

# Pakenham East

## Community Infrastructure and Open Space Provision Assessment

Victorian Planning Authority

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# 1. Introduction

## 1.1 Project scope

The Victorian Planning Authority (VPA) has prepared the *Pakenham East Precinct Structure Plan Community Infrastructure and Open Space Provision Assessment* to understand the nature of community infrastructure and open space to support the future residential population and workforce of the Pakenham East Precinct. This assessment is part of the ongoing precinct structure planning process and will inform the preparation of a Precinct Infrastructure Plan for the Pakenham East PSP.

This assessment has specifically focused on the following community infrastructure and open space items:

- Multipurpose community centres
- Early childhood facilities
- Community rooms
- Youth-oriented spaces
- Primary schools
- Secondary schools
- Sports reserves
- Tennis courts
- Hard court
- Indoor recreation
- Local parks
- Emergency services

This assessment identifies the number of facilities needed to support the future community arising directly from the projected population of the Pakenham East residential area. It provides recommendations for the location and size of facilities and responsibilities for their funding and delivery. The report also addresses the provision of open space throughout the precinct. For the most part of this report, it will refer to Pakenham East as the study area.

The report has not accounted for any external demand to be met within the precinct or assumed that any demand from the Pakenham precinct will be met in surrounding areas in the long term. The report specifically aims to identify the need for community infrastructure of a local order. The population forecasts for Pakenham East do not meet the benchmarks for higher order infrastructure. Lower order infrastructure refers to Level's 1 and 2 infrastructure and facilities. Level 1 includes neighbourhood level community facilities providing for catchments of up to 10,000 people. Level 2 refers to district level facilities providing for catchments between 10,000 – 30,000 people. Level 3 and 4 provides for sub-municipal and municipal level facilities for catchments between 30,000 – 60,000 people and beyond<sup>1</sup>.

The Pakenham East local town centre will provide opportunities to integrate a mix of higher density residential with retail and restrictive retail uses with supporting community, open space, recreational and educational facilities.

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<sup>1</sup> ASR Research Pty Ltd, Planning for Community infrastructure in Growth Area, 2008, City of Melton, City of Wyndham, City of Whittlesea, the City of Casey and the City of Hume.

## 1.2 Project context

The purpose of the report is to inform the future urban structure of the *Pakenham East Precinct Structure Plan (PSP)* and associated documentation, including the *Pakenham East Infrastructure Contributions Plan (ICP)*. The Pakenham East ICP is a framework to facilitate the provision of basic and essential infrastructure to the community. The ICP may be made of one or two parts, a standard levy and/or a supplementary levy. The standard levy is a pre-set rate that may be used to fund transport, community and recreation infrastructure and public land provision. In particular circumstances a supplementary levy may also apply.

The PSP will identify basic and essential infrastructure and services for future residents, visitors and workers, and the ICP will assist in delivering the infrastructure identified. This report establishes the basis for the precinct's community and open space facilities ranging from public and private, State Government and Council. The Pakenham East PSP will clarify the infrastructure to be directly provided by the developer and what infrastructure should be provided by the State, including through other funding sources such as Growth Area Infrastructure Contributions.

## 1.3 Methodology

The methodology was based on established guidelines and benchmarks and provision models developed by the VPA and iterative discussions with Council and State Government departments and other external stakeholders as relevant.

Key opportunities and considerations were identified for the delivery of community infrastructure in the growth areas within the Cardinia growth corridor.

A demographic review was undertaken of surrounding and comparable growth area communities to determine a likely population profile for the future community, in particular Cardinia Road and Officer.

Benchmarks were applied to the population projections based on full development including proposed dwelling yields to determine the community infrastructure items to support the future community.

Ongoing consultation with Cardinia Shire Council, Department of Education and Training (DET) and the Catholic Education Office of Melbourne (CEOM) has provided input to preferred configurations and locations of education and community facilities within the PSP itself.

## 2. Study Area

Pakenham East PSP is located within the South east growth corridor in the Cardinia shire and covers parts of the localities of Pakenham, Nar Nar Goon and Nar Nar Goon North. The precinct is bounded by the Princes Freeway to the south, Ryan Road and Deep Creek to the west, the electricity transmission easement area to the north, and Mt Ararat Road and Mt Ararat Road North to the east. The area will undergo a full transition of land use as part of large scale residential development with considerable population increase and demographic change, with commercial areas and community facilities to support it.

## 2.1 Metropolitan and regional context

Pakenham East sits amongst the southern extent of the Dandenong Ranges and is characterised by foothills and valleys with defined ridgelines. It is located 60km southeast of Melbourne, 20km east of the Narre Warren-Fountain Gate Principal Activity Centre, and 6km east of the Pakenham town centre. Pakenham is a Major Activity Centre (MAC) that services areas both within and beyond the municipal boundary. The *Cardinia Road Employment Precinct (CREP)* is an emerging employment area 7km to the south-west of the Pakenham MAC and is envisaged to be a multi-functional regional employment area that provides a greater mix of employment. The *South East Business Park (SEBP)*, located approximately 2 to 3km to the south west of Pakenham East PSP will provide approximately 1,500ha of future employment land.

The Pakenham East study area was only included within the urban growth boundary following the 'logical inclusion' process in 2012. The Logical Inclusions Advisory Committee supported the inclusion of the Pakenham East area due to a need to increase land supply for housing in the growth corridor.

The Pakenham East precinct will contribute to a residential community for the south east. The location adjacent to Pakenham maximises the use of existing infrastructure and supports the Pakenham MAC. It will also play a role in providing necessary community facilities for the greater area.

The precinct will include and be serviced by a Local Town Centre (LTC) and a Local Convenience Centre (LCC) that incorporates retail, specialty retail, and mixed use/commercial areas. It will provide local employment for the community and reduce the need to travel outside of the precinct for daily shopping needs.

The Deep Creek corridor that runs north-south through the western part of the precinct is identified as having areas of biodiversity and landscape values. Appropriate reserves will ensure the long term protection of the native vegetation and habitat. Much of the rest of the precinct is cleared, agricultural land with little native vegetation to be retained.

## 2.2 Future development and community

The PSP will outline and manage the growth of the Pakenham East area from an historic agricultural settlement, to a residential community on the edge of Metropolitan Melbourne. The precinct will offer its community distinct residential neighbourhoods and working places to create a strong sense of place and community by ensuring subdivision design, developments and public spaces are functional, safe and aesthetically pleasing, to build civic pride throughout the precinct.

The precinct will include a range of housing typologies to accommodate the expected population of between 20,000-22,000 new residents (in approximately 7148 dwellings).

## 2.3 Surrounding areas

A number of new settlements are currently planned or being developed around Pakenham East. Surrounding land uses and developments relevant to the precinct include:

### **PAKENHAM SOUTH EMPLOYMENT PRECINCT STRUCTURE PLAN**

Pakenham South Employment precinct lies to the south-west of Pakenham East. The precinct comprises approximately 190 hectares of existing employment land, and is bordered by the Princes Freeway to the north, McGregor Road to the west, Koo Wee Rip Road to the east, and the Urban Growth Boundary to the south. The precinct is planned to provide opportunities for industries to operate in a defined employment hub.

### **CARDINIA ROAD PRECINCT STRUCTURE PLAN**

The Cardinia Road PSP was approved in November 2008. The precinct lies to the west of Pakenham East on the other side of Pakenham Township. Princes Highway runs east-west through the centre of the precinct, with the railway line running through the southern area. The 1051 hectare precinct is planned to be largely residential, with a large Neighbourhood Activity Centre (NAC), a small NAC and a Neighbourhood Convenience Centre (NCC).

### **CARDINIA ROAD EMPLOYMENT PRECINCT STRUCTURE PLAN**

Cardinia Road Employment PSP is located to the south-west of Pakenham East. The PSP was approved in October, 2010 and will guide the development of a 595 hectare integrated business and industrial park, supported by a neighbourhood activity centre and some high density housing.

### **OFFICER PRECINCT STRUCTURE PLAN**

Officer PSP lies to the west of Cardinia Road PSP, and was approved in December 2011. The precinct is based around a transit-oriented Major Activity Centre and is further supported by a Neighbourhood Activity Centre and multiple Neighbourhood Convenience Centres, with predominantly residential areas.

## 3 Key Opportunities and Considerations

### 3.1 Population

Although development of the precinct will take place over thirty years (up to 2047), the population growth rate in the area over that period – approximately 20,000- 22,000 new residents in Pakenham East contributing to the projected population increase to 161,500 residents within the Cardinia Shire by 2031 – is rapid and requires comprehensive delivery of community infrastructure and open space to support it. The infrastructure must support activities that will build a strong sense of community, like that available in established suburbs where the development of community uses has taken place over much longer periods of urban development.

### 3.2 Collocating compatible uses

Best practice approaches promote the collocation of community infrastructure with other complementary services to strengthen the development of community hubs. There may or may not be interaction between these facilities. Together, however, they create a focal point for community activity and allow people to make a single trip to access a wide variety of services. These hubs can be large in size and include facilities (Council and non-Council) which serve a major town centre catchment or smaller in size and comprise facilities that cater for a local town centre or local convenience centre catchment area.

Collocation can provide greater land use efficiencies through the sharing of resources, for example through the collocation of public open space with schools in strategic locations. Three school sites have been located adjacent to areas of public open space, creating an opportunity for their shared use. Other potential benefits of collocation include various recreation and/or community facility options being available in one destination and opportunities to minimise infrastructure duplication (e.g. car parking). The proposed land uses within Pakenham East have been considered in terms of providing configurations of related activities in a compact manner in order to optimise the use of and achieve synergies.

The opportunity to collocate or share spaces depends on a number of key considerations. These include, but are not limited to:

- Ensuring that uses and activities are compatible, complementary and have the ability to support each other;
- Ensuring that the types of facilities and services provided are adequate with the scale of the overall facility and the area in which it is located;
- Ensuring that there is a shared and agreed understanding of usage requirements; and
- Ensuring that the catchment is not reduced from the collocation of multiple community uses.

The Department of Education and Training<sup>2</sup> has provided a number of examples of opportunities for schools and community partners (local councils, community organisations, sport and recreation

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<sup>2</sup> Victoria State Government, Department of Education and Training (DET), Schools as Community Facilities: Policy Framework and Guidelines, 2005, Melbourne

providers, other education and training providers and not-for-profit organisations) to work together and share the use of school facilities. These examples are:

- Using school premises for community halls and meeting spaces
- Opening school facilities up for use as community recreation facilities
- Creating spaces to support school-aged holiday, before- and after- school programs
- Providing information technology centres for community use
- Sharing libraries or resource centres
- Sharing performing arts spaces
- Collocating preschool centres on school grounds
- Sharing sporting facilities

### 3.3 Accessible and connected facilities

The location of community facilities will affect people's use and connection to the services provided. The location should also maximise accessibility through good access to public transport (multi-nodal where possible), pedestrian and cycle paths.

*Plan Melbourne Refresh Discussion Paper*<sup>3</sup> is focused on providing 20-minute neighbourhoods. This means the ability to meet every day, non-work needs locally, primarily within a 20-minute walk. For a community to thrive, the community services need to be easily accessible for everyone.

Planning for new facilities should consider the broader precinct's context and linkages that provide good access, and placement in a high profile and visible location, in addition to their collocation and siting near other compatible services such as schools, commercial and retail opportunities, and open space. Providing infrastructure in central locations improves the community's capacity to access facilities and services by public transport and active transport such as walking and cycling.

Community facilities should be central to their neighbourhood catchment and where people can access them conveniently, including by public transport and ideally as part of their daily travel routine (i.e. near town centres and community hubs). It is also important to ensure that each neighbourhood has safe, walkable connections to public transport stops and local facilities.

The precinct should promote connected on and off road path networks that allow for bike and pedestrian use and link key facilities. Where appropriate, paths should be through and around sports reserves and local parks which link facilities and connect to the main path network.

### 3.4 Early and staged delivery of community facilities

Pakenham East PSP area is designed to provide local services and facilities, however during the early stages of development infrastructure contributions may not yet be sufficient to fund the purchase of public land and construction of community facilities.

During the early stages of development, opportunities for use of shared or temporary spaces should be sought to assist in the delivery of early services. Examples of integration may include:

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<sup>3</sup> Victoria State Government, Department of Environmental, Land, Water and Planning (DELWP), Plan Melbourne Refresh Discussion Paper, 2015, Melbourne

- Expansion of an existing public building for community services to provide meeting rooms and educational spaces;
- Negotiated shared use of school facilities for meeting spaces and sport facilities for local sports clubs;
- Provision of maternal and child health services through schools; and
- Design facilities to accommodate interim uses (e.g. planning for playground equipment on land nominated as ultimate development for a future public use)<sup>4</sup>.

Forging partnerships with the private and public sector can assist in delivering early facilities and services to the community. In some instances, partnerships between organisations have assisted in early provision of services. For example, partnerships can be developed with non-government providers (such as education institutions, clubs and places of worship) to allow general public access to underutilised facilities at certain times of the day/week for social services and programmes. Community centres have been established in new areas by developers to provide flexible early community space at low cost, for example in a converted display home at Selandra Rise. Churches and schools will often include potential meeting spaces. Relocatable buildings have also been used by Council's in some Greenfield precincts to enable the provision of services to newly established communities.

Partnerships and collaborative arrangements will be critical in Pakenham East to support the delivery of community infrastructure and local services during the earlier stages of development. Local and state government, non-government organisations and developers will have a role to play in developing innovative delivery models to ensure resources are available to the community.

### 3.5 Provision of flexible and adaptable community facilities

Planned infrastructure must avoid being overly prescriptive for communities whose needs will evolve over the life of the precinct's development. As the community grows, facilities will need to become more responsive to cater to the needs of different target groups, including young people, older people and people from different cultural backgrounds. Families and first time home owners are generally attracted to Greenfield suburbs due to their affordability and range of housing options, and the appeal of more generous private space, parks and local services such as child care. It is important that services are relevant to local residents and can be flexible enough in their design to respond to changing needs of a growing and maturing community. Fundamentally, the infrastructure provided must be capable of adapting to local circumstances and catering to the changing community.

Models for community infrastructure capable of accommodating a variety of programs and services, and having the flexibility to change functionality over time will be necessary. The needs and interests of local communities may change and therefore community infrastructure must be able to respond by allowing for change in uses. For example, proposed models for community infrastructure should aim to respond to changing trends in sports participation, with open space available for a range of uses.

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<sup>4</sup> Government of Queensland, Office of Urban Management: Department of Infrastructure Queensland, Implementation Guidelines No. 5 Social infrastructure planning, 2007, Brisbane

It is important when planning for future community infrastructure that consideration is given to the staging of facilities and to reassess population projections, demographics and aspirations. This may give some guidance as to where future capacity may be required in facilities that are planned for.

Short term and long term benchmarks, for example, have been developed for kindergarten rooms. Short term benchmarks respond to the short term peak of population that generally occurs during the first ten years of development of the new community. This is applied collaboratively with Growth Area Councils and key service delivery partners. Once the provision requirements for the number of rooms is established for the short and long term, consideration needs to be given as to how kindergarten rooms that are no longer required once peak demand has subsided convert into a new use. As a general rule, approximately one third of kindergarten rooms will be required to convert to alternate use in the long term. It is important that they are adaptable multi-use rooms that can be repurposed to support other community uses.

An example of planning for kindergarten rooms in the short and long term include planning a community facility that comprises four kindergarten rooms where at least one room has been designed so that it can be easily repurposed to support an alternative community use. Another example is integrating several kindergarten services into primary schools with the intention of converting the kindergarten room into classroom space in the long term.

### 3.6 Existing community facilities

There is no existing community infrastructure within the PSP area. The existing Pakenham Township is adjacent to the Pakenham East PSP and will support the initial residential community with its community facilities. Pakenham Activity Centre (AC) has a large number of health and community services as well as a variety of support services, including the Pakenham Senior Citizens Club and Council's youth facility, MyPlace.

Cardinia Shire Council is currently developing a Pakenham structure plan that looks at a process of renewal for the township. This process is re-evaluating the provision of community facilities, and therefore means that Pakenham East doesn't have to cater for the Pakenham Township.<sup>5</sup>

Pakenham Hills Primary School (PHPS) is the closest existing primary school to the Pakenham East PSP, approximately 2.5km west of the edge of the precinct. It is a medium-sized government school that was established 21 years ago and runs a stable enrolment of between 360 - 400 students which offers a small amount of capacity. A new government primary school has recently been approved in Pakenham on the corner of Abrehart Road and Princes Highway, named (in the interim) Pakenham North East Primary School. The school will accommodate 475 students from Prep to Year 6 and will open for Term 1, 2019. The school is located approximately 500m from the entry to the study area and will provide important support for the initial residential community of Pakenham East.

The Pakenham Secondary College (PSC) is a Year 7 – 12 College located approximately 5km to the west of the Pakenham East Precinct. The expansion of Cardinia Shire has led to the development of new schools within the non-government sector and the new Officer Secondary College, reducing the

<sup>5</sup> Cardinia Shire Council, Cardinia Road Precinct Structure Plan, Cardinia, 2008, Victoria

number of students at PSC between the years 2014 and 2016<sup>6</sup>. This suggests that in the precincts' early years of development there will be capacity for secondary age students in the neighbouring area.

Toomuc Reserve is the local sports and recreation reserve for the Pakenham community, situated next to a Prep – Year 12 College. The reserve site covers 17ha, and offers Australian Rules football/cricket ovals, baseball pitches, athletics track, netball courts, cricket nets and an indoor recreation facility.

Given the scale of development proposed for Pakenham East, it is not expected that existing community infrastructure in the Pakenham Township would have any spare capacity for future residents of Pakenham East. Together with the areas isolated nature due to transport corridors constraining vehicle and pedestrian access, it's important for the early delivery of some community facilities in Pakenham East.

### 3.7 Local topography and barriers to movement

The proposed location of the community hubs within Pakenham East take into consideration the local topography and the restrictions to direct access to community infrastructure and open space.

Ridgelines are the dominant landscape feature in the study area, running north-south through the central part of the precinct, creating defined view lines and providing the area with its hilly character. The dramatic slopes leading up to these ridgelines constrain the type of land use and buildings in certain locations, create a barrier to pedestrian and vehicle access to facilities, and impact the catchment for facilities. These elements will contribute to the precinct's sense of place and identity, and are important to maintain the visual integrity. Future infrastructure, including sports pavilions, must not impact on sight lines and must comprise sympathetic landscaping. Existing utility easements (gas and power) and infrastructure within the precinct present opportunities (such as connectivity routes) and impose some constraints on locating community infrastructure and open space. The locations of schools and community centres are limited by the existing high voltage transmission line and gas pipeline requirements, particularly along the northern boundary and running north-south in the western part of the precinct.

Key transport linking the precinct to other destinations are the Princes Highway and Princes Freeway, and access to Pakenham Station on the Pakenham/Bairnsdale railway line. The Princes Highway cuts through the centre of the precinct, and provides an important east-west connection. It is also a significant barrier for the Pakenham East PSP communities, particularly those attempting to access the town centres from the north. Ensuring high quality connections exist between the south and the north of the highway will be crucial to avoid isolating communities. Similarly, the border with the Princes Freeway along the southern edge of the PSP will need to ensure that land uses, particularly school and community facilities, have appropriate interfaces. Similarly off road connections are important to cater for residents who would prefer to use cycling (in particular) to access other areas.

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<sup>6</sup> Victoria State Government, Department of Education and Training (DET), 2016 Annual Report to the School Community, Pakenham Secondary College, 2017, Melbourne

## 4 Demographic Profile

Population forecasts and demographic trends will impact on the future demand for community infrastructure in Pakenham East.

### 4.1 Population and dwelling forecasts and assumptions

At full development it is anticipated that the Pakenham East PSP area will be home to between 20,000-22,000 new residents. This is based on 435.94 hectares of land being available for residential development. Pakenham East will not be required to meet additional demand for community infrastructure from surrounding suburbs.

**Table 1 Pakenham East dwelling and population forecasts**

	Hectares	Dwellings	Population* (2.8 persons per household)	Population* (3.1 persons per household)
Total precinct area	629.82			
Net developable area - residential	435.94	7,148	20,014	22,158

\*An anticipated range of population estimates have been made assuming 2.8 persons per dwelling and 3.1 persons per dwelling.

Table 1 provides a brief summary of the land available for residential development and an expected population range. The table indicates that the projected dwelling yield anticipated for Pakenham East PSP is 7,148 new dwellings at approximately 16.40 dwellings per net developable hectare (NDHa) resulting in a population of between 20,000 and 22,000 people. A range of population forecast has been made based on a lower and upper estimate of average household size. This allows the analysis to identify any potential ‘tipping point’ for the provision of particular community infrastructure that does not immediately meet the provision benchmark.

The VPA’s PSP Guidelines mandate a minimum density of 15 dwellings per developable hectare is to be achieved across residential PSP areas as part of an effort to encourage housing choice, density and affordable places to live. Recent subdivision developments across the growth areas of Cardinia have achieved higher densities that average approximately 16.50 dwellings per NDHa. The Pakenham East residential area has adopted a slightly lower density of 16.40 dwellings per NDHa for the calculation of community infrastructure based on the range of development and housing typologies planned for the precinct and reflecting the various site opportunities such as town centre and transport routes as well as constraints such as slope and land affected by easements.

There are a number of new estates under construction in proximity to Pakenham East that are being developed at about 16.50 dwellings per NDHa, particularly in Officer. It is important to consider recent development and subdivision trends within the municipality by looking at a range of densities, and apply them to the community infrastructure benchmarks. This will determine whether the planned community infrastructure will meet the needs of a potentially higher future population and to identify the ‘tipping point’ for additional community facilities. In the instance where the population or dwelling yield does not reach the benchmark for certain infrastructure items but

comes reasonably close it will be important to consider these recent trends together with the potential for higher density development in the future.

#### 4.2 Demographic trends and assumptions

Planning for Greenfield PSPs have generally applied a long term occupancy rate of 2.8 persons per household for the purposes of planning for community infrastructure provision. Recent analysis suggests that the long term occupancy rate for new suburbs may be increasing for a variety of demographic and social reasons.

The VPA are in the process of reviewing the long term occupancy rates for households in Greenfield areas to confirm an appropriate estimate of long term occupancy rate. This is vital to ensure provision ratios for community infrastructure are appropriate for the future population.

In the interim, analysis for community infrastructure will apply a sensitivity test as noted in Section 4.1 above.

A review of age structure and household types for established and developing Greenfield suburbs in the Cardinia Shire can help to understand the future demographic profile of Pakenham East. Cardinia Road and Officer were master planned communities that are either developing or close to capacity.

Officer PSP is a precinct that is developing and can provide an understanding of the anticipated age structure and household profiles in the short-medium term, whilst Cardinia Road, which is closer to capacity, can provide an understanding of longer term facilities needed.

Significant population and household growth began in Cardinia Road precinct after 2001, and between 2006 and 2016 the population increased sixfold. As development nears completion the population has reached approximately 17,009 people<sup>7</sup>. Development for Officer has commenced in the last few years, with construction of a 4,000 lot housing estate expected to be completed in late 2019. The population doubled between 2001 and 2006, and then again when it reached 3,831 in 2016, with forecasts of reaching 28,556 by 2026<sup>8</sup>.

The nature of growth for Officer and Cardinia Road is considered to be similar to that anticipated for Pakenham East. The projections illustrated on Table 3 and Table 4 below detail the age profiles and household composition patterns for Officer and Cardinia Road based on the most recent census data. It is anticipated that residents of these areas are more likely to reflect an age profile similar to Pakenham East given that Pakenham East is likely to attract similar new residents.

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<sup>7</sup> Australian Bureau of Statistics, Census of Population and Housing 2006 and 2016 (Enumerated). Compiled and presented in profile.id by .id the population experts.

<sup>8</sup> Ibid.

**Table 3 Officer and Cardinia Road Age Structure (2016)**

Age group (years)	Officer	Cardinia Road
Babies and pre-schoolers (0 to 4)	7.5%	11.3%
Primary schoolers (5 to 11)	10.6%	11.6%
Secondary schoolers (12 to 17)	8.1%	7.6%
Tertiary education and independence (18 to 24)	11.1%	9.0%
Young workforce (25 to 34)	15.9%	20.7%
Parents and homebuilders (35 to 49)	22.7%	22.8%
Older workers and pre-retirees (50 to 59)	11.7%	8.2%
Empty nesters and retirees (60 to 69)	7.7%	5.8%
Seniors (70 to 84)	4.5%	3.0%
Elderly aged (85 and over)	0.2%	0.2%

Source: Australian Bureau of Statistics, Census of Population and Housing 2011 and 2016. Compiled and presented by .id, the population experts.

**Table 4 Officer and Cardinia Road Household Profile (2016)**

Household profile	Officer	Cardinia Road
Couples with children	40.7%	43.1%
Couples without children	27.1%	22.0%
One parent families	9.5%	14.0%
Other families	0.5%	1.1%
Group household	2.2%	2.3%
Lone person	14.9%	13.9%
Other not classifiable household	4.6%	3.2%
Visitor only households	0.5%	0.3%

Source: Australian Bureau of Statistics, Census of Population and Housing 2011 and 2016. Compiled and presented by .id, the population experts.

The dominant age group in Officer and Cardinia Road are parents and homebuilders (ages 35-49), which exemplifies the popularity of the area for families and future families. Cardinia Road has a greater percentage of the young workforce age group, which could represent more opportunities for work, or a reflection of more affordable housing if this group is typically first-home buyers or renters. Cardinia Road has a greater percentage of babies and pre-schoolers, suggesting families do not move into these areas at their initial build-out, but potentially later on when more development has occurred. Of all the age groups above 50 years, Officer has a marginally greater percentage than Cardinia Road, suggesting that within the first stages of development these are the age groups that take up residence first.

Both of the precincts' household profiles present very similar data, with the highest household type being 'Couples with children', supporting the age structure data that families are the dominant residents in the area both in the short and long term. Couples without children are the second highest household type in both precincts', followed by lone person households. Interestingly, one of the only differences in the data between the two precincts is in the change in household type between 2011 and 2016, when a larger increase in the number of couples without children occurred in Officer than Cardinia Road. This suggests that in the first stages of development there will be a

significant proportion of households with no children to be represented by a mix of empty nesters and first home buyers with no children.

**Table 5 Pakenham East projected age structure**

Age group (years)	2016		2026		2036	
	Number	%	Number	%	Number	%
Babies and pre-schoolers (0 to 4)	4	4.0	592	12.3	2,239	11.6
Primary schoolers (5 to 11)	13	12.2	673	13.9	2,693	14.0
Secondary schoolers (12 to 17)	11	10.4	418	8.7	1,836	9.5
Tertiary education and independence (18 to 24)	8	7.7	561	11.6	2,024	10.5
Young workforce (25 to 34)	10	9.1	1,182	24.5	3,819	19.8
Parents and homebuilders (35 to 49)	20	18.4	857	17.8	4,009	20.8
Older workers and pre-retirees (50 to 59)	19	17.3	235	4.9	1,191	6.2
Empty nesters and retirees (60 to 69)	15	13.5	174	3.6	812	4.2
Seniors (70 to 84)	6	5.6	117	2.4	588	3.0
Elderly aged (85 and over)	2	1.7	17	0.3	66	0.3
<b>Total persons</b>	<b>108</b>	<b>100</b>	<b>4,826</b>	<b>100</b>	<b>19,278</b>	<b>100</b>

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

**Table 6 Pakenham East projected household structure**

Age group (years)	2016		2026		2036	
	Number	%	Number	%	Number	%
Couple families with dependents	16	44.4	700	51.8	2,843	51.9
Couples without dependents	13	36.1	414	30.6	1,660	30.3
Group households	1	2.8	48	3.6	182	3.3
Lone person households	2	5.6	57	4.2	240	4.4
One parent family	3	8.3	109	8.1	456	8.3
Other families	1	2.8	23	1.7	92	1.7

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

The forecasts for Pakenham East further emphasise the findings from this data. Between the years 2016 and 2026, the age structure with the greatest increase will be the ‘Young workforce (25 to 34), with Parents and homebuilders (35 to 49) a close second. Between the same years, ‘couple families with dependents’ will largely dominate the precinct. In the longer term (2026-2036) these trends are set to continue at the same rates.

These population forecasts raise a number of considerations for the planning of community infrastructure including:

- Initial demand for some work and living opportunities for the 50+ age bracket and supporting services;
- Anticipated increase in demand for early years services such as long day care and kindergarten, particularly related to new families moving into the area and to families with two parents working, particularly at the medium-term;
- Future demand for services and programs for young people that support physical activity and encourage social connection and participation in local events, particularly at the medium- and long-term; and
- Potential demand for places and spaces that support home based employment and volunteering opportunities, particularly as the population ages.

It can be assumed that young families will be the dominant household type during the initial stages of the precinct's development. With first homebuyers and young families currently well-represented in the Greenfield suburbs, the most obvious conclusion relating to community infrastructure is the need for facilities and services that support this key demographic: maternal and child health care, kindergartens and primary schools and parks.

Facilities supporting children should be designed to be flexible. When not required for the maternal and child health service, the rooms could potentially be made available for other council and non-council community services programs that need consulting rooms. Councils will continue to deliver the service from this multifunctional setting.

Pakenham East will also need to plan for older members of the community, with a small number in the initial stages and then gradually requiring increased aged services and facilities over time as adult residents choose to remain within the community. The opportunity to 'age in place' and remain near family and friends in the neighbourhood must be adequately supported by social infrastructure.

## 5 Demand Calculations

Greenfield development areas must cater for a full range of facilities and services that provide opportunities for education (primary, secondary, tertiary, vocational and adult learning), health and well-being (health and support services, emergency services, age-specific services), recreation and leisure (organised and informal sport and recreation, cycling and walking, leisure) and social and cultural interactions.

Acknowledging the many facilities and services required by the growing community, this report emphasises a need to determine social infrastructure facilities suitable for delivery using infrastructure contributions, as well as land uses that have a spatial impact (land take) associated with their provision.

The needs assessment identifies:

- Some items not suitable for delivery in the infrastructure contribution plan
- Items suitable for delivery in the infrastructure contributions plan
- Items that affect land take
- Provision ratios and order of each infrastructure item affecting net developable area in the precinct

The following facilities, whilst essential to the ongoing development of the precincts and the well-being of the future community and neighbourhoods, will not be funded through an infrastructure contribution plan:

- Town centres
- Hospitals
- Medical centres
- Places of worship
- Emergency services
- Residential aged care centres
- Community/public art
- Government schools
- Non-Government schools

These facilities will be delivered through either private or not-for-profit organisations, state government funding and other forms of funding.

### Items suitable for delivery in the ICP

The following facilities are eligible to be funded in whole or part by an infrastructure contributions plan for Pakenham East:

- Multi-purpose community centres
- Neighbourhood houses
- Kindergartens
- Maternal and child health centre
- Playgroup facilities
- Youth services
- Local sports reserves and land for local parks
- Pavilions
- Associated infrastructure for sporting reserves
- Various sporting field and pitches (football, soccer, cricket, netball, baseball and softball).

### Items affecting precinct net developable area

The following facilities are not eligible for funding through infrastructure contributions but will be identified in the report, if required for delivery as part of the precinct:

- Government primary schools
- Government secondary schools
- Non-government primary schools
- Non-government secondary schools
- Tertiary education facilities
- Emergency services facilities

### Provision ratios for ICP items and items affecting precinct land take

The provision analysis for facilities and open space to be delivered across the precinct is undertaken by predicting the future population and/or NDA and by applying an indicative provision rate for each type of infrastructure.

Provision ratios guide how much community infrastructure is to be planned for the future population. The community infrastructure items selected for this assessment and the provision ratios used are generally based on those identified in the *Planning for Community Infrastructure in Growth Area Communities: Standards Project*<sup>9</sup> and some recently identified benchmarks.

The population and dwelling yields used for calculating future demand for community infrastructure in Pakenham East is based on 7,148 new dwellings housing between 20,000-22,000 new residents.

#### 5.1 General community facilities

The community facilities identified in this section of the report includes only Level 1 and Level 2 type facilities. The population and dwelling projections for Pakenham East do not reach the benchmark provisions for Level 3 type facilities.

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<sup>9</sup> ASR Research Pty Ltd, Planning for Community infrastructure in Growth Area, 2008, City of Melton, City of Wyndham, City of Whittlesea, the City of Casey and the City of Hume.

**Table 7 Provision analysis of community infrastructure based on population projections for Pakenham East PSP\*\***

	Level 1	Level 2	Early childhood		
	Multipurpose community centre	Neighbourhood house	Kindergarten rooms		Maternal and child health consulting rooms
Land take for facility	0.8 hectares	1.0 hectare	None (to be delivered on land for community centres)	None (to be delivered on land for community centres)	None (to be delivered on land for community centres)
Provision ratio	1 per 8,000 people	1 per 20,000 people	Short term – 1 per 1,400 dwellings	Long term – 1 per 2,100 dwellings	1 per 16,000 people
Demand analysis*	1.50-1.66	0.50-0.55	4.40-4.90	4.40-4.90	1.3-1.4
Proposed provision*	2	1	5	4	1

\*Based on population estimates assuming 2.8 persons per dwelling and 3.1 persons per dwelling.

\*\* Source of provision ratios: ASR Research Pty Ltd, Planning for Community infrastructure in Growth Area, 2008, City of Melton, City of Wyndham, City of Whittlesea, the City of Casey and the City of Hume.

**Table 8 Provision analysis of kindergarten infrastructure needs for the long term population based on recommended revised benchmark\***

Long term population		
Households	7,148	households
Population (dwelling occupancy = 2.8)	20,014	population
Number of 4 year-olds (1.5% of population)	300	4 year-olds
Proportion of 4-year-olds in session-based kindergarten (78.3% per cent)	234	attend session-based kindergarten
If each kindergarten room can accommodate 66 children	3.5	33-place kindergarten rooms required
<b>Long term provision = 1 kindergarten room per</b>	<b>2,019</b>	<b>households</b>

\*Source of provision ratios: Metropolitan Planning Authority, Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas: A Revised Benchmark, 2015, State Government of Victoria

**Table 9 Provision analysis of kindergarten infrastructure needs for the short term (peak) population based on recommended revised benchmark\***

Short term population		
Households	7,148	households
Population (dwelling occupancy = <b>3.3</b> ) (peak)	23,588	population
Number of 4 year-olds ( <b>1.9%</b> of population)	448	4 year-olds
Proportion of 4-year-olds in <b>session-based</b> kindergarten ( <b>78.3%</b> per cent)	350	attend session-based kindergarten
If each kindergarten room can accommodate <b>66</b> children	5	kindergarten rooms required
<b>Peak provision = 1 kindergarten room per 1,348 households</b>		

\*Source of provision ratios: Metropolitan Planning Authority, Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas: A Revised Benchmark, 2015, State Government of Victoria

### Multi-purpose community centres

Multi-purpose community centres play an important role in accommodating flexible spaces for a combination of community uses and activities. They cater for maternal and child health, kindergartens, child care, youth services, lifelong learning, community art, senior citizens clubs and cultural groups as well as being available to hire for community and private functions.

ASR Research’s provision ratios recommend one multipurpose community centre (Level 1) per 8,000 people and one neighbourhood house per 20,000 people (Level 2). Table 7 indicates that there is a need for one-two multi-purpose community centres and one neighbourhood house in Pakenham East, or two hectares of community facilities required to support the future population of Pakenham East.

Due to the constraints on the site, the spatial design of the community hubs, the severance caused by the Princes Highway, the major ridgeline and drainage corridors, to ensure that the community, especially those living to the north of the Prince Highway have access to appropriate community facilities, it is appropriate that two level 1 multipurpose community centres are provided (one to the north and one to the south of the Princes Highway) and a Level 2 Neighbourhood House is provided within the local town centre.

In regards to delivery models, there has been a recent shift of approach from using a domestic house for a neighbourhood house to operating neighbourhood house services from a multi-purpose community centre or library.

Level 1 multipurpose community centres are generally delivered with early childhood facilities with no additional land take required. A multi-purpose community centre requires in total 0.8 hectares of land. A Level 2 neighbourhood house requires 1.0-1.2 hectares. A neighbourhood house, also known as community learning centre, includes a youth space, additional classroom space and specialist facilities.

Community centres should typically be collocated with government primary schools as part of a community hub, preferably with no road separating the two uses. Having a range of services and

facilities (e.g. schools, kindergartens and maternal and child health) in one hub effectively creates a 'one-stop-shop'. The hubs are planned to be close to public transport and the local shopping strip, which means it becomes accessible for most of the members of the community.

### **Kindergarten rooms and maternal and child health**

Kindergarten rooms are typically delivered as part of a multipurpose community centre with the provision of four to five kindergarten rooms per facility. Table 7 indicates that 4-5 kindergarten rooms should be delivered at a ratio of one room per 2,100 dwellings. In the short term an alternative provision ratio is provided and recommends one room per 1,400 dwellings.

In the short term, 5 rooms in total are recommended, however in the long term only 4 rooms are likely to be required. The delivery model from the short term to the long term requires consideration by the Council.

An evidence-based benchmark for planning kindergarten infrastructure in Melbourne's growth areas was developed in 2015 to update those that had previously been used from the 2008 document, *Planning for Community Infrastructure in Growth Areas*. Tables 8 and 9 apply these revised benchmarks, which calculate that the community is likely to need a long term provision of 3-4 kindergarten rooms, and a short term (peak) provision of 5, utilising short term peak population and long term established population forecasts, as well as the percentage of children in Cardinia that attend session-based versus long day care settings.

One maternal and child health consulting room facility is recommended to enable one to be collocated with a kindergarten facility. This facility should be integrated with a Level 1 community centre, requiring no additional land take.

Kindergarten and maternal and child health rooms should allow for flexibility and re-adaptation. Flexibility enables accommodation for a range of users and groups and a focus for the potential service delivery of classrooms, youth services and consulting suites for outreach services. This reflects the move away from single purpose facilities in order to better meet the needs of diverse community groups. This allows for more efficient use of infrastructure and supports the delivery of community services such as Early Years services, Youth Services, Community Arts and Cultural Diversity.

It can be difficult to make a clear link between population growth and demand for specific activities such as senior centres, youth centres or community learning centres as needs vary over time and between communities as demographics, socio-economics and local circumstances change. Flexibility can provide for most of these activities and can be modified when required to meet changing needs.

## 5.2 Education

**Table 10** Provision analysis of schools based on population projections for Pakenham East PSP

	Government schools			Non-government schools		
	Primary	Secondary	Specialist	Catholic Primary	Catholic Secondary	Other
	3.5 hectares	8.4 hectares	2.6 hectares	2.6 hectares	7 hectares	8 hectares
	1 per 3,000 dwellings	1 per 9,000 dwellings	1 per 60,000 dwellings	1 per 8,000 dwellings	1 per 32,000 dwellings	1 per 40,000 people
Analysis of demand	2.2	0.80	0.11	0.89	0.22	0.17
Proposed provision	2	1	0	1	0	0

### Government Schools

The provision rate for new primary schools in growth areas is one per 3,000 dwellings. The predicted dwelling yield for Pakenham East at full development suggests the need for approximately two 3.5 hectare government primary schools. The delivering agency, the Department of Education and Training (DET), has confirmed that Pakenham East should nominate the provision of two government primary school locations.

Provision rates for new secondary schools in Greenfield areas is one per 9,000 dwellings. Pakenham East has a projected dwelling yield that triggers the need for 0.80 of a government secondary school. Government secondary schools exist in Officer and Pakenham, yet with the number of dwellings in Pakenham forecast to reach 16,925 and Officer to reach 9,559 by 2031, greater pressure will be placed on the area.

Discussions with the Department of Education and Training indicate that a secondary government school will be required in this location to service the precinct and surrounding townships and the existing Pakenham area.

The indicative provision rate for government specialist school, is one per 60,000 dwellings. A specialist school has not been identified in the precinct. Although Pakenham East does not have dwelling yield to support a future specialist school, Officer has a specialist school that can provide for the shires of Cardinia and Casey

### Non-Government Schools

A high level approach is required when planning for non-government schools in growth areas. The non-government school sector should be involved in each stage of the precinct structure planning process. Sites for non-government schools are shown in PSPs where a clear case is made for the need for such a school and where there is a demonstrated commitment to establish a non-government school on the site.

Catholic primary and secondary schools are specifically provisioned for in PSPs as part of the planning process and consultation undertaken with the Catholic Education Office Melbourne (CEOM). The strategic location of school sites is part of their wider future schools mapping for the south-eastern growth areas. The need for future Catholic schools is established through forecasts of future enrolments utilizing sources such as Australian Bureau of Statistics census data.

The provision rate used for new Catholic primary schools is 1 per 8,000 dwellings. The calculated provision suggests that a non-government primary school is not required, however the Catholic Education Office of Sale (CEOMSale) engaged Sustainable Planning Strategies Pty Ltd<sup>10</sup> to prepare a strategic study of Pakenham East, in which it suggested that in the long term a Catholic Primary School could be justified due to the school network. Its proposed location is in close proximity to the Local Town Centre, key east-west route and waterway corridor that provides connections for the north and south communities. Ultimately the provision of non-government schools is a decision made by the provider but can be advised by the VPA and Council through consultation.

Opportunities should be explored with the CEOM to collocate, share and integrate service delivery models between non-government schools and other community facilities. This may include establishing in the short term the early delivery of certain community facilities within the Catholic school that can later evolve into classrooms.

No other non-government school providers have identified the need for school sites in this precinct, however, future school developments may be approved through the normal planning process.

### 5.3 Open space and recreation

Open space in growth area precincts should be equitably distributed across the precinct, maximising access by the local community and contributing to amenity. The VPA's *Precinct Structure Planning Guidelines*<sup>11</sup> state that approximately ten per cent of the Net Developable Area in residential precinct should be provided as public open space.

**Table 11** Open space and recreation provision

	Open space		
	Local parks	Sports reserves	Indoor recreation centre (2 courts)
	4% of residential NDA	6% of residential NDA	1ha per 12,000 people
Calculated land take (ha)	16.7	25	1.67-1.83*
Proposed land take (ha)	20.14 ha	23.68ha	1.50
Proposed provision	13 local parks	23.68ha	1.50

<sup>10</sup> Sustainable Planning Strategies Pty Ltd, A strategic study of Pakenham East Precinct, Catholic School Provision to 2036, 2017

\* based on 20,000-22,000 people

The Precinct Structure Plan and Infrastructure Contributions Plan deliver, as a development obligation, local open space of approximately 10% of net developable area; generally this is divided into 4% of NDA for local parks and 6% of NDA for local sports reserves but can be tailored to suit local requirements and conditions. As a guide, 3% to 5% of NDA should be typically set aside for local parks and 5% to 7% of NDA is typically be set aside for sports reserves. The proposed breakdown of open space within Pakenham East residential area is 4.61% for local parks and 5.42% for sports reserves.

The precinct features a ridgeline in the northern part of the precinct where some large, native trees are located and to be retained. A large hilltop park is situated around these features and is identified as credited open space, providing a significant open space feature for the community.

Further, the PSP Guidelines outline standards for the provision of land for indoor recreation, at the rate of 5 hectares per 60,000 people (equating to 1ha per 12,000 people). Council has confirmed its desire for the provision of a lower order 1.5 hectare indoor recreation centre. The location of the indoor recreation facility should be focused on collocation with education and community facilities. Opportunities could be explored for the collocation of a shared indoor recreation facility if a school is delivered during the early stages of development.

### Local parks

Cardinia Shire Council's *Recreational Open Space Strategy, 2000*<sup>12</sup>, advise that local parks should offer a variety of opportunities which encourage people to participate in different activities. The PSP guidelines recommend that local parks be located within 400 metres safe walking distance of 95% of all households. They are considered as local level infrastructure and generally include paths, seats, trees, open area with basic playgrounds in most cases.

13 local parks (20.14 hectares) of varying sizes are proposed across the residential areas of the PSP area. A number of open space reserves are proposed, connecting people to landscape and heritage features as well as nearby sports reserves.

### Sports fields

Table 9 indicates that a total of 23.68 hectares of land for local sports reserves is to be provided across the Pakenham East precinct. Local sports reserves should cater for the outdoor sports (netball, Australian football, soccer, cricket, hockey, baseball etc.). The VPA's Precinct Structure Planning guidelines outline that sports reserves should be provided within one kilometre of 95 per cent of all dwellings.

Cardinia Shire Council's provision model promotes a range of sporting field sizes to cater for a variety of local sports activities and to respond to new patterns of sports participation. For example, soccer, rugby and hockey require less space and can generally be catered for on six hectare sites while AFL ovals, cricket, softball and baseball fields require greater land takes of typically ten hectares due to dimension requirements of the fields.

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<sup>12</sup>Edaw, *Recreational Open Space Strategy, 2000*, Cardinia Shire Council, Victoria

Each sportsground also provides for wider uses by providing play spaces for children and youth activity nodes. Finally, each reserve will include a community pavilion to suit the size of the park, containing facilities such as change rooms, toilets, first aid and storage.

Pavilions could be costed and designed in a more flexible way rather than being designed for a single purpose. Pavilions also have the capacity to provide for playgroups, meeting rooms for community groups to use such as scouts and local choirs.

#### 5.4 Emergency services

Additional population growth in Pakenham East may generate the need for additional emergency services and facilities. The number and type of facilities, timing of development and locations is determined by a planning process undertaken by the Department of Justice and other relevant services.

The VPA and Council has consulted with emergency services as to whether the inclusion of any such services is desired within the precinct. There are a number of existing and planned emergency infrastructure items located within the precinct and surrounding communities. The VPA will continue a dialogue with the emergency services agencies to future provision strategies for their short, medium and long term plans for the Cardinia Growth Corridor and how that will impact on all future PSPs. Consideration should be given to collocation of emergency services with other emergency services and community facilities particularly where services are based on volunteer participation. An emergency services facility should have main road frontage, be easily accessible and be located so that it can achieve good emergency response times.

## 6. Spatial Considerations

Facilities identified through the provision analysis have been located into a number of community hubs that will serve local neighbourhood catchments and connect to each other via an open space network.

### 6.1 Pakenham East PSP community hubs

Pakenham East PSP will have three hubs. Their composition is outlined in Table 12.

**Table 12 Community hubs located within Pakenham East Precinct Structure Plan**

Community Hub	Facilities	Total land take (hectares)
<b>Hub 1</b>	Local park Government Primary school Community facility	4.3
<b>Hub 2</b>	Non-government Primary school Community facility	4.5
<b>Hub 3</b>	Government Primary school Local park Community facility	4.7

## 7. Conclusions and Recommendations

The Pakenham East Precinct Structure Plan, Community Infrastructure and Open Space Provision Assessment has been prepared by the Victorian Planning Authority (VPA) to support the population growth of Pakenham East. It provides an assessment of the future demand for community infrastructure and open space in Pakenham East residential area and includes spatial recommendations and proposed infrastructure delivery models to meet that demand.

To deliver the necessary community infrastructure and open space in a manner that simultaneously satisfies the needs of local community catchments and attempts to provide connections between them, a 'community hub' model of delivery that links to the open space network is proposed for the Pakenham East residential area.

The inventory of community infrastructure and open space outlined for each community hub will directly inform infrastructure contributions required as part of its development. It is intended that the community infrastructure and open space will be delivered by the Infrastructure Contributions Plan, where applicable, wholly or in part.

The key opportunities to be considered include:

### **The collocation of facilities and services**

- Community infrastructure should be collocated with complementary services as this will give the opportunity to strengthen community hubs. The precinct structure plan provides suitable conditions and opportunities or shared use of future facilities.
- Potential efficiencies and partnerships with private providers and non-government organisations should be explored.

### **Well-connected and accessible facilities**

- Facilities should be placed in high profile location to maximise the accessibility to public transport and pedestrian and cycle paths. The location of facilities should be placed in convenient areas and visible locations that are collocated with other services.

### **The provision of flexible and adaptable community facilities**

- Facilities must be able to cater to the needs of different target groups. As such, planned infrastructure must avoid being overly prescriptive and be highly flexible to respond to the evolving needs of the precinct's development.

### **Respecting local topography and understanding barriers to movement**

- It is important to acknowledge, respect and preserve significant cultural heritage within Pakenham East.

### Timing and delivery of social infrastructure

- Timing and delivery of social infrastructure should link to the staging of residential and commercial development within the three precincts.
- Individual community facilities may be delivered in stages to appropriately respond to need as it emerges
- During the early stages of development, opportunities for use of shared, multi-purpose or temporary spaces should be sought to assist in the delivery of early services.

This will ensure that the community facilities provided in the Pakenham East Greenfield development area will provide opportunities for education, health and well-being, recreation and leisure, and social and cultural interaction for the emerging community.

## 8. References

The following sources have been used to inform this assessment.

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