ An Accessible Valley: Travelling around the valley by foot, cycle, bus, car is convenient, safe and equitable for all members of the community ○ A designed Valley: Inspired by the natural surrounds the built form is efficient, comfortable and distinctive reflecting the diverse needs of residents specifically designed to be sensitive to the features of the Valley and provide residents with a unique living environment. ○ A Prosperous Valley: The Valley provides employment and investment opportunities for residents and contributes significantly to the regional economy. ○ A Functional Valley: Ripley Valley has been designed on a global best practice in sustainability, including energy efficiency, waste minimization and water sensitive urban design. Necessary utilities and services to residents are provided in a eco-efficient manner, maximising the communities self-sufficiency and capacity to cater for advancements in technology and infrastructure provision. ○ A Natural Valley: The significant Natural Assets of the Valley are conserved and enhanced, enabling the local environmental values to flourish and define the function of the community. > The implementation strategy outlines that the Ripley Valley Urban Development Area will identify targets and goals that will be constantly monitored, reviewed and adjusted accordingly to ensure that the strategy continuously adopts best practice guiding principles for development over the lifetime of the Ripley Valley Urban Development Area Development Scheme.
Challenges & Issues	> Delivering a “model” community over a lengthy time period as fulfilling the vision for the Ripley valley is expected to take approximately 30-40 years.
Information sources	> http://www.edq.qld.gov.au/resources/guideline/pda/infrastructure-funding-framework.pdf > http://www.dilqp.qld.gov.au/resources/plan/pda/ripley-valley-development-scheme.pdf > http://www.rdaivm.org.au/news/148-ripley-valley-development > http://www.realestate.com.au/invest/house-in-south+ripley.+qld+4306 > http://www.providenceripley.com.au/community/felicity-hill-community-development-officer

Armstrong Creek

Development	Armstrong Creek VIC
Location/ Council Area	> City of Greater Geelong
Lead Agency	> City of Greater Geelong
Brief Description	Situated 11km south of the Geelong CBD, The Armstrong Creek Urban Growth Area is approximately 2600 Hectares of greenfield farming land. The area is currently identified as Victoria's sixth growth area and is part of the Geelong region, recognised as the fastest growing region in Victoria. Geelong's Municipal Strategic Statement (MSS) designates Armstrong Creek as a primary growth corridor for future urban growth, noting that stage 1 of the project will accommodate majority of Geelong's long term growth. The key objective for the site is to develop land to provide an extension to the Greater Geelong urban area to accommodate for the population expansion proposed for the region. The site currently maintains an undulating topography providing and attractive development area for residential and business developments. As part of this development, the site is expected to deliver a major activity

Development	Armstrong Creek VIC
	<i>center, two neighbourhood activity centres and numerous local centers. The area will also provide education and health facilities.</i>
Size of Development Area (km2 or hectares)	> 2600ha
Development Timeframe (commencement)	> Armstrong Creek Urban Growth Plan Adopted in May 2008 and Amended in May 2010
Ultimate Population/Population Forecast	> The site will ultimately service and house a population of 55,000 to 65,000 people
Demographics (e.g. characteristics/ makeup of residents)	> Between 2001-2006 Greater Geelong(In which Armstrong Creek is situated) had a net gain of migration of 15-24 year olds > Throughout its initial stages of development it is expected that it will have majority of young families Population > Population in 2011 – 174 > Median age – 35 > Average household size – 2.86 > Growth Rate over 10 years – 8,276 by the year 2021 Households: > Couples without children – 30% > Couple family with children – 46.7% > Single parent family – 6.7% > Other families – 1.7% > Lone Person – 15% > Group Households – 0% Age Structure: > 0-4years – 6.8% > 5-9years –3.4 % > 10-19 - 10.8% > 20-24 - 7.4% > 25-34years – 11.8% > 35-44years – 13.6% > 45-54years – 14.3% > 55-64years- 12.6% > 65-74years-12.7% > 75-84years- 5.1% > 85+years- 1.5% Dwelling Structure: (Note Information is for all of Greater Geelong, could not find for Armstrong Creek) > Separate House – 84.5% > Semi-detached, row or terrace house, townhouse – 15.6% Tenure: (Note Information is for all of Greater Geelong, could not find for Armstrong Creek) > Owned outright- 35.2% > Owned with a mortgage- 33.4% > Rented- 25.5%

Development	Armstrong Creek VIC
Housing Price Points	> Median House Price 436,000 (August 2016)
Diversity of Housing Product	> Detached houses on family sized blocks, apartments, and accommodation for retired, aged and mobility impaired. In addition higher density housing such as town housing. > Social and affordable housing was planned for but has not been delivered up to this time. There is no social housing anticipated for Armstrong Creek.
Community Development initiatives	> Sustainable community: a focus on the provision of active transportation modes, effective and significant public transport provision and sustainable water use. > Affordable Housing: Assist in addressing the regions housing affordability issues and having sustainable housing choices
Delivery models for social infrastructure (e.g. early provision, place making)	> Have early provision of physical and social infrastructure, with the aim of building communities rather than releasing land for development. These elements include not only, homes and jobs but the provision of infrastructure such as schools, retail space, parks and open space, bike paths and a place for people create a home and become part of the community. These features will also encourage the establishment of community groups that will become involved in the development of the community
Collaboration Models	> As identified in the Social Infrastructure Delivery Plan the Armstrong Creek Project Team is collaboration between the Department of Planning and Community Development and the City of Greater Geelong. - o The Geelong Planning Working Group functions as the strategic partnership between the City of Greater Geelong and the state Government to achieve coordinated management of the significant land use projects. > Produced the Interagency Infrastructure Delivery Plan (IIDP) acted as the baseline delivery plan for the growth area that provides a guiding plan for the deliverance of trunk infrastructure in the Armstrong Creek Urban Growth Area including - o Reticulated potable water mains and sewage services - o Storm water management - o Movement and access - o Electricity and gas supply systems - o Rail and other public transport services - o Telecommunications > Formation of the Interagency Infrastructure Working Group (IIIGW) Partnership by Geelong City Council in 2007. The IIIGW provides direction for productive partnership between Geelong City Council, State Governments, Agencies and the developer community that: - o Develops associations and strategic coalitions/alliances allowing organisations to strive for a specific purpose or common goal. - o Involve authentic communication and collaboration to define and solve problems and critical issues and investigate opportunities to solve common goals. - o Develops a mechanism for bridging differences between agencies and promoting effective collaboration. > It should be noted that the Geelong Planning Partnership ceased operation in 2011.
Funding Models	> The Armstrong Creek Urban Growth Project employs the use of an Infrastructure Place Based Funding model that comprises of both Private Sector and Government Investment.
Principles for successful master planned communities	> Armstrong Creek will be divided into seven precincts that will each be master planned. These Precincts include one major activity center, two employment precincts, three major residential precincts and the inclusion of the existing residential precinct. - o By planning on a precinct basis it will allow agencies to engage with developers in a meaningful way by having clearly defined deliverables and objectives for each area. This will allow for the provision of services and facilities at a precinct level, reflecting the needs of the local community and also the regional and municipality.

Development	Armstrong Creek VIC
	> As identified in the Armstrong Creek Urban Growth Plan Volume 1 there are 8 key themes identified in the vision These include: ○ Identity and Character: New development will build on the rural setting and provide a distinctive green character for the local community. Heritage and cultural values will be championed and provide a basis for attractions for the community and residents. Will become a leading example in sustainable urban development ○ Natural Environment: Development will be of the highest environmental standards, with floodplains being protected or where necessary restored to their natural habitat value. Protection of environmentally significant vegetation, with in accompaniment with re-vegetation projects act as wildlife corridors and recreation areas for walking and cycling. ○ Community: Armstrong Creek will deliver a range of lifestyle and living options to meet the needs of a diverse community. This will be achieved through a range of housing options including social and affordable housing. A diverse range of community facilities such as schools libraries, medical centers and meeting places. Numerous education facilities but also social institutions and organisations. ○ Economy: Local jobs will be created to avoid the creation of a commuter suburb. These jobs will include retail, service sectors and business. This job creation will be assisted through the inclusion of communications infrastructure that will also provide the opportunity for home business. ○ Open Space and Recreation Facilities: Extensive network of recreation and open space facilities as well as sport and informal parks. These facilities will be linked by leisure trails and walking an cycling paths promoting active transportation. ○ Transport: The provision of high quality public transport facilities from the outset of development, development will be planned to ensure homes are close to public transport nodes. The provision of active transport infrastructure that is safe and equitable that promotes an interconnected community and walkable neighbourhoods. ○ Utility Services: The latest technology to ensure that utility services are considered to be environmentally friendly and the inclusion of recycling services. ○ Buildings: High quality of standards and environmentally friendly including waster and energy efficient elements. Design guidelines that will ensure the coherent character of the neighborhood whilst allowing for some personalisation.
Challenges & Issues	> Identified in the G21 Regional Growth Plan Implementation Plan and Background Report there are three key barriers and challenges to achieveing strategic housing growth, development and investment in the G21 Region. These Challenges include: ○ Planning for Growth and Land Supply: adequacy of suitability zoned land to meet the demand of future growth, land ownership (fragmented ownership), land contamination, physical and environmental constraints (flooding topography). ○ Infrastructure: Timely delivery of infrastructure including, transport, community and social infrastructure, availability of services and utilities, access to employment opportunities. ○ Development Viability: costs and finance availability, lack of market demand and consumer confidence, land and construction costs, access to government funding, high developer expectation, unforeseen costs, developer contributions to infrastructure, affordability options and level of amenity. ○ Development Approval and Planning Process: Complexity of planning process, currency of policies and planning frameworks and local government planning capacity. > Ensuring that the Integrated Infrastructure Delivery Plan and the Social Interagency Infrastructure Delivery Plan work in conjunction with one another.
Information sources	> https://www.geelongaustralia.com.au/armstrongcreek/armstrong/article/item/8cfafd49ea31e3f.aspx > https://www.geelongaustralia.com.au/Armstrongcreek/files/ArmstrongCreekUrbanGrowthPlan-Volume1.pdf > http://forecast.id.com.au/geelong/population-households-dwellings?WebID=100

Development	Armstrong Creek VIC
	> http://profile.id.com.au/geelong > http://planningschemes.dpcd.vic.gov.au/schemes/greatergeelong/ordinance/21_mss11_ggee.pdf > http://www.q21.com.au/sites/default/files/resources/q21-rqp-ip_implementation_plan_background_report_-_decnov_2013.pdf > https://www.geelongaustralia.com.au/Armstrongcreek/files/ArmstrongCreekSocialInfrastructureDeliverPlan.pdf

Selandra Rise

Development	Selandra Rise Vic
Location/ Council Area	> City of Casey
Lead Agency	> The Victorian State Government including VicHealth > Metropolitan Planning Authority > The Planning Institute of Australia > Stockland Property Group > City of Casey
Brief Description	Located in Melbourne's South-East growth corridor in the City of Casey, approximately 52km north of Melbourne CBD and 20km from the Mornington Peninsula, Selandra Rise is Melbourne's latest Greenfield Master Planned Greenfield development site. Selandra Rise was designed and developed to address the complex issues surrounding health and the built environment and strived to incorporate and implementing best practice planning in addressing these challenges. A key focus of the development was to use Selandra Rise to be a model example of these features and incorporate the developments success in the design and development of future residential communities.
Size of Development Area (km² or hectares)	> 120ha: 1200-1500 lots
Development Timeframe (commencement)	> First residents moved in November 2011
Ultimate Population/Population Forecast	> 240,000
Demographics (e.g. characteristics/ makeup of residents)	> Young first homebuyers with white collar or professional jobs, with 30% under the age of 18 years with only 11% over the age of 60. > High Cultural Diversity with 30% of residents born overseas > Relatively low rental (17%) with most residents being owner occupied > The expected community will include first home buyers, young families, retirees and migrants.
Housing Price Points	> Three Bedroom house and land packages start from 320,000
Diversity of Housing Product	> Detached homes on various lot sizes, apartment and town houses. All dwelling types have the principles of universal design incorporated in their design and implantation

Development	Selandra Rise Vic
Community Development initiatives	> Named by the community through a 'place naming competition' > Planning for a community before it arrives > Selandra Rise will contain the Sustainable Living Hub where residents can receive advice regarding energy conservation, water saving and sustainable landscaping. > Encouragement of local business in town centre > Community Garden and a focus on food sustainability > Emphasis on walkability and multi-use parks > Social Programs to foster healthy eating, physical activity and financial planning. In addition the developer has also organized events such as markets, film nights and comeptitions. > Community Place: A meting point for local residents
Delivery models for social infrastructure (e.g. early provision, place making)	> Early provision of services including public transport, a community centre, diverse parks, secondary school and a town center. In addition there has been significant community engagement with the local community and residents.
Collaboration Models	> There has been a long term partnership with key stakeholders Stockland, the city of Casey, the metropolitan planning authority and the Planning Institute of Australia enabled the early delivery of public transport and the park network. > Continuing collaboration with the developer and the local community. > A committed partnership with VicHealth to prove theories and create an evidence base for placing health at the center of planning.
Funding Models	> Government and Private sector cross-funding model. - o 186million- Stockland > Health research is funded by VicHealth
Principles for successful master planned communities	> Diverse and Affordable housing - o Broad Mix of quality affordable housing options that is accessible to the people of the community - o Three Distinctive Villages, Parkside, Creekside or Hillside with a choice of locations and the size of homes - o Retirement and aged care facilities on site > Local Employment Opportunities - o Employment opportunities delivered through on-site amenities and town Centre - o A diverse range of employment sectors retail, construction and agriculture both in the development and in the nearby rapidly growing City of Casey - o Employment options, work from home or locally > A Healthy and Engaged Community - o Extensive community consultation and engagements programs to determine project elements such as parks and community services - o All ready occurring with residents currently being engaged to determine the name of the community - o Homes have been designed to provide an easy connection to local destinations such as the local town center, schools, community centers and open space. All homes are with 300m of a park or greenspace - o Active transport infrastructure to promote walking and cycling connected to parks and recreation facilities. These facilities are provided both within and outside the development promoting integration with the surrounding area. - o Access to public transport reducing commute times and health of residents - o Timely delivery of services

Development	Selandra Rise Vic
Challenges & Issues/Lessons Learnt	> The five-year study, which saw residents interviewed and surveyed before and after moving to the community, demonstrated that lack of efficient transport infrastructure and access to local employment opportunities severely undermined attempts to improve health outcomes by providing amenities and services within the development. > Nearly all residents reported Selandra Rise was a good place to live but there were high levels of dissatisfaction with long commutes to work that increased over the study period > The research identified key recommendations to be considered for future development and planning of residential communities including: - o Support planning for and delivery of local employment opportunities to reduce commute times - o Deliver high frequency public transport as early as possible, ideally with the arrival of the first residents - o Undertake community consultation to guide design and plans for parks and common facilities and engage with future residents early to determine the kinds of programs and activities they want - o Deliver parks, a community centre and facilities as the first residents arrive - o Ensure sufficient light, shelter and equipment to support all weather use of parks - o Support early delivery of or interim measures for community shops and other facilities including schools and childcare to encourage physical activity and improve walkability.
Information sources	> https://www.planning.org.au/viccontent/selandra-rise > https://www.vichealth.vic.gov.au/.../selandra%20rise%20research%20highlights.pdf > https://www.stockland.com.au/investor-centre/our-portfolio/residential/selandra-rise > http://www.propertyobserver.com.au/finding/residential-investment/house-and-land/18824-thursday-news-stocklands-selandra-rise-tops-melbournes-house-and-land-sales-but-lower-sales-forecast-ahead-colliers-international.html?start=1 > http://global-cities.info/wp-content/uploads/2012/04/IMCL_2012_Maller_paper_14022012.pdf

Appendix C – Population Projections

Population Assumptions & Projections

Population Assumptions

For the purpose of this study, population projections including projections of the likely family types as well as age distribution has been undertaken. The assumptions that have been used to determine projections include the following:

- > **Dwelling Yield Assumptions** – The Context Report for the NWGGA Project 2016 assumes a dwelling yield of between 16,000 to 18,000 for the Northern Growth Area and between 18,000 to 22,000 for the Western Growth Area. The high yield scenario (18,000 for Northern and 22,000 for Western) has been used to determine population numbers for the purposes of this study.
- > **Population Assumptions** – A review of demographic profiles within the case studies (refer to Section 2.2) shows that an average household size of 2.95 can be expected at the commencement of development with slow decrease overtime to about 2.8. The average household size has been applied to the dwelling yields above to determine indicative population numbers.
- > **Family Type and Age Structure Assumptions** – Family Type and Age Structure projections have been based on the following data sets:
 - Projected percentages released by the State Government (Victoria in Future (VIF) 2016) for the Geelong Local Government Area.
 - Scenarios have also been tested using Victoria in Future Small Areas (VIFSA's) data. For the Northern Growth Area, the VIFSA's that are considered relevant include, VIFSA Lara District and VIFSA Bell Park-Corio District. For the Western Growth Area, the VIFSA's that are considered relevant include, VIFSA Geelong West District and Grovedale Highton District Projections. The average of the combined VIFSA was used as the basis for calculations.
 - In addition to using the State Government percentages for family type and age structure, scenarios were tested using historical data for the Ellenbrook case study as well as Forecast ID projections for Armstrong Creek. For the purposes of this study the projections based on historical data for Ellenbrook has been adopted.

Population Projections for the Northern Growth Area

The following tables highlight the expected population characteristics for the Northern Growth Area. The following key points have been noted:

- > At ultimate build out, the Northern Growth Area is projected to have a population of 50,400 people.
- > Within the first 5 years of development it is expected that the Northern Growth Area will be home to an estimated 4,800 people.
- > The predominant family type in the Northern Growth Area is expected to be 'Couple Family's with Children' followed by 'Couple Family's Without Children'.
- > It is expected that the proportion of 'Couple Family's with Children' will decrease over time from an estimated 49% in the initial year to about 45%.
- > It is expected that the proportion of 'One Parent Family' and 'Lone Persons' will increase over time.
- > The predominant age groups are expected to be 0 to 14 year olds and 25 to 49 year olds.

Population Projections

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Population	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Family Type Projections

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	2,393	5,916	9,745	13,254	16,691	19,669	22,855
Couple family without children	1,640	4,446	6,401	7,711	8,866	9,424	9,724
One-parent family	308	1,082	2,059	2,965	4,301	5,756	7,511
Other family	24	72	84	186	382	629	945
Group household	108	262	331	467	743	1,065	1,463
Lone person	351	1,084	2,280	3,375	4,742	6,186	7,903
TOTAL	4,823	12,862	20,901	27,958	35,725	42,728	50,400

Age Distribution Projections

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	424	1,405	2,323	3,015	3,967	4,881	5,918
5-9	463	1,350	2,213	2,789	3,178	3,341	3,398
10-14	343	882	1,639	2,397	3,123	3,808	4,577
15-19	255	594	1,101	1,737	2,501	3,327	4,321
20-24	360	836	1,101	1,522	2,237	3,024	3,979
25-29	439	1,315	1,841	2,246	3,095	3,971	5,001
30-34	477	1,473	2,251	2,567	2,683	2,495	2,101
35-39	471	1,293	2,076	2,675	3,154	3,457	3,705
40-44	389	877	1,556	2,304	3,102	3,899	4,821
45-49	409	830	1,195	1,726	2,346	2,974	3,706
50-54	295	641	927	1,279	1,755	2,244	2,818
55-59	209	509	844	1,039	1,190	1,257	1,287
60-64	128	310	632	876	1,040	1,149	1,243
65-69	76	216	465	702	917	1,122	1,353
70-74	52	136	277	454	631	815	1,032
75-79	11	73	188	285	423	576	762
80-84	7	54	145	212	255	286	314
85+	18	70	124	132	128	103	64
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Source: Thao Ashford Planning, 2016

Population Projections for the Western Growth Area

The following Tables highlight the expected population characteristics for the Western Growth Area. The following key points have been noted:

- > At ultimate build out, the Western Growth Area is projected to have a population of 61,600 people.
- > Within the first 5 years of development it is expected that the Western Growth Area will be home to an estimated 5,900 people.
- > The predominant family type in the Western Growth Area is expected to be 'Couple Family's with Children' followed by 'Couple Family's Without Children'.
- > It is expected that the proportion of 'Couple Family's with Children' will decrease over time from an estimated 49% in the initial year to about 45%.
- > It is expected that the proportion of 'One Parent Family' and 'Lone Persons' will increase over time.

- > The predominant age groups are expected to be 0 to 14 year olds and 25 to 49 year olds.

Population Projections

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Population	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Family Type Projections

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	2,928	7,240	11,926	16,221	20,427	24,072	27,933
Couple family without children	2,007	5,441	7,834	9,438	10,851	11,534	11,885
One-parent family	376	1,325	2,519	3,629	5,263	7,044	9,180
Other family	30	88	103	227	467	770	1,155
Group household	132	320	405	572	910	1,303	1,788
Lone person	430	1,327	2,791	4,130	5,803	7,570	9,659
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Age Distribution Projections

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	518	1,719	2,843	3,690	4,855	5,974	7,234
5-9	567	1,652	2,709	3,413	3,890	4,089	4,153
10-14	419	1,079	2,006	2,933	3,822	4,660	5,594
15-19	312	727	1,348	2,126	3,061	4,072	5,282
20-24	440	1,023	1,347	1,863	2,738	3,701	4,863
25-29	538	1,609	2,254	2,749	3,788	4,860	6,113
30-34	583	1,803	2,755	3,142	3,284	3,054	2,567
35-39	576	1,583	2,540	3,273	3,860	4,230	4,529
40-44	476	1,073	1,905	2,820	3,797	4,771	5,892
45-49	501	1,015	1,463	2,113	2,871	3,639	4,529
50-54	360	785	1,135	1,565	2,148	2,746	3,444
55-59	255	622	1,033	1,272	1,456	1,538	1,573
60-64	157	379	773	1,073	1,273	1,406	1,519
65-69	92	264	569	859	1,123	1,373	1,654
70-74	64	167	339	556	772	997	1,262
75-79	13	89	230	349	517	705	931
80-84	8	66	177	260	312	350	384
85+	21	85	152	162	156	126	78
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Source: Thao Ashford Planning, 2016

The below tables detail the assumptions that have been used for the purposes of calculating projections.

Population Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Average Persons Per Dwelling	2.95	2.95	2.95	2.85	2.85	2.8	2.8

Source: Case Studies Reviewed, TAP, 2016 & NWGGA Context Report, CoGG, April 2016

Dwelling Yield Assumptions

Ultimate Dwelling Yield	Low Scenario	High Scenario
Northern	16,000	18,000
Western	18,000	22,000

Source: NWGGA Context Report, CoGG, April 2016

Family Type Assumptions

VIF Greater Geelong Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Family Type							
Couple family with children	27.58%	27.31%	27.12%	26.79%	26.51%	26.24%	25.96%
Couple family without children	28.86%	29.17%	29.21%	29.63%	29.92%	30.20%	30.48%
One-parent family	11.07%	10.89%	10.83%	10.61%	10.45%	10.29%	10.13%
Other family	0.99%	0.96%	0.94%	0.92%	0.90%	0.88%	0.86%
Group household	3.42%	3.30%	3.21%	3.10%	3.00%	2.90%	2.80%
Lone person	28.07%	28.37%	28.69%	28.94%	29.22%	29.49%	29.77%

Source: Victoria in Future 2016 (VIF2016), July 2016

AVG VIFSA Bell Park-Corio District & Lara District Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Family Type							
Couple family with children	27.89%	27.27%	26.65%	26.04%	25.42%	24.80%	24.18%
Couple family without children	25.86%	26.54%	27.22%	27.90%	28.58%	29.27%	29.95%
One-parent family	15.45%	15.14%	14.84%	14.54%	14.24%	13.94%	13.64%
Other family	1.11%	1.10%	1.08%	1.06%	1.04%	1.02%	1.00%
Group household	2.83%	2.75%	2.67%	2.59%	2.52%	2.44%	2.36%
Lone person	26.87%	27.20%	27.53%	27.87%	28.20%	28.54%	28.87%

Source: Victoria in Future 2016 (VIF2016), July 2016, Calculated Average, TAP, 2016

AVG VIFSA Geelong West District & Grovedale Highton District

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Family Type							
Couple family with children	28.88%	28.79%	28.69%	28.59%	28.50%	28.40%	28.30%
Couple family without children	28.00%	28.48%	28.96%	29.44%	29.92%	30.40%	30.88%
One-parent family	9.53%	9.40%	9.26%	9.13%	8.99%	8.86%	8.72%
Other family	1.03%	1.02%	1.01%	1.00%	0.99%	0.98%	0.97%
Group household	4.11%	4.07%	4.02%	3.97%	3.93%	3.88%	3.84%
Lone person	28.45%	28.26%	28.06%	27.87%	27.68%	27.48%	27.29%

Source: Victoria in Future 2016 (VIF2016), July 2016, Calculated Average, TAP, 2016

Ellenbrook Case Study Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Family Type							
Couple family with children	49.61%	45.99%	46.62%	47.41%	46.72%	46.03%	45.35%
Couple family without children	34.00%	34.57%	30.63%	27.58%	24.82%	22.06%	19.29%
One-parent family	6.38%	8.41%	9.85%	10.61%	12.04%	13.47%	14.90%
Other family	0.50%	0.56%	0.40%	0.66%	1.07%	1.47%	1.88%
Group household	2.23%	2.03%	1.59%	1.67%	2.08%	2.49%	2.90%
Lone person	7.28%	8.43%	10.91%	12.07%	13.27%	14.48%	15.68%

Source: ABS Census & Thao Ashford Planning, 2016

Armstrong Creek Case Study Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Family Type							
Couple family with children	39.66%	39.53%	38.69%	37.51%	36.33%	35.13%	33.94%
Couple family without children	28.11%	28.06%	28.66%	29.52%	30.39%	31.26%	32.13%
One-parent family	11.44%	11.55%	11.52%	11.38%	11.26%	11.13%	11.00%
Other family	0.76%	0.70%	0.69%	0.66%	0.63%	0.61%	0.58%
Group household	3.75%	3.50%	3.32%	3.15%	2.97%	2.80%	2.63%
Lone person	16.28%	16.64%	17.12%	17.77%	18.42%	19.07%	19.72%

Source: Forecast ID, May 2015 and Thao Ashford Planning, 2016

Age Distribution Assumptions

VIF Greater Geelong Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Age Group							
0-4	6.29%	6.33%	6.21%	6.26%	6.25%	6.24%	6.23%
5-9	6.10%	6.18%	6.24%	6.30%	6.36%	6.43%	6.49%
10-14	5.88%	5.91%	6.00%	6.02%	6.07%	6.11%	6.16%
15-19	5.92%	5.90%	5.92%	5.82%	5.76%	5.70%	5.65%
20-24	6.43%	6.03%	6.01%	5.67%	5.43%	5.20%	4.96%
25-29	6.52%	6.25%	5.91%	5.76%	5.54%	5.31%	5.09%
30-34	6.30%	6.42%	6.15%	6.21%	6.17%	6.12%	6.07%
35-39	6.41%	6.34%	6.42%	6.43%	6.45%	6.48%	6.50%
40-44	6.13%	6.37%	6.33%	6.41%	6.46%	6.51%	6.56%
45-49	6.25%	5.91%	6.17%	5.87%	5.76%	5.65%	5.54%
50-54	6.07%	5.88%	5.59%	5.33%	5.06%	4.80%	4.53%
55-59	6.18%	5.77%	5.60%	5.23%	4.93%	4.62%	4.32%
60-64	6.10%	5.88%	5.54%	5.43%	5.23%	5.03%	4.83%
65-69	5.55%	5.76%	5.58%	5.73%	5.77%	5.80%	5.84%
70-74	5.04%	5.06%	5.28%	5.50%	5.70%	5.91%	6.11%
75-79	3.65%	4.33%	4.39%	5.00%	5.43%	5.86%	6.29%
80-84	2.56%	2.93%	3.51%	3.81%	4.22%	4.62%	5.03%
85+	2.63%	2.75%	3.14%	3.23%	3.42%	3.61%	3.80%

Source: Victoria in Future 2016 (VIF2016), July 2016

AVG VIFSA Bell Park-Corio District & Lara District Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Age Group							
0-4	6.44%	6.54%	6.65%	6.76%	6.87%	6.98%	7.08%
5-9	6.01%	5.71%	5.41%	5.12%	4.82%	4.52%	4.23%
10-14	6.25%	6.26%	6.28%	6.29%	6.30%	6.32%	6.33%
15-19	6.49%	6.11%	5.73%	5.36%	4.98%	4.61%	4.23%
20-24	6.41%	5.92%	5.42%	4.93%	4.43%	3.94%	3.45%
25-29	7.10%	7.65%	8.20%	8.75%	9.30%	9.85%	10.40%
30-34	6.47%	6.49%	6.52%	6.54%	6.57%	6.59%	6.61%
35-39	6.30%	6.46%	6.62%	6.78%	6.93%	7.09%	7.25%
40-44	5.91%	5.13%	4.34%	3.55%	2.77%	1.98%	1.20%
45-49	6.43%	6.38%	6.32%	6.26%	6.20%	6.14%	6.09%
50-54	6.26%	5.79%	5.31%	4.83%	4.35%	3.88%	3.40%
55-59	6.23%	6.43%	6.63%	6.83%	7.03%	7.23%	7.43%
60-64	5.55%	5.65%	5.74%	5.83%	5.93%	6.02%	6.12%
65-69	5.19%	4.77%	4.36%	3.95%	3.53%	3.12%	2.70%
70-74	5.12%	6.17%	7.23%	8.28%	9.33%	10.39%	11.44%
75-79	3.50%	3.92%	4.34%	4.76%	5.18%	5.59%	6.01%
80-84	2.29%	2.53%	2.77%	3.01%	3.25%	3.49%	3.73%
85+	2.04%	2.08%	2.13%	2.17%	2.21%	2.26%	2.30%

Source: Victoria in Future 2016 (VIF2016), July 2016, Calculated Average, TAP, 2016

AVG VIFSA Geelong West District & Grovedale Highton District

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Age Group							
0-4	6.60%	6.69%	6.78%	6.87%	6.96%	7.05%	7.14%
5-9	6.36%	6.71%	7.05%	7.40%	7.75%	8.09%	8.44%
10-14	5.79%	5.80%	5.82%	5.83%	5.85%	5.86%	5.87%
15-19	6.10%	5.92%	5.73%	5.54%	5.36%	5.17%	4.99%
20-24	7.38%	7.33%	7.27%	7.21%	7.16%	7.10%	7.04%
25-29	7.09%	7.19%	7.30%	7.41%	7.52%	7.62%	7.73%
30-34	6.75%	6.42%	6.09%	5.76%	5.42%	5.09%	4.76%
35-39	6.94%	7.40%	7.85%	8.30%	8.75%	9.21%	9.66%
40-44	6.28%	6.11%	5.95%	5.78%	5.62%	5.45%	5.29%
45-49	6.12%	5.93%	5.75%	5.56%	5.38%	5.20%	5.01%
50-54	5.78%	5.40%	5.02%	4.65%	4.27%	3.90%	3.52%
55-59	5.61%	5.19%	4.77%	4.35%	3.93%	3.51%	3.09%
60-64	5.45%	5.63%	5.80%	5.98%	6.16%	6.33%	6.51%
65-69	4.84%	4.79%	4.75%	4.71%	4.66%	4.62%	4.58%
70-74	4.33%	4.83%	5.33%	5.83%	6.33%	6.83%	7.33%
75-79	3.24%	3.55%	3.85%	4.16%	4.47%	4.78%	5.09%
80-84	2.49%	2.38%	2.27%	2.17%	2.06%	1.95%	1.85%
85+	2.85%	2.73%	2.61%	2.49%	2.36%	2.24%	2.12%

Source: Victoria in Future 2016 (VIF2016), July 2016, Calculated Average, TAP, 2016

Ellenbrook Case Study Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Age Group							
0-4	8.78%	10.92%	11.12%	10.78%	11.10%	11.42%	11.74%
5-9	9.60%	10.49%	10.59%	9.97%	8.90%	7.82%	6.74%
10-14	7.10%	6.86%	7.84%	8.57%	8.74%	8.91%	9.08%
15-19	5.29%	4.62%	5.27%	6.21%	7.00%	7.79%	8.57%
20-24	7.46%	6.50%	5.27%	5.45%	6.26%	7.08%	7.89%
25-29	9.11%	10.22%	8.81%	8.03%	8.66%	9.29%	9.92%
30-34	9.88%	11.45%	10.77%	9.18%	7.51%	5.84%	4.17%
35-39	9.76%	10.05%	9.93%	9.57%	8.83%	8.09%	7.35%
40-44	8.07%	6.82%	7.45%	8.24%	8.68%	9.12%	9.57%
45-49	8.49%	6.45%	5.72%	6.17%	6.57%	6.96%	7.35%
50-54	6.11%	4.98%	4.44%	4.58%	4.91%	5.25%	5.59%
55-59	4.33%	3.95%	4.04%	3.72%	3.33%	2.94%	2.55%
60-64	2.66%	2.41%	3.02%	3.13%	2.91%	2.69%	2.47%
65-69	1.57%	1.68%	2.23%	2.51%	2.57%	2.63%	2.69%
70-74	1.08%	1.06%	1.33%	1.62%	1.77%	1.91%	2.05%
75-79	0.23%	0.57%	0.90%	1.02%	1.18%	1.35%	1.51%
80-84	0.14%	0.42%	0.69%	0.76%	0.71%	0.67%	0.62%
85+	0.36%	0.54%	0.60%	0.47%	0.36%	0.24%	0.13%

Source: Thao Ashford Planning, 2016

Armstrong Creek Case Study Assumptions

	Year 1 - 5	Year 5 - 10	Year 10 -15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Age Group							
0-4	9.40%	8.66%	8.17%	7.73%	7.29%	6.85%	6.41%
5-9	8.26%	7.73%	7.24%	6.95%	6.66%	6.37%	6.08%
10-14	7.01%	6.79%	6.43%	6.19%	5.94%	5.70%	5.45%
15-19	5.55%	6.03%	5.92%	5.78%	5.64%	5.50%	5.35%
20-24	7.07%	6.76%	6.67%	6.43%	6.17%	5.93%	5.68%
25-29	9.40%	8.35%	7.67%	7.23%	6.77%	6.33%	5.89%
30-34	10.40%	9.58%	8.72%	8.06%	7.37%	6.71%	6.05%
35-39	9.51%	9.39%	8.91%	8.34%	7.76%	7.18%	6.60%
40-44	7.10%	7.96%	8.22%	8.09%	7.98%	7.84%	7.71%
45-49	5.28%	6.09%	6.81%	7.14%	7.50%	7.84%	8.17%
50-54	4.25%	4.86%	5.49%	6.08%	6.69%	7.27%	7.86%
55-59	3.69%	4.14%	4.62%	5.13%	5.63%	6.13%	6.64%
60-64	3.04%	3.31%	3.74%	4.17%	4.62%	5.05%	5.49%
65-69	2.33%	2.81%	3.11%	3.50%	3.88%	4.27%	4.65%
70-74	1.79%	2.10%	2.50%	2.80%	3.10%	3.40%	3.70%
75-79	1.81%	1.68%	1.93%	2.24%	2.57%	2.89%	3.21%
80-84	1.55%	1.48%	1.48%	1.63%	1.77%	1.92%	2.07%
85+	2.55%	2.27%	2.36%	2.49%	2.64%	2.83%	3.01%

Source: Forecast ID, May 2015 and Thao Ashford Planning, 2016

Projections Northern

Population Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Population	4,292	11,446	18,600	24,881	31,792	38,024	44,800
High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Population	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Family Type Projections

VIF Greater Geelong Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1184	3,126	5,044	6,666	8,429	9,976	11,654
Couple family without children	1239	3,339	5,433	7,373	9,511	11,483	13,631
One-parent family	475	1,246	2,014	2,641	3,324	3,914	4,555
Other family	42	110	175	229	286	333	385
Group household	147	377	597	772	954	1,102	1,262
Lone person	1205	3,247	5,336	7,200	9,288	11,215	13,313
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1330	3,513	5,668	7,490	9,472	11,210	13,083
Couple family without children	1392	3,752	6,105	8,285	10,688	12,904	15,364
One-parent family	534	1,400	2,264	2,967	3,735	4,399	5,108
Other family	48	124	197	257	321	375	431
Group household	165	424	671	867	1,072	1,239	1,409
Lone person	1354	3,649	5,996	8,091	10,438	12,602	15,005
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

AVG VIFSA Bell Park-Corio District & Lara District Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1197	3,122	4,957	6,478	8,080	9,429	10,833
Couple family without children	1110	3,038	5,063	6,942	9,087	11,128	13,417
One-parent family	663	1,733	2,761	3,618	4,528	5,301	6,110
Other family	48	125	200	263	330	388	449
Group household	121	315	497	646	800	928	1,058
Lone person	1153	3,113	5,121	6,934	8,966	10,850	12,933
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1345	3,508	5,571	7,279	9,080	10,596	12,187
Couple family without children	1247	3,413	5,689	7,801	10,212	12,505	15,094
One-parent family	745	1,948	3,102	4,066	5,088	5,956	6,874
Other family	54	141	225	296	371	436	505
Group household	136	354	558	725	899	1,043	1,191
Lone person	1296	3,498	5,755	7,791	10,075	12,193	14,550
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Ellenbrook Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	2,129	5,265	8,672	11,795	14,853	17,504	20,315
Couple family without children	1,459	3,957	5,697	6,862	7,890	8,387	8,643
One-parent family	274	963	1,832	2,639	3,827	5,122	6,676
Other family	22	64	75	165	340	560	840
Group household	96	233	295	416	662	947	1,300
Lone person	312	965	2,029	3,003	4,220	5,505	7,025
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	2,393	5,916	9,745	13,254	16,691	19,669	22,855
Couple family without children	1,640	4,446	6,401	7,711	8,866	9,424	9,724
One-parent family	308	1,082	2,059	2,965	4,301	5,756	7,511
Other family	24	72	84	186	382	629	945
Group household	108	262	331	467	743	1,065	1,463
Lone person	351	1,084	2,280	3,375	4,742	6,186	7,903
TOTAL	4,823	12,862	20,901	27,958	35,725	42,728	50,400

Armstrong Creek Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1,702	4,525	7,197	9,333	11,549	13,360	15,206
Couple family without children	1,207	3,212	5,330	7,345	9,661	11,885	14,392
One-parent family	491	1,323	2,143	2,832	3,581	4,233	4,929
Other family	33	81	128	164	201	231	261
Group household	161	401	618	784	944	1,064	1,177
Lone person	699	1,904	3,184	4,422	5,857	7,252	8,835
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1,913	5,085	8,087	10,487	12,978	15,012	17,107
Couple family without children	1,356	3,610	5,989	8,254	10,856	13,355	16,191
One-parent family	552	1,486	2,408	3,183	4,023	4,756	5,545
Other family	37	91	144	184	226	260	294
Group household	181	451	694	881	1,061	1,196	1,324
Lone person	785	2,140	3,578	4,969	6,581	8,149	9,939
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Age Distribution Projections

VIF Greater Geelong Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	270	725	1,155	1,557	1,986	2,371	2,790
5-9	262	708	1,160	1,568	2,023	2,444	2,901
10-14	252	676	1,116	1,498	1,929	2,325	2,756
15-19	254	676	1,101	1,447	1,831	2,169	2,536
20-24	276	691	1,118	1,411	1,727	1,976	2,243
25-29	280	716	1,099	1,434	1,760	2,020	2,299
30-34	270	735	1,144	1,546	1,960	2,327	2,725
35-39	275	725	1,195	1,599	2,051	2,463	2,911
40-44	263	729	1,178	1,594	2,054	2,476	2,935
45-49	268	676	1,148	1,461	1,832	2,149	2,493
50-54	261	673	1,039	1,326	1,609	1,824	2,054
55-59	265	660	1,042	1,302	1,567	1,759	1,963
60-64	262	673	1,031	1,350	1,662	1,912	2,181
65-69	238	659	1,038	1,425	1,833	2,207	2,614
70-74	217	579	983	1,369	1,813	2,245	2,718
75-79	157	496	816	1,244	1,726	2,227	2,778
80-84	110	335	653	949	1,341	1,757	2,215
85+	113	314	585	803	1,087	1,373	1,687
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800
High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	303	814	1,298	1,749	2,232	2,665	3,138
5-9	294	795	1,303	1,762	2,274	2,746	3,270
10-14	283	760	1,254	1,683	2,168	2,613	3,106
15-19	285	759	1,237	1,626	2,058	2,438	2,847
20-24	310	776	1,256	1,585	1,941	2,220	2,499
25-29	315	804	1,235	1,611	1,978	2,270	2,564
30-34	304	826	1,285	1,737	2,203	2,615	3,061
35-39	309	815	1,343	1,797	2,305	2,768	3,277
40-44	296	819	1,323	1,792	2,308	2,782	3,307
45-49	301	760	1,290	1,642	2,059	2,415	2,794
50-54	293	757	1,168	1,490	1,809	2,049	2,283
55-59	298	742	1,171	1,463	1,761	1,976	2,178
60-64	294	756	1,159	1,517	1,867	2,148	2,433
65-69	268	741	1,167	1,601	2,060	2,480	2,945
70-74	243	651	1,104	1,538	2,037	2,523	3,078
75-79	176	557	917	1,398	1,940	2,503	3,168
80-84	123	376	733	1,066	1,506	1,975	2,533
85+	127	353	657	902	1,221	1,543	1,917
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

AVG VIFSA Bell Park-Corio District & Lara District Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	276	749	1,237	1,682	2,183	2,653	3,174
5-9	258	654	1,007	1,273	1,532	1,720	1,893
10-14	268	717	1,168	1,565	2,004	2,402	2,836
15-19	278	699	1,067	1,333	1,584	1,751	1,895
20-24	275	677	1,009	1,226	1,410	1,498	1,543
25-29	305	876	1,525	2,177	2,957	3,746	4,660
30-34	278	743	1,212	1,628	2,087	2,506	2,963
35-39	270	739	1,231	1,686	2,205	2,697	3,249
40-44	254	587	807	884	880	753	535
45-49	276	730	1,175	1,558	1,972	2,336	2,727
50-54	269	662	987	1,202	1,384	1,473	1,522
55-59	267	736	1,233	1,700	2,235	2,749	3,329
60-64	238	646	1,068	1,452	1,885	2,290	2,740
65-69	223	546	811	982	1,123	1,185	1,211
70-74	220	706	1,344	2,060	2,967	3,950	5,126
75-79	150	449	807	1,184	1,645	2,127	2,693
80-84	98	290	516	750	1,035	1,329	1,673
85+	87	238	395	540	704	858	1,031
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800
High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	310	842	1,390	1,890	2,454	2,981	3,570
5-9	290	734	1,131	1,431	1,722	1,933	2,130
10-14	302	806	1,312	1,759	2,252	2,699	3,191
15-19	313	786	1,199	1,498	1,780	1,968	2,132
20-24	309	761	1,133	1,378	1,584	1,683	1,736
25-29	342	984	1,714	2,447	3,323	4,210	5,243
30-34	312	835	1,362	1,829	2,346	2,816	3,334
35-39	304	831	1,383	1,894	2,477	3,031	3,655
40-44	285	659	907	994	989	847	602
45-49	310	820	1,321	1,750	2,216	2,625	3,067
50-54	302	744	1,109	1,351	1,555	1,656	1,712
55-59	301	827	1,386	1,910	2,512	3,089	3,745
60-64	268	726	1,200	1,631	2,118	2,573	3,083
65-69	250	614	911	1,103	1,262	1,332	1,363
70-74	247	794	1,510	2,315	3,334	4,438	5,767
75-79	169	504	907	1,330	1,849	2,390	3,029
80-84	111	326	580	843	1,163	1,493	1,882
85+	98	268	444	606	791	964	1,160
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Ellenbrook Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	377	1,250	2,067	2,683	3,530	4,344	5,261
5-9	412	1,201	1,970	2,482	2,828	2,973	3,020
10-14	305	785	1,458	2,133	2,779	3,389	4,069
15-19	227	528	980	1,546	2,226	2,961	3,841
20-24	320	744	980	1,355	1,991	2,691	3,537
25-29	391	1,170	1,639	1,999	2,754	3,534	4,446
30-34	424	1,311	2,003	2,285	2,388	2,220	1,867
35-39	419	1,151	1,847	2,380	2,807	3,076	3,294
40-44	346	781	1,385	2,051	2,761	3,469	4,285
45-49	364	738	1,064	1,536	2,088	2,646	3,294
50-54	262	571	825	1,138	1,562	1,997	2,505
55-59	186	453	751	925	1,059	1,119	1,144
60-64	114	276	562	780	926	1,022	1,105
65-69	67	192	414	624	816	999	1,203
70-74	46	121	247	404	561	725	917
75-79	10	65	168	254	376	512	677
80-84	6	48	129	189	227	254	279
85+	16	62	111	117	113	92	57
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800
High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	424	1,405	2,323	3,015	3,967	4,881	5,918
5-9	463	1,350	2,213	2,789	3,178	3,341	3,398
10-14	343	882	1,639	2,397	3,123	3,808	4,577
15-19	255	594	1,101	1,737	2,501	3,327	4,321
20-24	360	836	1,101	1,522	2,237	3,024	3,979
25-29	439	1,315	1,841	2,246	3,095	3,971	5,001
30-34	477	1,473	2,251	2,567	2,683	2,495	2,101
35-39	471	1,293	2,076	2,675	3,154	3,457	3,705
40-44	389	877	1,556	2,304	3,102	3,899	4,821
45-49	409	830	1,195	1,726	2,346	2,974	3,706
50-54	295	641	927	1,279	1,755	2,244	2,818
55-59	209	509	844	1,039	1,190	1,257	1,287
60-64	128	310	632	876	1,040	1,149	1,243
65-69	76	216	465	702	917	1,122	1,353
70-74	52	136	277	454	631	815	1,032
75-79	11	73	188	285	423	576	762
80-84	7	54	145	212	255	286	314
85+	18	70	124	132	128	103	64
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Armstrong Creek Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	404	992	1,519	1,924	2,318	2,605	2,872
5-9	355	885	1,347	1,730	2,118	2,423	2,724
10-14	301	777	1,196	1,541	1,889	2,166	2,442
15-19	238	691	1,102	1,439	1,793	2,090	2,399
20-24	303	774	1,241	1,599	1,963	2,253	2,543
25-29	404	955	1,426	1,798	2,152	2,406	2,637
30-34	447	1,096	1,623	2,006	2,344	2,551	2,708
35-39	408	1,075	1,658	2,076	2,468	2,730	2,956
40-44	305	911	1,528	2,013	2,536	2,982	3,453
45-49	227	697	1,266	1,777	2,386	2,980	3,659
50-54	183	556	1,022	1,513	2,127	2,766	3,521
55-59	158	473	859	1,275	1,789	2,332	2,974
60-64	131	379	695	1,037	1,469	1,922	2,458
65-69	100	321	578	870	1,234	1,623	2,084
70-74	77	240	465	698	987	1,294	1,658
75-79	78	193	359	559	817	1,098	1,437
80-84	66	170	276	405	563	729	925
85+	109	260	440	619	839	1,075	1,351
TOTAL	4,292	11,446	18,600	24,881	31,792	38,024	44,800
High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	453	1,114	1,707	2,163	2,605	2,927	3,231
5-9	399	995	1,514	1,944	2,380	2,722	3,065
10-14	338	873	1,344	1,731	2,123	2,434	2,747
15-19	268	776	1,238	1,617	2,015	2,349	2,699
20-24	341	869	1,394	1,797	2,206	2,532	2,861
25-29	453	1,073	1,603	2,021	2,418	2,704	2,967
30-34	502	1,232	1,823	2,254	2,634	2,867	3,047
35-39	459	1,207	1,863	2,333	2,773	3,068	3,326
40-44	343	1,024	1,718	2,262	2,850	3,351	3,884
45-49	255	784	1,423	1,997	2,681	3,348	4,116
50-54	205	625	1,148	1,700	2,390	3,108	3,961
55-59	178	532	965	1,433	2,010	2,620	3,346
60-64	147	426	781	1,166	1,651	2,159	2,765
65-69	112	361	650	978	1,387	1,823	2,345
70-74	86	270	522	784	1,109	1,454	1,865
75-79	87	217	403	628	918	1,234	1,617
80-84	75	191	310	455	633	820	1,041
85+	123	293	494	696	943	1,208	1,519
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

Projections Western

Population Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Population	4,823	12,862	20,901	27,959	35,725	42,728	50,400
High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
Population	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Family Type Projections

VIF Greater Geelong Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1330	3,513	5,668	7,490	9,472	11,210	13,111
Couple family without children	1392	3,752	6,105	8,285	10,688	12,904	15,335
One-parent family	534	1,400	2,264	2,967	3,735	4,399	5,124
Other family	48	124	197	257	321	375	433
Group household	165	424	671	867	1,072	1,239	1,420
Lone person	1354	3,649	5,996	8,091	10,438	12,602	14,977
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1628	4,299	6,937	9,167	11,592	13,719	15,991
Couple family without children	1704	4,592	7,472	10,140	13,080	15,793	18,778
One-parent family	654	1,714	2,770	3,632	4,571	5,383	6,243
Other family	58	152	241	315	393	459	527
Group household	202	519	821	1,062	1,312	1,516	1,723
Lone person	1657	4,466	7,339	9,902	12,774	15,423	18,339
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

AVG VIFSA Geelong West District & Grovedale Highton District Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1393	3,702	5,996	7,994	10,180	12,134	14,264
Couple family without children	1350	3,663	6,052	8,230	10,688	12,988	15,562
One-parent family	460	1,209	1,936	2,552	3,213	3,785	4,397
Other family	49	131	211	279	354	420	491
Group household	198	523	840	1,111	1,403	1,659	1,933
Lone person	1372	3,634	5,865	7,792	9,887	11,742	13,753
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1705	4,531	7,338	9,783	12,459	14,850	17,434
Couple family without children	1653	4,483	7,407	10,073	13,080	15,895	19,020
One-parent family	563	1,479	2,369	3,123	3,932	4,633	5,374
Other family	61	160	258	342	433	514	600
Group household	243	640	1,028	1,360	1,718	2,030	2,363
Lone person	1679	4,448	7,178	9,536	12,100	14,371	16,810
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Ellenbrook Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	2,393	5,916	9,745	13,254	16,691	19,669	22,855
Couple family without children	1,640	4,446	6,401	7,711	8,866	9,424	9,724
One-parent family	308	1,082	2,059	2,965	4,301	5,756	7,511
Other family	24	72	84	186	382	629	945
Group household	108	262	331	467	743	1,065	1,463
Lone person	351	1,084	2,280	3,375	4,742	6,186	7,903
TOTAL	4,823	12,862	20,901	27,958	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	2,928	7,240	11,926	16,221	20,427	24,072	27,933
Couple family without children	2,007	5,441	7,834	9,438	10,851	11,534	11,885
One-parent family	376	1,325	2,519	3,629	5,263	7,044	9,180
Other family	30	88	103	227	467	770	1,155
Group household	132	320	405	572	910	1,303	1,788
Lone person	430	1,327	2,791	4,130	5,803	7,570	9,659
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Armstrong Creek Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	1,913	5,085	8,087	10,487	12,978	15,012	17,107
Couple family without children	1,356	3,610	5,989	8,254	10,856	13,355	16,191
One-parent family	552	1,486	2,408	3,183	4,023	4,756	5,545
Other family	37	91	144	184	226	260	294
Group household	181	451	694	881	1,061	1,196	1,324
Lone person	785	2,140	3,578	4,969	6,581	8,149	9,939
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
Couple family with children	2,341	6,223	9,898	12,835	15,883	18,373	20,909
Couple family without children	1,659	4,418	7,330	10,102	13,286	16,345	19,789
One-parent family	675	1,819	2,947	3,895	4,924	5,821	6,777
Other family	45	111	176	226	276	318	359
Group household	222	551	849	1,078	1,298	1,463	1,618
Lone person	961	2,619	4,379	6,081	8,055	9,973	12,148
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Age Distribution Projections

VIF Greater Geelong Projections

Low Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	303	814	1,298	1,749	2,232	2,665	3,139
5-9	294	795	1,303	1,762	2,274	2,746	3,264
10-14	283	760	1,254	1,683	2,168	2,613	3,101
15-19	285	759	1,237	1,626	2,058	2,438	2,853
20-24	310	776	1,256	1,585	1,941	2,220	2,523
25-29	315	804	1,235	1,611	1,978	2,270	2,587
30-34	304	826	1,285	1,737	2,203	2,615	3,066
35-39	309	815	1,343	1,797	2,305	2,768	3,275
40-44	296	819	1,323	1,792	2,308	2,782	3,302
45-49	301	760	1,290	1,642	2,059	2,415	2,805
50-54	293	757	1,168	1,490	1,809	2,049	2,310
55-59	298	742	1,171	1,463	1,761	1,976	2,208
60-64	294	756	1,159	1,517	1,867	2,148	2,453
65-69	268	741	1,167	1,601	2,060	2,480	2,941
70-74	243	651	1,104	1,538	2,037	2,523	3,058
75-79	176	557	917	1,398	1,940	2,503	3,125
80-84	123	376	733	1,066	1,506	1,975	2,492
85+	127	353	657	902	1,221	1,543	1,897
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5 - 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	371	997	1,588	2,141	2,731	3,261	3,835
5-9	360	973	1,595	2,156	2,782	3,361	3,997
10-14	347	930	1,534	2,060	2,653	3,198	3,796
15-19	349	929	1,514	1,990	2,518	2,983	3,480
20-24	379	950	1,537	1,940	2,375	2,717	3,055
25-29	385	984	1,511	1,971	2,421	2,778	3,134
30-34	372	1,011	1,573	2,126	2,696	3,200	3,742
35-39	378	998	1,643	2,199	2,821	3,387	4,006
40-44	362	1,003	1,620	2,193	2,824	3,404	4,042
45-49	369	930	1,579	2,009	2,520	2,956	3,414
50-54	358	926	1,429	1,823	2,213	2,508	2,791
55-59	365	908	1,434	1,790	2,155	2,418	2,662
60-64	360	925	1,418	1,857	2,285	2,629	2,974
65-69	328	907	1,428	1,959	2,521	3,035	3,600
70-74	298	797	1,352	1,882	2,493	3,088	3,762
75-79	216	682	1,122	1,711	2,374	3,063	3,872
80-84	151	461	898	1,305	1,844	2,417	3,096
85+	155	432	804	1,104	1,494	1,888	2,343
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

AVG VIFSA Geelong West District & Grovedale Highton District Projections

Low Scenario							
Year	Year 1 - 5	Year 5- 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	318	860	1,417	1,920	2,486	3,011	3,597
5-9	307	863	1,474	2,069	2,767	3,458	4,253
10-14	279	746	1,216	1,630	2,088	2,504	2,961
15-19	294	761	1,198	1,550	1,914	2,210	2,513
20-24	356	942	1,520	2,017	2,557	3,034	3,551
25-29	342	925	1,526	2,071	2,685	3,257	3,896
30-34	326	826	1,273	1,609	1,937	2,174	2,397
35-39	335	951	1,640	2,321	3,127	3,933	4,868
40-44	303	786	1,243	1,617	2,007	2,329	2,664
45-49	295	763	1,201	1,556	1,922	2,220	2,526
50-54	279	695	1,050	1,300	1,527	1,665	1,775
55-59	271	667	996	1,215	1,403	1,498	1,555
60-64	263	724	1,213	1,672	2,200	2,707	3,282
65-69	233	617	993	1,316	1,666	1,974	2,307
70-74	209	621	1,114	1,630	2,261	2,917	3,692
75-79	156	456	806	1,164	1,597	2,042	2,565
80-84	120	306	475	606	736	835	931
85+	138	351	545	695	844	958	1,068
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5- 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	390	1,053	1,734	2,350	3,042	3,685	4,396
5-9	375	1,056	1,804	2,532	3,387	4,232	5,198
10-14	342	914	1,488	1,995	2,556	3,065	3,619
15-19	360	931	1,466	1,897	2,343	2,704	3,071
20-24	436	1,153	1,860	2,468	3,129	3,713	4,340
25-29	418	1,133	1,868	2,535	3,286	3,986	4,762
30-34	399	1,011	1,557	1,969	2,371	2,661	2,930
35-39	410	1,164	2,007	2,840	3,827	4,814	5,949
40-44	371	962	1,522	1,979	2,456	2,851	3,256
45-49	361	934	1,470	1,904	2,352	2,717	3,088
50-54	341	850	1,285	1,591	1,868	2,038	2,170
55-59	331	817	1,220	1,487	1,717	1,833	1,901
60-64	322	886	1,485	2,047	2,692	3,313	4,011
65-69	286	755	1,215	1,611	2,039	2,416	2,820
70-74	256	760	1,363	1,995	2,767	3,570	4,513
75-79	191	558	986	1,424	1,955	2,500	3,134
80-84	147	375	581	741	901	1,022	1,138
85+	168	430	667	851	1,033	1,172	1,305
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Ellenbrook Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5- 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	424	1,405	2,323	3,015	3,967	4,881	5,918
5-9	463	1,350	2,213	2,789	3,178	3,341	3,398
10-14	343	882	1,639	2,397	3,123	3,808	4,577
15-19	255	594	1,101	1,737	2,501	3,327	4,321
20-24	360	836	1,101	1,522	2,237	3,024	3,979
25-29	439	1,315	1,841	2,246	3,095	3,971	5,001
30-34	477	1,473	2,251	2,567	2,683	2,495	2,101
35-39	471	1,293	2,076	2,675	3,154	3,457	3,705
40-44	389	877	1,556	2,304	3,102	3,899	4,821
45-49	409	830	1,195	1,726	2,346	2,974	3,706
50-54	295	641	927	1,279	1,755	2,244	2,818
55-59	209	509	844	1,039	1,190	1,257	1,287
60-64	128	310	632	876	1,040	1,149	1,243
65-69	76	216	465	702	917	1,122	1,353
70-74	52	136	277	454	631	815	1,032
75-79	11	73	188	285	423	576	762
80-84	7	54	145	212	255	286	314
85+	18	70	124	132	128	103	64
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5- 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	518	1,719	2,843	3,690	4,855	5,974	7,234
5-9	567	1,652	2,709	3,413	3,890	4,089	4,153
10-14	419	1,079	2,006	2,933	3,822	4,660	5,594
15-19	312	727	1,348	2,126	3,061	4,072	5,282
20-24	440	1,023	1,347	1,863	2,738	3,701	4,863
25-29	538	1,609	2,254	2,749	3,788	4,860	6,113
30-34	583	1,803	2,755	3,142	3,284	3,054	2,567
35-39	576	1,583	2,540	3,273	3,860	4,230	4,529
40-44	476	1,073	1,905	2,820	3,797	4,771	5,892
45-49	501	1,015	1,463	2,113	2,871	3,639	4,529
50-54	360	785	1,135	1,565	2,148	2,746	3,444
55-59	255	622	1,033	1,272	1,456	1,538	1,573
60-64	157	379	773	1,073	1,273	1,406	1,519
65-69	92	264	569	859	1,123	1,373	1,654
70-74	64	167	339	556	772	997	1,262
75-79	13	89	230	349	517	705	931
80-84	8	66	177	260	312	350	384
85+	21	85	152	162	156	126	78
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Armstrong Creek Case Study Projections

Low Scenario							
Year	Year 1 - 5	Year 5- 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	453	1,114	1,707	2,163	2,605	2,927	3,231
5-9	399	995	1,514	1,944	2,380	2,722	3,065
10-14	338	873	1,344	1,731	2,123	2,434	2,747
15-19	268	776	1,238	1,617	2,015	2,349	2,699
20-24	341	869	1,394	1,797	2,206	2,532	2,861
25-29	453	1,073	1,603	2,021	2,418	2,704	2,967
30-34	502	1,232	1,823	2,254	2,634	2,867	3,047
35-39	459	1,207	1,863	2,333	2,773	3,068	3,326
40-44	343	1,024	1,718	2,262	2,850	3,351	3,884
45-49	255	784	1,423	1,997	2,681	3,348	4,116
50-54	205	625	1,148	1,700	2,390	3,108	3,961
55-59	178	532	965	1,433	2,010	2,620	3,346
60-64	147	426	781	1,166	1,651	2,159	2,765
65-69	112	361	650	978	1,387	1,823	2,345
70-74	86	270	522	784	1,109	1,454	1,865
75-79	87	217	403	628	918	1,234	1,617
80-84	75	191	310	455	633	820	1,041
85+	123	293	494	696	943	1,208	1,519
TOTAL	4,823	12,862	20,901	27,959	35,725	42,728	50,400

High Scenario							
Year	Year 1 - 5	Year 5- 10	Year 10 - 15	Year 15 - 20	Year 20 - 25	Year 25 - 30	Year 30 - 35
	no.	no.	no.	no.	no.	no.	no.
0-4	555	1,364	2,089	2,647	3,188	3,583	3,949
5-9	488	1,217	1,853	2,379	2,913	3,332	3,746
10-14	414	1,068	1,645	2,119	2,598	2,979	3,357
15-19	327	950	1,516	1,979	2,466	2,875	3,298
20-24	417	1,064	1,706	2,199	2,699	3,098	3,497
25-29	555	1,314	1,961	2,473	2,960	3,309	3,626
30-34	614	1,508	2,232	2,759	3,224	3,508	3,724
35-39	561	1,478	2,280	2,855	3,393	3,755	4,065
40-44	419	1,253	2,102	2,768	3,488	4,101	4,747
45-49	312	959	1,741	2,444	3,281	4,098	5,031
50-54	251	765	1,406	2,081	2,925	3,804	4,841
55-59	218	651	1,181	1,754	2,460	3,207	4,089
60-64	180	521	956	1,427	2,020	2,643	3,379
65-69	138	442	795	1,197	1,698	2,232	2,866
70-74	106	330	639	960	1,357	1,779	2,280
75-79	107	265	493	768	1,123	1,510	1,976
80-84	91	234	379	557	774	1,003	1,272
85+	150	358	605	852	1,154	1,478	1,857
TOTAL	5,903	15,741	25,579	34,217	43,722	52,293	61,600

Appendix D – Consultation Report

Importance of Stakeholder Consultation

It is recognised that engagement is an important component in any planning process, particularly where involving a range of key stakeholders. The recognition of the need to include key stakeholders in the planning process is an important consideration in the development of any planning initiative.

The project team recognises the importance of engaging with a wide range of stakeholders and see genuine stakeholder engagement as an important way to build relationships among potential project partners. Engagement, done properly, can enable a deeper understanding of a project through information sharing and discussion. Important benefits of a comprehensive approach to stakeholder engagement include:

- > Increased credibility/accountability by demonstrating the CoGG's willingness to collaborate with stakeholders;
- > Involving broader stakeholders can satisfy expectations and demand for involvement;
- > Avenues are opened for stakeholders to raise issues incorporating local knowledge, expertise and ideas;
- > Relationships are established with key stakeholder groups that can benefit current and future project activity; and
- > Priorities are tested in the market place.

Consultation Objectives, Method & Timeframes

In an effort to ascertain the potential needs of the NWGGA community population, the study team undertook a comprehensive consultation strategy as part of the Social Infrastructure Report. The specific objectives of the consultation were to:

- > Identify existing and future needs of the communities surrounding the NWGGA project site.
- > Examine stakeholders' perceptions of, and assess the gaps in, social infrastructure.
- > Consider the potential needs of the NWGGA community, and how these could be addressed.

The consultation phase took place between the 12th September and 21st October 2016. A total of 47 stakeholders from 38 separate organisations including, state and local government, not for profit organisations, peak bodies, private sector and service providers were invited to participate in the consultation for the study. Of the 38 organisations, the team consulted with a total of 33 via key informant interviews (face-to-face and telephone).

ID	Organisation	Stakeholder Group
1	Department of Education & Training	Education
2	Deakin University	Education
3	Catholic Education	Education
4	Geelong Regional Library Corporation	Cultural
5	Department of Health & Human Services - West Division Health	Health
6	Barwon Health	Health
7	G21 Regional Alliance	Government/Community
8	Victoria Police	Police
9	Ambulance Victoria	Ambulance

ID	Organisation	Stakeholder Group
10	Department of Health & Human Services – Sport & Recreation Victoria	Sport & Recreation
11	Aged & Disability - COGG	Aged & Disability
12	Sport & Recreation- COGG	Sport & Recreation
13	Leisure Services - COGG	Sport & Recreation
14	Family Services - COGG	Family & Community Services
15	Community Development - COGG	Community Development
16	Arts & Culture - COGG	Arts & Culture
17	Youth Services - COGG	Youth Government/Community
18	Gordon Institute of TAFE	Education
19	Department of Justice	Justice
20	Diversitat	Youth/CALD/Multicultural/Aged Support
21	McKillop Family Services	Youth Homelessness, Refugee
22	Golden Plains Shire	Government/Community
23	Northern Futures	Community Services
24	Bethany	Community Services
25	St Laurence	Community Services
26	Wathaurong Aboriginal Co-operative	Community Services
27	UnitingCare Geelong	Community Services
28	Baptcare	Community Services
29	Karingal	Community Services
30	Landowner Consortium Groups Northern	Landowner
31	Landowner Consortium Groups Western	Landowner
32	Covenant College	Private Education
33	Geelong Baptist College	Private Education
34	Country Fire Authority	Safety
35	State Emergency Services*	Safety
36	Glastonbury Community Services (Barwon Health)*	Community Services
37	Salvation Army*	Community Services
38	NDIS*	Community Services

*Organisation did not participate in consultation

Objectives of the Report

The purpose of this report (Consultation Summary) is to provide a summary of the information and key findings that arose out of the consultation process. The consultation findings have been summarised under key social infrastructure themes identified for this study. In addition to key findings for specific social infrastructure themes there were also a number of general comments made by stakeholders and these have been reported for completeness.

This report forms part of a series of supporting documents for the NWGGA Social Infrastructure Report.

It should be noted that the findings of this consultation report is based on stakeholder views and perceptions and does not necessarily translate to the aspirations or views of the NWGGA Project. Findings from the consultation will be used to inform recommendations as a result of this study.

Education & Training

Primary & Secondary School

Given public funding constraints and existing commitments to build and upgrade schools around the state, it was considered unlikely that the Department of Education and Training (DET) would have the ability to provide a government school in the NWGGA during the early years of establishment. The DET representatives believed that the early residents were likely to have their children access schools in adjoining communities before a school can be provided. Data from DET suggests that there is capacity in existing schools to absorb additional growth in the short term. Long term provision of additional government school infrastructure (i.e. as development matures) will be subject to ongoing monitoring of population growth and demand.

The new P-12 school currently being developed at Bannockburn will provide additional capacity, however further information is required to ascertain whether the new school includes parts of the Western Growth Area within its catchment.

In addition to the new P-12, the DET are committed to delivery of the new North Geelong Special Developmental School (SDS). The North Geelong SDS will be constructed on the former Western Heights College, Quamby Avenue campus in Hamlyn Heights, with construction works to occur throughout 2017. The school will open for students in Term 1, 2018 and will provide specialist education services and first class facilities for children and young people with a disability from ages 5 to 18.

Catholic Education has expressed an interest in establishing a primary and secondary school in both Growth Areas. It was commented by the representative for Catholic Education that the demand for Catholic Education in Geelong is projected to grow. Currently the Catholic Education sector caters for 23% of overall education needs. There is some capacity in existing Catholic Education primary school however at the secondary school level it was suggested that there is no capacity to cater for any further demand.

Initial planning undertaken by Catholic Education suggests the following needs:

- > In the Northern Growth area it is estimated that a need at full development for between 2.1 and 2.4 primary schools based on a Long term enrolment (LTE) of 400 for a primary school; and between 0.8 and 0.9 secondary schools based on a Long term enrolment (LTE) of 1200 for a secondary school.
- > In the Western Growth area it is estimated that at full development there will be a requirement for between 2.4 and 2.9 primary schools based on a long term enrolment (LTE) of 400 for a primary school; and between 0.9 and 1.1 secondary schools based on a LTE of 1200 for a secondary school.

In addition, Catholic Education are keen to look at opportunities to create 'early learning centre' hubs with kindergarten, pre-school and primary schools together (and perhaps secondary schools as well).

Other non government schools providers consulted indicated that they are planning for growth and would depend on the numbers of students expected in the NWGGA. One school provider indicated that the existing campus (which is in close proximity to the Northern Growth Area) has capacity to double enrolments without much difficulty and the land the campus is situated on, has the ability to be developed to support further growth. Another school which is located in the Western Growth Area catchment indicated that they were near capacity and has plans to grow the college by an additional 150 to 200 students. It was noted that if NWGGA went ahead student enrolments may increase further, however the College has chosen to not adopt an open door policy but rather focus on quality of education based on an ideal number of students.

Models that have been flagged as good examples include:

- > Sharing of facilities (council open space and school facilities) was seen as a positive model that should be explored in the NWGGA. E.g. Shared use with Myers Reserve and Covenant College.
- > Taylors Hill West Secondary College that will open in 2018 has been flagged as a potential model for inclusive education. The school is spread over 2 sites that are approximately 10 hectares and will be co-located with council land and facilities. Once developed, the school will include facilities for special needs, early intervention and community facilities including training facilities. The first stage of Taylors Hill West Secondary College will open in 2018. When fully built, Taylors Hill West Secondary College will be all on state owned land.

Tertiary Education

The representative for Deakin University anticipated that additional growth in population through the NWGGA would increase the demand on existing services, however this would depend entirely on the demographic makeup of the new communities. Whilst it is recognised that additional demand would be placed on existing services, it was suggested that Deakin University has the capacity to take on additional demand. In addition, given the proximity of the Growth Areas to the existing Waurn Ponds and Waterfront campuses (about 10km), there would not be a sufficient population (estimated 100,000 people at ultimate build out) to warrant a new University in NWGGA.

The Gordon Institute of TAFE was also not likely to develop a new campus in the NWGGA, as it believed its existing Geelong City, East Geelong and Hoppers Crossing Campus as well as various trade centres would meet the needs of a growing student population in Geelong. Whilst it was acknowledged that the NWGGA could potentially bring an increase demand for training programs, it was suggested that new potential students would attend existing campuses. The Gordon Institute of TAFE currently has 15,000 students enrolled and the Institute has in the past had much higher numbers. The changing nature of education delivery is a key focus with additional innovations being explored to expand service delivery while ensuring quality.

The models of delivery for TAFE include:

- > Courses delivered through existing campuses with some online offerings through 'Blended Learning'
- > Some courses are offered at school trade training centres for year 11 and 12 students (also offered at TAFE campus).
- > The Institute also delivers training in the workplace within and across many regions and industry.
- > The increase in demand for "skill gap" training requires adaptation of the traditional models of training. On-line and informal learning opportunities such as TED talks require technology interface that can be challenging for students due to lack of resources.

It was noted that the existing campuses could be upgraded and developed if the need was there. Any expansion of facilities/services would depend on emerging new industries and its requirements to deliver training to meet the new area of expertise required; that is training that is not currently catered for within the existing course offering, or facilities. Physically, the current infrastructure is adequate to support further growth. There are a number of options to consider if a new emerging industry requires new programs etc. The Gordon TAFE would at first consider whether it can cater for this new demand within existing structure or repurpose existing infrastructure. If this proved to be inadequate then the next options would be to look at partnerships with other organisations and/or industry to provide required training on other sites etc., the last option would be to consider new infrastructure build, but given the large scale upfront cost associated with a new campus, any expansion would require a business case to government seeking further funding support.

An important issue that was raised by both representatives for Deakin University and Gordon Institute of TAFE is accessibility linkages between existing communities into new community as well as between campuses. This is

particularly important for students who may not have access to reliable transport. The following examples have been provided in relation to the issue of public transport:

- > The lack of public transport between Deakin University campuses (Waurin Ponds and City Campus) resulted in the University providing its own buses including bus stops to cater for students.
- > Recent changes to the train timetable have meant commute times between Werribee and Geelong (location of TAFE campuses) can now take up to 1 hour and 30 minutes.
- > Another area of concern is no direct rail connection from Geelong CBD to Werribee Town Centre, or spoke service from Little River on the regional rail to provide this connectivity.

Transport considerations include public transport, cycling and walking paths as well as adequate car parking spaces. Models to explore for NWGGA include park and ride services as well as free bus services in the interim. There is a need to not only ensure connectivity into new communities but also the improvement to existing networks. This includes connectivity to rail transport with possible new station between Corio and Lara near the GREP area so commuters from the new Northern Growth Area (Lovely Banks) can easily access rail transport without needing to travel over major arterials or increase traffic through existing communities already suffering infrastructure concerns. A station site at the GREP would also allow for adequate commuter parking requirements.

Both representatives suggested the NWGGA site will need to be equipped with good broadband facilities to support the increasing trend towards online learning.

Health & Emergency

Emergency & Safety

Police

To service NWGGA, the Victoria Police Geelong division has indicated a new 24 hour large police facility (funding permitting) located on the Geelong Ring Road at a diamond intersection, preferably near public transit stop (if/when they are developed) would be adequate to meet the needs of the Growth Areas. There are opportunities to consider Co-location with Justice and (Department of Health and Human Services) DHHS in a Multi-disciplinary centre, similar to the Barwon Multidisciplinary Centre located in Geelong. Multi Disciplinary Centres together in a single location the key services involved in supporting those who have experienced sexual assault including Centres Against Sexual Assault (CASA), the Department of Human Services Child Protection, Sexual Abuse Intervention Team (SAIT) and Victoria Police, Sexual Offences and Child Abuse Investigation Team (SOCIT).

Ambulance

The Ambulance representative stated that they would need to undertake more detail site planning (through their Strategy Research and Innovation (SRI) division) to establish whether a new station is needed. At present Geelong is well covered for Ambulance services. The Belmont Ambulance Head Quarters at 120 Settlement Road Belmont is currently a busy station and it will not have the capacity to service new growth to the West of the Ring Road (Western Growth Area). Although it was noted that a new station recently opened (less than 12months) at Bannockburn has the capacity to absorb further demand generated from the Western Growth Area, this facility however is currently not a 24hour station but can be changed if the need was there. In relation to the Northern Growth Area the two primary stations (Lara and Norlane) which services that catchment is currently operating at full capacity and further growth in the North would place additional pressure on already stretched services. Further investigation is required to determine how the Northern Growth Area could be serviced, whether through expansion of existing stations or a new station and the availability of resources and funding. The Ambulance representative has flagged the opportunity to create emergency precincts in new Growth Areas with co-location with CFA and SES.

CFA

CFA provides a service delivery footprint that looks to provide a response capability to all residential areas within 8 minutes of receiving the call, in 90% of situations. As such, fire station infrastructure supporting this area is already established in:

- > Lara
- > Corio
- > Geelong West
- > Lovely Banks
- > Stonehaven

However, as the bulk of this development is outside of the current Urban Growth Boundary, existing service delivery will be unable to meet this need. As such, CFA would be required to provide additional capability by way of two career fire station assets. These would be positioned as one per growth area.

In addition, the existing brigades located in Lovely Banks and Stonehaven would likely see an increase in their response numbers and complexity. This would require a review of their existing infrastructure and skills requirements.

The design of the internal road network is critical to ensuring that the Emergency Service units responding into the area can get to all residences within response times. To assist with this, CFA would like to be involved in the process of designing the internal road network for both of these growth areas. This will help to minimise the need to provide additional service infrastructure, and can maximise the utilisation of existing and proposed brigades. As an example, CFA would like consideration of the placement of a Moorabool Creek Crossing in the Western Growth Area, as well as the potential for an extension to Church Street and associated crossing of the ring road. Both of these would assist in avoiding further infrastructure and personnel requirements

CFA recognise that the requirement for CFA to provide services commences as soon as the first asset is placed into a community. As both of these growth areas are being created outside of the urban growth area, there is limited capability in existing CFA infrastructure to provide service into this area. As such, CFA would be looking to provide additional capability into both of the growth areas. Preliminary assessment indicates that this would require two stations with a career response capability, as well as the upgrade of two existing rural stations.

Justice

Representatives from the Department of Justice and Regulation expressed concerns around the potential for poor urban design in new Growth Area resulting on future offending rates and compound existing social disadvantage in neighbouring suburbs.

There are currently no plans to build new justice facilities in the new Growth Area. The approach to servicing the Growth Areas would be through existing city centre to service the two Growth Areas.

The following were noted as issues and trends that may have an impact on service delivery in the future:

- > Future legislative changes impact the service demand through changes in sentencing.
- > Economic downturns often impact the number of people who become involved in the justice system e.g. fine defaulters, property crime.
- > Youth crime is a trend resulting from the disengagement of young people in Geelong.

Health

Stakeholders noted that the NWGGA will ultimately place additional demand on existing services including the Corio Community Health Centre, the specialist centre at Northern Arc (not yet constructed) and McKellar facility. It was commented that the Corio Community Health Centre is an older building and would require refurbishment/refreshment to modernise. At present the Corio Community Health Centre is operating at full capacity with some services having to outreach from other facilities due to the limited space available. It was suggested that once the Northern Arc Health & Wellbeing Hub (Barwon Health North) is built this would alleviate pressure on the Corio Community Health Centre.

There is consensus amongst stakeholders consulted that it is unlikely the NWGGA will trigger a new hospital. Representatives from Department of Health & Human Services (DHHS) indicated that further planning is required to assess the need for a new hospital and it will depend on the resident profile, capacity of existing facilities/infrastructure and contemporary models of care in operation. The Departments view is that any new hospital developed will need to be flexible to facilitate the ability to adapt to changes in models of care and targeted populations. Similarly, it is the view of Barwon Health that Geelong is well serviced by the number of public and private hospitals in the area. There are plans to develop new wards in the existing public hospital which is

anticipated to be open the middle of 2017. With additional wards, the capacity of the hospital will increase, however the issue will be securing funding for operational aspects of the new wards.

Outreach and home-based services and smaller more mobile services are preferred models of delivery compared to building a new hospital in the area. The focus on service delivery will be around prevention, early intervention and diversion services through design and utilising existing services including provision that complements the private sector's health service provision in the area. It was acknowledged that some programs and services may change to meet the needs of the new population (e.g. children's services).

The services that are funded by the DHHS often fill the gaps if the private sector fails to. The Department's priority is to work in with other providers particularly new facility developers to see if there are opportunities to complement the new facility with DHHS services to create for example a health hub such as the planned Northern Arc Health and Wellbeing Hub (Barwon Health North).

When Barwon Health North is developed it will be a specialist centre with some services moving from the University Hospital Geelong to the facility. The specialist services proposed at Barwon Health North are primarily targeting the needs in the communities of Corio and Lara in areas such as haemodialysis and specialist clinics although this facility will be open to other residents in the broader Geelong community.

Service areas that are thought to be impacted on if NWGGA goes ahead include:

- > Public dental could be impacted with increased demand though there is evidence that fluoridation has resulted in less presentation of children at the public dental clinic in Corio.
- > There is already a demand for GPs in the Northern Area and this demand would increase. GPs are private providers and the primary health network represent their interests. Less GPs means an increase in presentations at the Geelong Hospital emergency department.
- > Allied health will be impacted, although it was suggested that private providers could fill this need such as physiotherapists and other therapists.
- > Corio/Lara are ageing communities which could attract new aged care facility providers into the Growth Areas to service this need in new facilities in the Northern Growth Area.

The following trends and models in service delivery have been noted for consideration in the NWGGA:

- > The use of technology in health care is emerging (e.g. GP could have appointment with patients over the internet) and the focus on diversion from hospitals (emergency) to GP services and the growth of the private sector in health provision (hospitals, aged care, GPs and others) all mean less focus on state hospital based services and more on home-based, local, co-located and outreach services. DHHS will continue to provide community health services as clients are generally not able to afford high levels of private health care or private health cover and will need public health services that service the Northern and Western areas and the broader catchment.
- > The Ocean Grove model of shared children services facility is a good example of using infrastructure to provide a range of services in one location. It would make sense to consider this model in any future development of health and wellbeing hubs. Other services such as neighbourhood houses and shared facilities that attract community members to a range of activities is a great model and is likely to be the model of the future rather than single purpose large health facilities.

Targeted Support

Youth

Stakeholders acknowledged that there is a high youth population in Geelong. The existing youth centre (The Fort) and services are operating at capacity and additional resources would be required to support additional youth population. The Fort is a well used facility with alternative space that can be used for a variety of uses and is a good model to replicate in new Growth Areas. It was commented that the Northern suburbs particularly are stretched and would not be able to absorb any further demand. Similarly, it was thought that youth services in the West are also stretched given the lack of services in suburbs South of Geelong at Highton and Grovedale.

There is a need for innovation hubs for young people in Geelong and there may exist opportunities for a purpose built youth centre however any new facilities will require additional youth workers.

Education attendance is a challenge for young people and it was commented by several stakeholders that there is a need for alternative education to mainstream schooling. A number of service providers are operating in this space however there is demand for more similar services:

- > Karingal offer alternative education however is currently deciding whether to continue to provide this service.
- > Mckillop Family Services own and manage an alternative education facility that is very successful. This facility is operating at capacity and would struggle to meet additional demand.
- > Diversitat operate an alternative education program in the Old Post Office facility for young teenage parents still in secondary school. The program runs 2 days a week and allows the parents to bring their children to class. Small class size is important as many undiagnosed illnesses in the client group including mental health and developmental disabilities. The current class size of 10 is ideal and there is the possibility of expansion to an extra class (if funding remains stable). The Growth Areas, particularly the North where most of the students come from, will generate a need for alternative schooling and young parents' education programs like the one that Diversitat operate.

Aged & Disability

The number of seniors is on the rise in Geelong. Council provides in home care services as well as managing a number of seniors centre. Given the expected increase in seniors there will be a need for further services. It was commented that the future trend is for multipurpose community hubs incorporating recreational opportunities, intergenerational space, activities and programs such as UA3 rather than standalone seniors centre. The ideal mix for a multipurpose community hub would include seniors centre, health centre, recreation and leisure centre to be incorporated into a hub facility.

In relation to services such as in home care for older people, it was agreed amongst stakeholders that the NWGGA will place additional pressure on home care services. According to one stakeholder the current waitlist for the Barwon catchment is about 1200 people. A number of stakeholders suggested that the National Disability Insurance Scheme (NDIS) and the transition to My Aged Care may provide further capacity/resources, however the full extent of the NDIS and My Aged Care and impacts on current service delivery is still unknown. In addition, there is the view that many organisations are moving towards a mobility model whereby services are provided in multipurpose centres e.g. consulting rooms and activity rooms.

There is a need to focus on accessible planning to allow ageing in place and for seniors to stay in their local neighbourhood. Considerations for appropriate, affordable housing which includes single level self contained apartments that are well designed should be a priority. It was commented that providing a diversity of housing will provide older people with a choice when it comes to retirement, which currently is limited to residential aged care facilities and retirement homes.

Baptcare is responding to community need for affordable housing and aged care facilities and services through the development of the Norlane Integrated Community Hub on Robin Avenue (former Isik College Site). The project will deliver:

- > 90 bed residential aged care facility – concessional beds for existing public housing tenants and low income older people.
- > 52 affordable housing units – mixed housing options for families, older people and people with disabilities.
- > Community hub and wellbeing centre – café, playground, gym and open space all accessible to local community.

Cultural

One stakeholder commented that the numbers of asylum seekers seeking support services is not stable as it depends on when they arrive and often service providers are not made aware of arrivals until they have arrived. It was noted by stakeholders that if services were required in the new Growth Area then this would be achieved through outreach from another facility.

Wathaurong will be impacted by population growth in NWGGA as the organisation is not able to meet current demand for medical and support services and new development will result in more demand for its services. The service has increased from 62 to 95 staff in the last few years with little additional operational space. Some offices have 3-4 people sharing. The organisation has recently acquired more operational space at Mackey Street North Geelong.

The Aboriginal population in the Geelong area is growing and current needs are not met. For example the organisation does not service the prisons despite the expansion of the prison beds and the high representation of Aboriginal prisoners. Funding prevents the organisation from fully meeting its responsibilities to Aboriginal people.

Wathaurong has a \$30 million redevelopment plan for the Morgan Street site at North Geelong including acquisition of Vic Roads land around the site. The organisation is currently seeking funding support to deliver that expansion plan. Wathaurong would like to have identifiable facilities (not shared but standalone) in NWGGA. Those facilities would ideally be designed with clinician's rooms and office space.

Leisure & Recreation

Leisure & Aquatics

The Northern Arc Leisure Project is earmarked to service current community in the North and has the ability to be a subregional facility. Further consideration is needed on appropriate/alternative location (more central location) as there is the view the current site may not be big enough, with poor accessibility and parking would be an issue for that scale of development. This will be explored further in the Aquatics Strategy currently underway. In the short term, the option is to maintain existing leisure facility with medium to long term view to redevelop. The Aquatic Strategy is underway to look at the aquatic and leisure needs of the Geelong community with a focus on affordability, accessibility and future proofing the provision of services moving forward.

Issues were raised around the need to carefully consider Co-location of other community facilities and services with leisure and aquatics. The example was provided where there is parking issues with the current Leisure Link site which is co-located with the library. It was perceived that the parking arrangements in any future co-located space needs further thought as currently the library users are contending with Leisure Link users, which is seen to have a higher number of users. This issue was also flagged for consideration with Northern Arc.

Open Space

Provision of open space in the North is challenging and is seen as inadequate. It has been suggested that further improvements to open space is needed in the Northern Area as a stepping stone into the Northern Growth Area. The following issues have been raised in relation to open space provision in the North:

- > There is a need to focus on acquisition and protection of land in the North for open space.
- > There is currently no program/capital funding for the North.
- > There is a need for more district/subregional level informal open space and recreation sites in the North.
- > There is the issue with small pockets of open space which are not useable but too small to rationalise and with these sites the direction would be to improve the quality.
- > There is very limited sub-regional open space and recreation reserve in the North – Stead Park is the only one however there are concerns that this site could be compromised. One stakeholder commented that Stead Park should be developed as a high quality sports precinct to attract people to the park and local area with the suggestion that there are national sports possibilities for Stead Park.

A key issue that has been raised is the adequate designation of land for open space separate to community facilities. In the past there has been examples of where community facilities have been built on open space which erodes the provision of open space. It was noted that there is limited protection for open space as the planning scheme allows rezoning of open space for other community use. It was commented that the model used for Armstrong Creek is appropriate.

There is the view that the current minimum requirement of 10% unencumbered open space is not enough and further consideration should be given to opportunities to acquire open space in excess of the minimum requirement.

Sport & Recreation

In relation to sport and recreation, it was commented that clubs are struggling in the North due to lack of volunteers. A number of examples were provided of clubs closing due to issues with the capacity of clubs to run and membership. This issue needs to be addressed as any future growth will place further pressure on existing clubs. One stakeholder suggested that in the North, there is a priority in relation to sport and club development this includes improving participation outcomes. In the North, structure participation (club/team base) is not working and there is the view that more informal unstructured participation such as walking, cycling, swimming etc may be more appealing. It was noted that clubs in the surrounding communities of the Western Growth Area are doing well.

Sport and Recreation Victoria has started looking at opportunities and synergies for sport and recreation within the Health and Wellbeing agenda. One of the advantages of this approach is that it opens up more funding opportunities. A number of examples were provided of having sport and recreation facilities adjoining hospitals, aged care facilities etc to achieve health outcomes such as water rehabilitation.

Cultural

Library

In the North, Lara and Corio branches will both be expanded through redevelopment in the next 5 years. This will increase capacity to service in the Northern Area (particularly from Corio) although it was commented that this would still not be enough space to cater for demand in the new Northern Growth Area and proximity was seen as a barrier for new residents. The Western Area libraries are considered too small (Highton) or not close enough to the new Growth Areas to be viable for those new residents.

Whilst, there has been no planning to date for the new Growth Areas, it would be ideal to have 2 new sub-regional libraries (one in each of the Growth Areas) with large children's spaces and whole of community areas. The two sub-regional libraries (for 25,000+ people) should be developed following the 8 principles in the Public Library Buildings Development Strategy (2009). It was noted that development of the two libraries would be subjected to funding availability.

Libraries have a strong potential for community building and inclusiveness. Inclusion of cafes in libraries is a trend that will likely be followed in any new libraries in the Growth Areas. The following trends have been noted as considerations for NWGGA:

- > The use of libraries to access technology (bridging the digital divide through the free and public library wifi and computer and games access).
- > Larger and flexible spaces are desirable for meeting spaces to book on-line. Some people run their businesses with the support of the library for meeting and working space.
- > Libraries are assisting with data retrieval in an age of data overload and libraries can offer refinement by supporting searches for specific data retrieval.
- > More cultural services being offered through libraries.
- > Libraries are an affordable and safe space to seek shelter and quiet from the streets/weather.

Arts & Culture

There is a high level of growth anticipated in the arts and culture space in Geelong. This will result in the need for more space and resources. It was commented that existing facilities and services are operating at capacity:

- > Potato Shed requires upgrade.
- > GPAC is progressing development of Stage 2 with Stage 3 yet to commence.
- > The Art Gallery needs development.
- > CoGG has received a number of requests/advice around new initiatives from individuals, groups, professionals etc however there is currently limited capacity/resources to respond to these requests and this is seen as a missed opportunity.

In addition to the above, there is a need in the community for dedicated creative arts space for long term residency such as independent organisations, community, not for profit, commercial.

Opportunities identified for the provision of arts and cultural spaces included the following:

- > Re-purposing of old heritage buildings to cater for demand in cultural activities and reusing for the purpose of arts and cultural activities.
- > The Potato Shed is a good model to look at for any new planned facilities in the Growth Areas. This model is a partnership with the adjoining schools and council. The facility is multipurpose in nature and therefore meeting a variety of needs (includes conference and theatre space, although no dedicated long term residency space).
- > Recognise that arts and culture has a pivotal role in nurturing new and existing communities.
- > Recognise the important role of place making in new communities and access to things like trails, heritage stories etc.

Early Years

Children's Services

A concern raised by some stakeholders is the impact on existing children's services if the provision of these services in the new Growth Areas lags behind demand in those locations. One service provider indicated that children and family services in particular are stretched in Geelong.

Council is one of the three main providers of children's services in Geelong. The following demand and capacity of existing services have been noted (CoGG 2016):

- > Existing early childhood service provision in the North and West is sufficient to meet current population requirements, with some limited capacity to accommodate additional future demand.
- > Proposed development of a new Integrated Child and Family Centre adjacent to Northern Bay College Wexford Court P-8 Campus in Purnell Road, to replace and expand the capacity of exiting early childhood services.
- > Two additional early childhood and community facilities are proposed for development within the Lara West Precinct which will provide for population growth within the immediate vicinity and surrounding area.
- > A new early childhood and community facility is proposed for development within the Fyansford Precinct which will provide for population growth within the immediate vicinity and surrounding area.
- > The development of a new integrated Early Learning Centre to consolidate and replace existing ageing early childhood service infrastructure in Bell Park, Bell Post Hill, and Hamlyn heights has also been proposed as a critical priority, but most likely remains subject to identification of a suitable site and land acquisition.

- > The catchment area (North and West) reflects a relatively high level of developmental vulnerability amongst young children at school entry as classified by the Australian Early Development Census.

In relation to the planning of children's services in new Growth Areas, it was noted that Armstrong Creek provides a good basis. However lessons to consider for the NWGGA include:

- > Land requirement – this includes consideration for appropriate parcels of land, configuration and size (footprint), car parking requirements
- > There is a need for some principles around land/site configuration
- > Issues around funding gap with DCP
- > The need for consideration of ongoing operational cost

Community Spaces

Community Centres/Spaces

The following demand and capacity issues have been noted for existing community centres and spaces in adjacent communities:

- > Community centres and spaces in the North are very modest and growth from NWGGA will place pressure on existing spaces.
- > Community centres in proximity to the Northern Growth Area have limited capacity to cater for additional use. Cloverdale Community Centre is operating at capacity. Although expansion is planned for the facility, however the centre's ability to service the Northern Growth Area would be limited.
- > There are two buildings on Sutcliffe Reserve (in the North) which are for exclusive use by two community groups and will not be able to service new residents.
- > In the West, Vines Road Community Centre and Library has recently undergone refurbishment and has some capacity for increase usage, however it's expected that utilisation at this centre will increase in the short term from use within existing community.
- > Other community spaces in the catchment area to the West require redevelopment due to age and fitness for purpose e.g. Petit Park Hall, Cobradah House, Batesford Hall.

There is a need to look at innovative models of delivery for community facilities. Multipurpose spaces and shared use should be considered for any new community facility in NWGGA. The following examples were provided for consideration:

- > Innovations in shared space such as utilisation of classrooms outside of school hours.
- > Good model to look at for NWGGA is the Doveton Community College, which has similar disadvantages as Corio. The College is a K-9 School and the Principle manages the space including the Kindergarten. The School is used by migrants for English classes, there is a large commercial kitchen used to teach cooking, 2 multipurpose activity rooms, theatre, stadium, a leadership program for the community and volunteer program is run through the School.

A key concern raised was the need to ensure appropriate management models are in place for shared community spaces at the outset. Currently there is a challenge in some existing facilities where management models have not been established.

Other Issues

Through the course of the consultation, a number of broader issues were raised in relation to the NWGGA:

Affordable Housing – Affordable housing is a key issue in the North. One stakeholder noted that affordable housing for young people is a big gap and there are very long waiting lists. A priority project for the G21 Regional Alliance is the Affordable Housing Project (previously known as New Norlane) which is needed in the community but has no funding. Some stakeholders raised concerns regarding increased affordable housing in the North with perceptions of increasing further disadvantage.

Golden Plains is considered an affordable alternative for some Geelong residents and the new development may provide more choices for residents in Geelong and therefore the people moving into Golden Plains may stagnate.

Connectivity & Accessibility – Key service infrastructure such as Barwon Water will be impacted. Barwon Water is struggling to keep up with current service delivery and will struggle to support additional growth. Public transport is another key challenge and there is no funding available to resolve these issues let alone new challenges with NWGGA.

Planning & Design Considerations – A number of stakeholders commented on the importance and quality of the built environment to support new strong communities. The design of the new communities is of great interest to many stakeholders and the following comments were made in relation to the design of new communities:

- > Street design in particular (for legibility and permeability) and crime prevention through environmental design principles are strongly supported.
- > High quality design is important for the success of libraries. The new city library is a success as it has a flexible, welcoming, innovative design with high quality and creative interior spaces. A coffee shop is planned for the foyer area to further invite users.
- > Prevention focus is critical and this relates to neighbourhood design, transport access to encourage active and healthy lifestyle.

One stakeholder noted that the current lot supply analysis shows enough land to support predicted current growth rate and the development of NWGGA will possibly create a glut in the market.

Importance of social infrastructure – Stakeholders consistently raised the importance of social infrastructure provision. The following comments were noted:

- > It will be important to stage the new residential development with the provision of social infrastructure. Armstrong Creek was flagged for early infrastructure delivery to service the new community however this took awhile to happen.
- > Social infrastructure is important and the waterworks (Northern Arc) site may not be big enough to accommodate the expanding population in the North if development goes ahead.
- > Consideration needs to be given to the new communities and what can be reasonably expected of them in regards to access to a range of services and facilities.

Employment – Concerns were raised in relation to employment and jobs in Geelong and the impacts as a result of NWGGA. One stakeholder commented that it will be important for the new Growth Areas to achieve their local jobs targets as there are disadvantages to NWGGA becoming commuter suburbs for Melbourne workers.

High tech manufacturing and the state government agency relocations to Geelong are hopeful possibilities for the employment profile in Geelong. General employment instability in Geelong with industry closures and global restructuring and shift to technology could result in more out of work and more struggling with finances which would increase demand for services.

Financial Implications – There is a view amongst some stakeholders that the current financial constraints on Council require careful consideration. Council is struggling to keep up with current provision and there is a backlog of programs that should take precedent over any further new development. One stakeholder questioned council's ability to service the new communities as well as existing community and current Growth Areas such as Armstrong Creek, Lovely Banks etc within current financial environment e.g. rate capping.

Some service providers suggested that there is a lack of linkage between population growth and funding. It is often the case that there are no additional funds for services to support an increased population.

Working in Collaboration – A number of stakeholders expressed the desire to work in collaboration with each other to achieve common outcomes. For example, utilising and tapping into the Regional Justice Reference Group and Emergency Services Multi Agency Group in the planning for the new Growth Areas. Council is a member of the Regional Justice Reference Group as are Domestic Violence services, social housing providers, sexual assault services and the Department, Police and others.

There is an advantage to considering sport and recreation at the outset of planning and having Sport and Recreation Victoria at the discussion early so that internal discussions can start to take place which would assist in funding down the path.

Social Disadvantage in the North of Geelong – A common issue raised by stakeholders is the current challenges in the North of Geelong. Challenges are in relation to socio economic disadvantage and stakeholder's believed that the existing needs in the North cannot be underestimated and needs to be prioritised before any new development. There are a number of critical projects in the North that are needed but have no funding commitment e.g. Stead Park Master Plan, Northern Arc.

There is an aspiration from one stakeholder to connect the Northern Growth Area to Melbourne. There is potential for Geelong to be a lifestyle choice for Melbourne residents as it is commutable to Melbourne and close enough to the Great Ocean Road. It has the potential to attract people if the infrastructure is right. It was commented that new development is seen as being of economic and social benefit to the North.

Homelessness – One stakeholder raised the issue of homelessness in Geelong and Surf Coast Shire Council. It has been reported that people are sleeping in public toilet blocks.

Appendix F –Northern and Western Geelong Recreation Ratios/ Benchmarks Project Report