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Huntingdale Activity Centre

Community Infrastructure

City of Monash

Huntingdale Activity Centre background report: Community Infrastructure

November 2018

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Executive summary

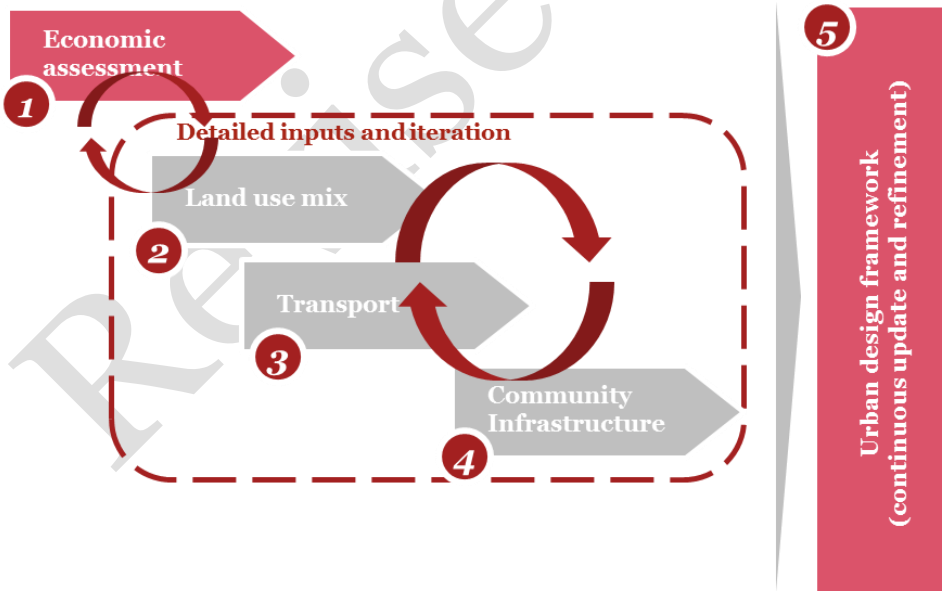
PricewaterhouseCoopers Consulting (Australia) Pty Limited (PwC) has been engaged by the City of Monash to develop a transformative vision for the Huntingdale Activity Centre and embed it in the Precinct Structure Plan. This involves the preparation of five background reports to inform a discussion paper for public consultation.

This report, the Background Report: Community Infrastructure (referred to as the *Community Infrastructure Background Report*), audits community infrastructure provision within the Huntingdale Activity Centre catchment and establishes benchmark provision targets to assess the adequacy of supply to the current and forecast future users (residents and employees working in the Huntingdale Activity Centre). Based on current and forecast demand deficits in provision, this report develops recommendations for infrastructure investment and delivery models to meet user needs. Responding to the recommendations of the *Land Use Background Report,* the report proposes locations for infrastructure investment that support the objectives of the transformative vision for Huntingdale.

This report is level and its intent is to provide an indication of infrastructure gaps and potential pathways to address them. This report should not be considered a substitute for a comprehensive community infrastructure needs analysis (for further limitations to the analysis see 1.4.3).

Analysis in this report is based on inputs provided by the *Economic Background Report* and the *Land Use Background Report* – the relationship between the *Community Infrastructure Background Report* and the other reports is shown in Figure 1.

Figure 1. Relationship between the background reports



Source: PwC

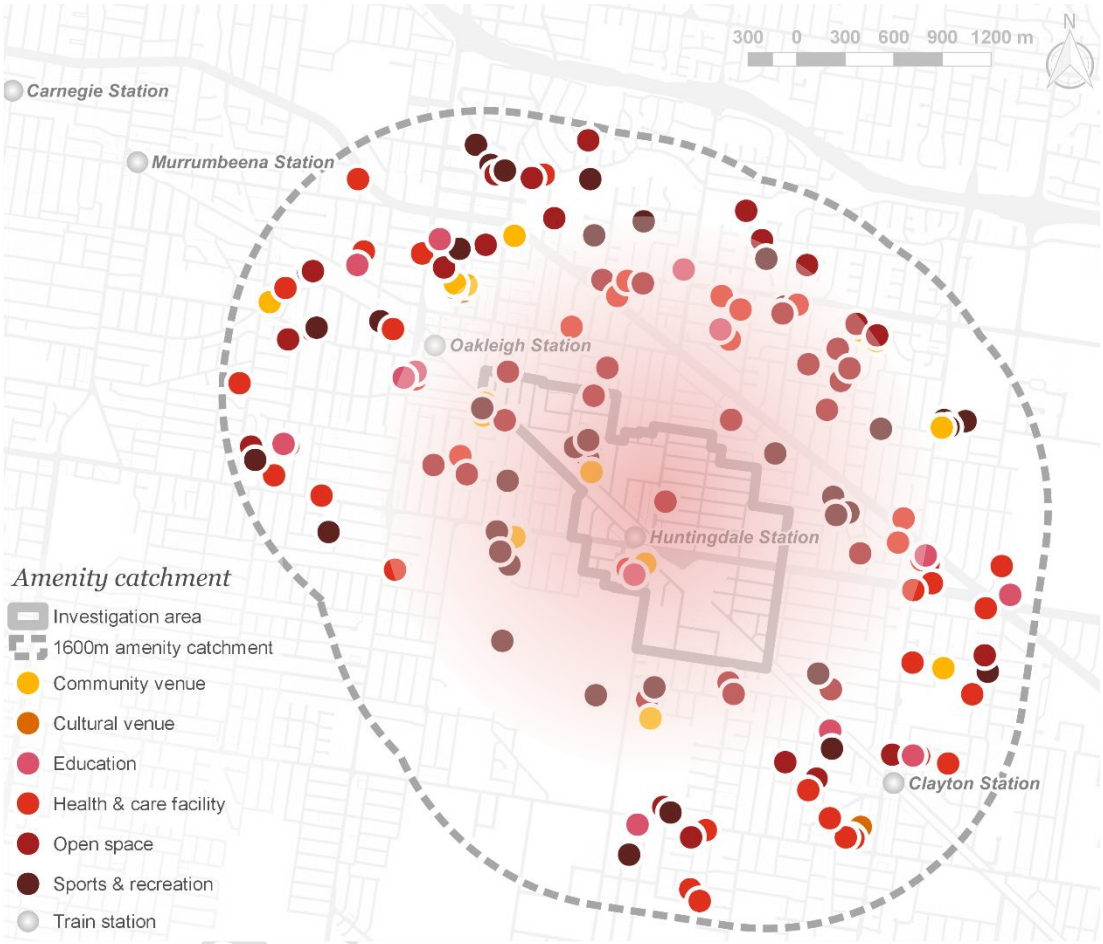
There is little 'local' community infrastructure within the Huntingdale community, and surrounding infrastructure is overutilised

For the purpose of this analysis, community infrastructure refers to the public places and spaces that accommodate community facilities and services and support individuals, families and groups to meet their social needs, maximise their potential and enhance community

wellbeing. This may include things such as health and care facilities, community and cultural venues, education facilities, public open space and sports and recreational facilities.

The survey of existing community infrastructure (Figure 2[1]) shows that there is an abundance of facilities surrounding Huntingdale. Spatially, however, these tend to be clustered around other community hubs such as the Clayton and Oakleigh Activity Centres.

Figure 2: Survey of existing community infrastructure



Source: PwC analysis

Data analysis of the service population of the facilities shown in Figure 2 shows that existing infrastructure is heavily overutilised and service populations primarily relate to communities beyond the Huntingdale Activity Centre – as such there is little remaining capacity to serve the estimated future growth in Huntingdale community[2]. Discussion with Council officers suggests that the infrastructure that is closer to the Huntingdale centre is in poor condition and in need of upgrade.

The report shows that there is very little infrastructure provided within the Huntingdale Activity Centre to serve the estimated future community.

[1] Based on a comprehensive data sweep of all community infrastructure features (defined within Section 1.4 of the report) within a 1,600 metre radius of the Huntingdale Activity Centre study area boundary.

[2] Estimated to grow by 4,994 people within the Huntingdale Activity Centre study area by 2040, based on the PwC Economic Background Report.

Multi-purpose facilities housing multiple services are an opportunity to efficiently meet future additional community infrastructure

The analysis demonstrates that in many categories current supply of community infrastructure to the Huntingdale Activity Centre is already overutilised and in need of upgrades. The estimated future population growth will increase pressure on the need for additional infrastructure within the community centre. As many of the facilities required have similar functional characteristics, there is the opportunity for delivery through multi-purpose facilities, enabling a more efficient approach to serving the needs of the community.

Based on the analysis of the service capacity of existing surrounding infrastructure and the estimated future growth in the Huntingdale Activity Centre population, delivery of the following additional facilities will likely be required:

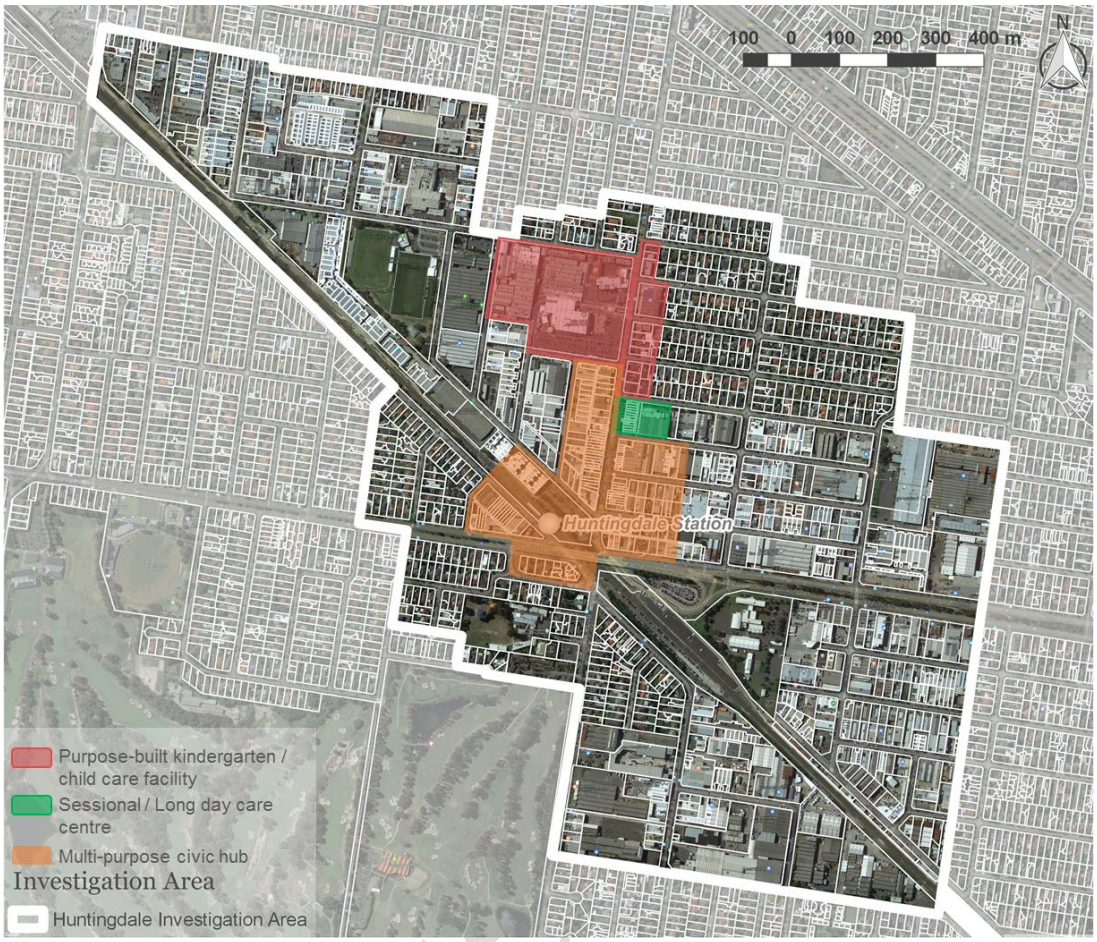
- **Kindergarten, sessional day care and long day care required can be delivered through:**
    - One small multi-purpose facility providing long day and sessional care.
    - One medium sized purpose-built facility providing a kindergarten, sessional and long day care uses.
- **Community centre, neighbourhood house and community arts facility can be delivered as**:
    - One multi-purpose facility serving as a neighbourhood house, and small community facility or hall.

These facilities would likely best serve the community by being provided in close proximity to Huntingdale Station. This is where:

- future population and employee density is estimated to be the highest
- accessibility via road, public and active transport is strong
- the infrastructure could be integrated with other amenity and services provided along the Huntingdale Road retail strip
- new infrastructure will support frequent and regular social interaction between local community members (given other attractions for social trips eg the retail strip).

The potential locations for child care and community facilities and examples of these facilities are shown in Figure 3.

Figure 3: Potential child care and community facility locations & building types



Sessional / long day care within Mixed-use development

Purpose-built kindergarten / child care facility

Multi-purpose civic hub

Source: PwC analysis

Provision for additional green space is recommend to address the needs of the community and support amenity as the residential population grow

The report analysis documents an undersupply of sport, recreation space and public open space relative to standard provision and documented community need. The Jack Edwards Reserve is the only green open space within the study area, and is exclusively used by the local soccer club at scheduled times during the week (synthetic pitch gates locked from dusk-dawn and closed during club training and matches several times a week), reducing access for the wider community.

Based on the existing surrounding facilities and estimated future population growth of the area, the following additional provisions are recommended:

- **Public Open spaces:**
    - One green open space providing sporting field and parkland services.

- 10,000 – 15,000 sqm of additional passive open space, providing for extensive exercise and recreation, improving pedestrian flow across the area between the Huntingdale Road retail strip with the Oakleigh Activity Centre, and connecting with existing green open space. The location of this is based on the movement and access analysis performed in the *Urban Design* report.

- **Outdoor sports facility can be delivered through:**
  - One multi-purpose outdoor sports facility providing, for example, basketball and netball uses and unstructured play.

The proposed locations for new open space and recreational facilities, and examples of these facilities, are shown in Figure 4. These are indicative solutions only and require a more detailed open space strategy to be undertaken.

Figure 4: Potential open space and recreational space strategies


Public green open space


Passive open space


Multi-purpose outdoor sports facility

Source: PwC analysis

Contents

1 Introduction

PricewaterhouseCoopers Consulting (Australia) Pty Limited (PwC) has been engaged by the City of Monash to develop a Precinct Structure Plan for Huntingdale Activity Centre (the Study Area). This report, the Background Report: Community Infrastructure (referred to as the Community Infrastructure Background Report) demonstrates a robust evidence base to support a transformative vision, which will drive the development of the Precinct Structure Plan and form the direction and focus for the other supporting background reports (as shown below in Figure 5).

These five background reports are described below:

1. Economics – review of economic activity and trends to develop a transformative vision for industry, population growth, and retail.

2. Land use – review of planning controls, land supply and market factors to provide strategies to support the economic growth outlined in the Economics Background Report.

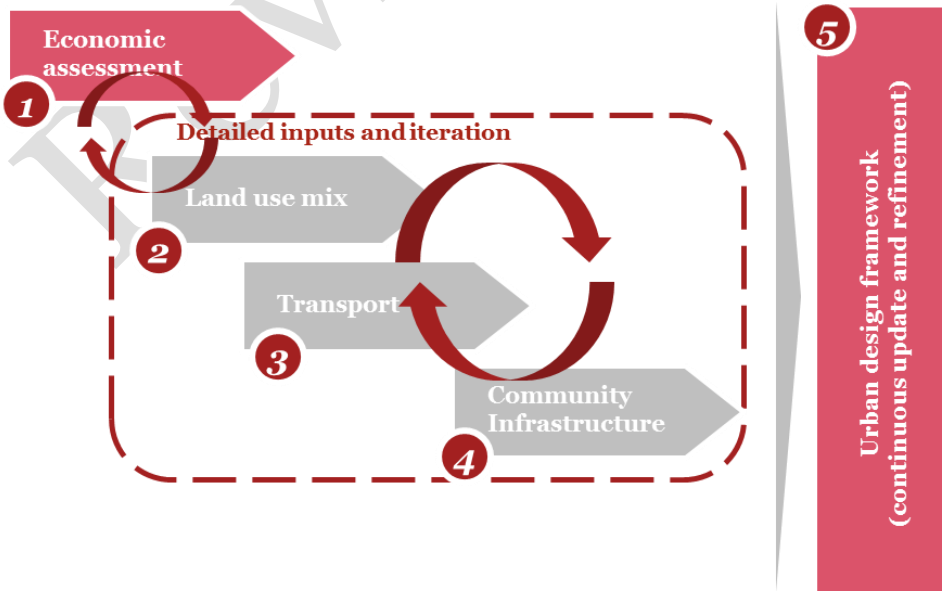
3. Transport – review of existing transport options (roads, public transport, active transport), consideration of State and Commonwealth Government proposals, recommendations to support the transformative vision.

4. Community infrastructure – review of existing community infrastructure and needs assessment to support the growing residential and employment populations.

5. Urban design – changes to access, movement, activity, public realm and the built form to support the transformative vision.

The suite of background reports will be led by the direction set in Economics Background Report, as illustrated in Figure 5. Together they will inform a discussion paper supporting the proposed vision for Huntingdale.

Figure 5. Relationship between the background reports



Source: PwC *Economic Background Report,* 2018

1.1 The opportunity for Huntingdale Activity Centre today

The Huntingdale Activity Centre is approximately 283 hectares, predominately industrial estates with traditional manufacturing and warehouse/showroom activity. There are several pockets of residential area on the fringes of the study area, and some medium to high density mixed use development taking place adjacent to the Huntingdale Shopping Strip. The shopping strip contains a diverse range of restaurants and cafes, but the amenity of the strip is poor and the streetscape is dated. Huntingdale is the gateway to Monash University, and there are strong public transport interchange between Huntingdale train station, and the 601 bus (the most frequent and patronised bus service in Victoria).

The Huntingdale Activity Centre is part of the Monash National Employment and Innovation Cluster[3] (NEIC), and has the following long term objectives:

- to become an important gateway, transit interchange and node of activity for Monash University and the local community
- a greatly improved public realm will change the feel of the area as a destination rather than simply acting as a transport interchange
- renewal of industrial precincts will boost local economic performance and expand the array of jobs in the cluster
- increased dwelling diversity and density will support a range of successful community, retail and recreational infrastructure.

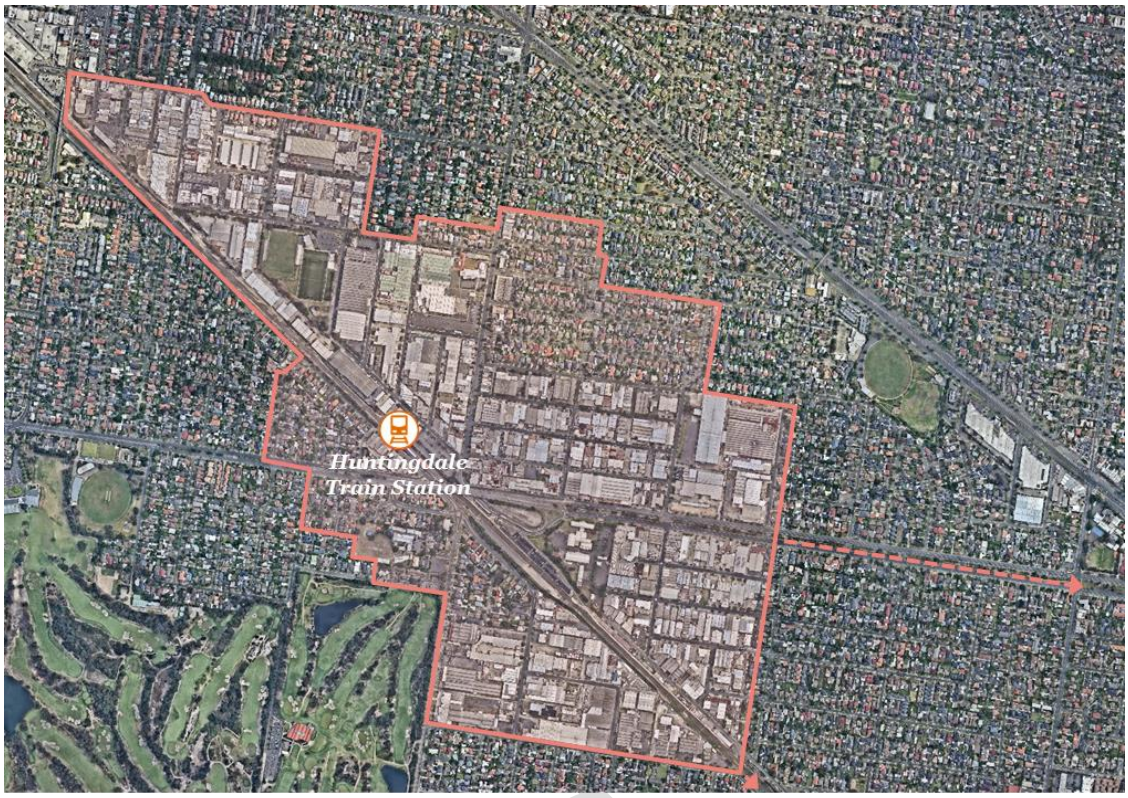
Huntingdale today has the preconditions to achieve these long term objectives – large lot sizes with heavy industrial uses, strong public transport connections, and proximity to the growing activity in the Monash NEIC. It is expected that these factors, left to run their course, will result in rising land values, increasing pressure for residential development and transition of existing land uses in the coming years. The key opportunity is to transition from its current state into a western anchor for the Monash NEIC, providing

- a gritty urban attractor, leveraging its industrial identity as exemplified by areas like Cremorne, Richmond, Parkville, Fishermans Bend, and Port Melbourne
- a high amenity urban centre interspersed with diverse housing stock to accommodate local residents and students alike
- land supply to capture economic activity expected to spill over as development intensifies in the Monash NEIC.

The study area considered across all the background reports is illustrated in Figure 6.

[3] Victorian Planning Authority (2016) Monash National Employment and Innovation Cluster Draft Framework Plan

Figure 6. Huntingdale Activity Centre Precinct Structure Plan Study Area



Source: PwC *Economic Background Report*, 2018

1.2 Objectives

The aim of the Precinct Plan is to set out a transformative, long term vision for the Huntingdale Activity Centre through to 2040, developing an overarching framework for urban structure and form that transforms the Activity Centre by:

- improving the attractiveness of the Activity Centre as a place to live, work and play to deliver the amenity and accessibility required for a liveable western anchor to the innovation Activity Centre
- using extensive stakeholder engagement to chart a path to transition retail, housing and industrial land stock to higher value uses and provide a framework to manage that transition
- incorporating urban design to create a compact Activity Centre characterised by a variety of mixed uses, designed to serve the needs of workers, students and residents of the area.

The *Community Infrastructure Background Report* supports this aim by assessing the existing capacity and future demands for community infrastructure to support the growth of the Huntingdale Activity Centre.

Specifically, this report will assess:

- the service capacity of existing community infrastructure such as open space, community services and other facilities (defined in detail in Section 1.4)
- the forecast of additional community infrastructure required to meet the growth of the study area

- the approximate costs associated with additional community infrastructure.

1.3 Interdependencies with other work

This report is being developed in parallel with two other work streams related to the Monash NEIC:

- the City of Monash has separately commissioned the Clayton Activity Centre Precinct Structure Plan
- DEDJTR is separately developing a future vision for the Monash NEIC with precinct partners which will include the Huntingdale Activity Centre.

To manage interdependencies, City of Monash and DEDJTR have been consulted throughout the development of this report.

1.4 Scope

The scope of this report is limited to identifying the community infrastructure needs of the projected employment and residential populations as defined by the *Economic Background Report*.

1.4.1 In scope Community Infrastructure

For this report, community infrastructure is understood as *"the public places and spaces that accommodate community facilities and services and support individuals, families and groups to meet their social needs, maximise their potential and enhance community wellbeing"*[4]. Note that this understanding reflects the 'local' community infrastructure needs, and do not include sub-regional community infrastructure such as aquatic facilities and hospitals, or council services such as welfare centres.

The community infrastructure categories that will be the subject of this analysis are detailed in Table 1.

Table 1: Community infrastructure categories and definitions

Infrastructure Category	Community Infrastructure	Definition	Typical facility
Health & Care Facility	Aged care	A special-purpose facility which provides accommodation and other types of support, including assistance with day-to-day living, intensive forms of care, and assistance towards independent living, to frail and aged residents.	Multi-purpose community health facility or purpose built facility.
	Community health centre / maternal health centre	Health care includes consulting rooms for GPs, Allied health, human services, as well as pharmacy	Multi-purpose community health facility.
	Kindergarten	The care of children, especially by a crèche, nursery, or childminder while parents are working.	Multi-purpose community facility or purpose built facility.
	Sessional day care		
	Long day care		
Community Venue	Community centre or small multipurpose room	A place where people from a particular neighbourhood can meet for social events, education classes, or recreational activities.	Multi-purpose community facility.

[4] *Community Infrastructure Development Framework*, City of Melbourne, 2014

Infrastructure Category	Community Infrastructure	Definition	Typical facility
	Hall or large multipurpose room	A building or large room used for meetings, concerts, or other events.	Multi-purpose community facility or stand-alone facility.
	Neighbourhood house	A building that brings people together to connect, learn and contribute in their local community through social, educational, recreational and support activities, using a unique community development approach.	Multi-purpose community facility or stand-alone facility.
	Art gallery (or community arts facility)	A room or building for the display or sale of works of art and providing cultural activities to the community.	Multi-purpose community facility.
Cultural Venue	Library	A building or room containing collections of books, periodicals, and sometimes films and recorded music for use or borrowing by the public or the members of an institution.	Multi-purpose community facility or stand-alone facility.
Education	Primary school	A school for children between the ages of about five and eleven.	Stand-alone facility.
	Secondary school	A school for children between the ages of about twelve and seventeen.	Stand-alone facility.
Open Space	Open space	Open space is any open piece of land that is accessible to the public for use primarily as outdoor recreation, nature conservation and passive outdoor entertainment. Open space can include: Green space (landscaped to some extent), passive open space such as squares and plazas, and other public space such as pedestrian sidewalks.	Open space and other public area
Sports and Recreation	Indoor sports stadium	A place or venue for indoor sports, concerts, or other events and consists of a field or stage either partly or completely surrounded by a tiered structure designed to allow spectators to stand or sit and view the event.	Stand-alone facility.
	Other outdoor sports facilities	A place or venue for outdoor sports, concerts, or other events and consists of a field or stage and may be partly or completely surrounded by a tiered structure designed to allow spectators to stand or sit and view the event. Examples include tennis courts, netball courts, and basketball courts.	Multi-purpose sports facility.
	Playground	An outdoor area provided for children to play in, especially at a school or public park.	Multi-purpose sports facility.
	Sports grounds	An outdoor area provided for sports like football, cricket, rugby, soccer, baseball etc. These are typically delivered as part of a multi-purpose ground or several grounds adjacent to each other.	Multi-purpose sports facility.

Source: PwC analysis, taking Definitions are amalgamated from a variety of Community Infrastructure Needs Analysis reports produced by various Councils that were referenced in developing this high level report. Reports referenced are detailed in Appendix A.

1.4.2 Area of investigation

PwC value creation and capture experience demonstrates that 1600 metre radius is the distance over which surrounding properties would receive land value uplift due to the proximity to community infrastructure and facilities[5]. In this report, the value uplift

[5] Value' in this context is used in terms of the value of the amenity accreting to the underlying land value of surrounding properties, and does not mean intrinsic values of community and social engagement. Based on PwC proprietary value analysis 1,600 metres

geospatial boundary is used as proxy for the reach of amenity impact from community infrastructure on the community.

In the report, this 1,600 metre radius[6] has been used to define the investigation area in two ways:

1. to define the investigation area in relation to the Huntingdale Activity Centre boundary – the boundary for the audit of community infrastructure currently available to the population of the Huntingdale Activity Centre

2. to define the population catchment for specific infrastructure or services based on their location and so assess the likely use

The two boundary types are illustrated in Figure 7 – with the grey dotted line indicating the boundary for the community infrastructure audit, and an illustrated example of a boundary around hypothetical education infrastructure used to assess catchment demand *for that piece of infrastructure*.

Figure 7: Investigation area

Source: PwC analysis

is the distance over which surrounding properties would receive land value uplift due to the proximity to community infrastructure and facilities

[6] The 1,600 metre radius is a proxy distance used in lieu of performing a comprehensive community infrastructure needs analysis, which is not the purpose of this report. Such an analysis would typically use distances which are specific to each infrastructure category and reflect walkable access.

1.4.3 Limitations

In undertaking this analysis, PwC has identified several factors that are beyond the scope of the Background Report and should be considered in future detailed studies. This report is considered to be ***high level and indicative only*** of the likely future demand generated by the projected growth of the Huntingdale study area. Future actions and decision-making should be supported by a more comprehensive needs analysis that considers the interaction of community infrastructure in the wider LGA and eastern-region.

The key limitations of this report include:

- The study is a high level report only and should not be considered a substitute for a comprehensive community infrastructure needs analysis. This should be performed in detail prior to finalisation of the Precinct Plan.

- The analysis assumes that residents have access to community infrastructure if it is within 1,600 metres of their place of residence. This distance is a proxy for the infrastructure specific distances that would be used in a more comprehensive study.

- The additional demand measured is in relation to the estimated forecast population ***growth only***, and does not consider the pre-existing demands of the Huntingdale population. The purpose of this report is to identify the *additional* community infrastructure that would be needed given the population growth estimated provided in the PwC *Economic Background Report*.

- Additional demand from other areas in the NEIC has not been considered in the assessment. It is likely that as population grows in the NEIC demand for community infrastructure will increase across the board, including on the boundary of the study area. A comprehensive community infrastructure needs analysis could document this demand outside of the study area.

- The study only considers local infrastructure, as defined in Table 1, and does not analyse the provision or demands for sub-regional or wider infrastructure, such as universities.

- The study does not differentiate between government and non-government schools, but understands that a more comprehensive analysis would be needed to be undertaken before providing any such infrastructure.

- The study includes indicative costs, as a high level view of the cost to build facilities (but not to purchase land). No reliance is to be placed on these estimates.

1.5 Key inputs for the analysis

This report provides an analysis of current community infrastructure available, its use based on surrounding population catchment, and likely future demand based on the population and employment growth assumptions developed in the PwC *Economic Background Report*.

Population and employment for 2016 and forecast for 2040 are summarised in Table 2 and Table 3 respectively.

Table 2: Study area residential population forecast

Population by age bracket*		2016*	2040**
0 to 4	5%	105	250
5 to 9	5%	109	250
10 to 14	5%	103	250
15 to 19	7%	135	350
20 to 24	10%	198	499
25 to 29	8%	162	400
30 to 34	7%	143	350
35 to 39	7%	125	350
40 to 44	7%	129	350
45 to 49	6%	129	300
50 to 54	6%	117	300
55 to 59	5%	105	250
60 to 64	5%	93	250
65 to 69	4%	87	200
70 to 74	4%	75	200
75 to 79	3%	65	150
80 to 84	3%	49	150
85 and over	3%	53	150
Total		***1,981***	***4,994***

* ABS 2016 census
** Total population from PwC *Economic Background Report*, 2018. Age breakdown based on ABS 2016 Census

Source: PwC *Economic Background Report*

Table 3: Study area employment population forecast

Population by age bracket*		2016*	2040**	2040 adjusted @ 78%^
15 to 24 years	11%	226	537	419
25 to 34 years	24%	477	1,173	915
35 to 44 years	24%	465	1,173	915
45 to 54 years	22%	443	1,075	838
55 to 64 years	15%	289	733	572
65 years and over	4%	75	195	152
Total		***1,976***	***4,886***	***3,811***

* ABS 2016 data
** Total population from PwC *Economic Background Report*, 2018. Age breakdown based on ABS 2016 Census
^ Based on 22% of employees population of the City of Monash being residents of the LGA, ABS 2016

Table 2 and Table 3 show forecast growth in residential population of and in employment of ~3,010 and ~1,835[7].

The projected employment and residential populations will determine the total increase in population that will require additional community infrastructure to be provided to, in addition to the existing demands of the population outside of the Huntingdale area.

1.6 Format of Report

This report is structured into the following sections:

- *Section 2* is a Survey of existing community infrastructure within the area. It identifies all community infrastructure assets available to the Huntingdale

[7] Table 3 includes an adjustment for the share of residents who live and work in Huntingdale, in order to capture the net change in the combined resident and employee population who would be drawing on community infrastructure in the future. This adjustment is capture in the figure of 1,835, or put another way, of the 4,886 employees forecast to be in the study are in 2040, 1,075 are assumed to live in Huntingdale.

community, the catchment that the infrastructure serves (not necessarily within the Huntingdale study area) and the level of utilisation of that asset based on its catchment.

- *Section 3* is the Forecast of future community infrastructure needs. Using the existing infrastructure, and the projected future demand generated by Huntingdale employment and residential population forecasts, the analysis estimates what community infrastructure will be demanded by the estimated future population growth in the Huntingdale Activity Centre.

- *Section 4* is the Community infrastructure strategy and costings. This interprets the needs analysis to understand how and where infrastructure should be provided. This section also provides high level costing of the proposed infrastructure investments.

A detailed methodology applying to each section is provided in Appendix B.

2 Survey of existing community infrastructure

This section establishes the current surplus or deficient of community infrastructure capacity relative to current population demand for the study area by:

- establishing benchmark rates of community infrastructure provision
- auditing community infrastructure currently available to the Huntingdale Community, by infrastructure type and location
- analysing the current utilisation of the available community infrastructure (calculated by comparing the population in the catchment for each piece of infrastructure to the population size identified in the rate of provision).

2.1 Rate of provision

In order to estimate the utilisation of available community infrastructure, Table 4 defines provision in terms of the size of the population supported by the community infrastructure type. These provision rates have been sourced from a variety of community infrastructure needs analysis that have been performed across Melbourne[8].

As the community infrastructure needs for residential populations and worker populations differ, Table 4 further defines the relevance of each infrastructure type to the population. For example, a worker will less likely need or use a maternal health centre near their work but would likely need or use exercise facilities.

Table 4: Rate of provision

Infrastructure Category	Community Infrastructure	Rate of provision / Service capacity	For residents?	For workers?
Health & Care Facility	Aged care	1 facility of 88 beds per 1000 people over 70	Y	N
	Community health centre	1 facility per 50,000 people	Y	Y – partial (30%)
	Maternal health centre	1 session for every 13 infants (under 4)	Y	N
	Kindergarten	1 preschool place for every 2 children aged 4 years / 1 room for every 75 enrolments	Y	Y – partial (30%)
	Sessional day care	1 place per 48 children aged 0-6	Y	Y – partial (30%)
	Long day care	1 place per 6.8 children aged 0-6	Y	Y – partial (30%)
Community Venue	Community centre or small multipurpose room	1 room/small centre per 6,000 people	Y	N
	Hall or large multipurpose room	1 hall per 20,000 people	Y	N

[8] Refer to Appendix A for detail on reports referenced.

Infrastructure Category	Community Infrastructure	Rate of provision / Service capacity	For residents?	For workers?
	Neighbourhood house	1 house per 15,000 people	Y	N
	Art gallery (or community arts facility)	1 centre for every 60,000 residents	Y	N
Cultural Venue	Library	1 library for every 30,000 residents	Y	Y – partial (30%)
Open Space	Open space @ 5% of net developable area (NDA)[9]	5% of NDA	Y	Y – partial (30%)
	Open space @ 8% of NDA	8% of NDA	Y	Y – partial (30%)
	Open space @ 10% of NDA	10% of NDA	Y	Y – partial (30%)
	Passive open space	1 per 1000 people	Y	Y – partial (30%)
Sports and Recreation	Indoor sports stadium	1 stadium per 10,000 people	Y	Y – partial (30%)
	Sports ground	1 facility per 5,000 people	Y	Y – partial (30%)
	Other outdoor sports facilities	1 facility per 7,000 people	Y	Y – partial (30%)
	Playground	1 playground per 5,000 people	Y	N
Education	Primary school	Places for 93% of children aged 5-11 Avg. School 300 people	Y	N
	Secondary school	Places for 83% of children aged 12-17 Avg. School 750 people	Y	N

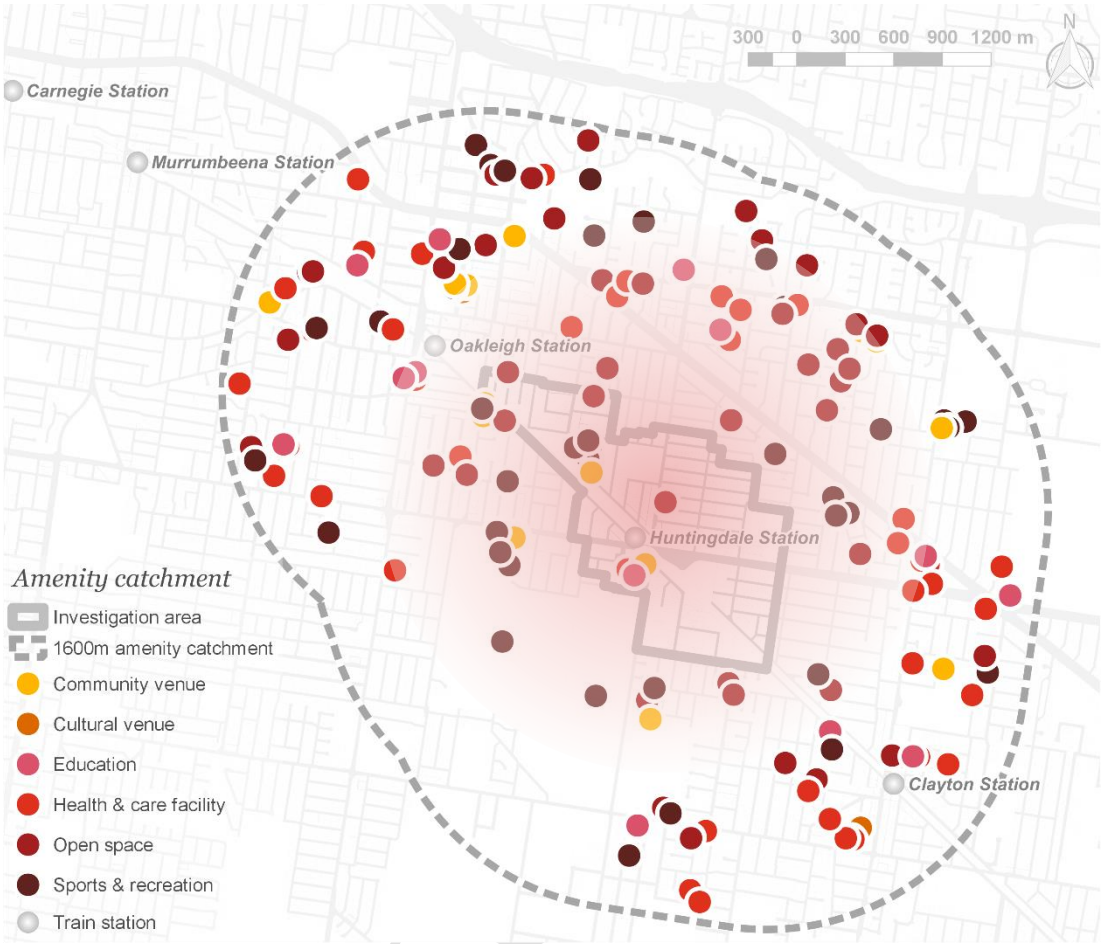
Source: Survey of Council Community Infrastructure reports from multiple councils – refer to Appendix A

2.2 Existing community infrastructure & utilisation

Figure 8 illustrates the location and type of community infrastructure within the access catchment for Huntingdale, using the infrastructure definitions established in Table 1.

[9] Net developable area (NDA) being the total land area available to be developed after excluding uses that would be precluded the land from being developed for open space uses, such as contamination. This figure been obtained from the *Land Use Background Report* report.

Figure 8: Survey of existing community infrastructure accessible[10] from the Huntingdale Activity Centre



Source: PwC Analysis

Figure 8 shows that there is very little community infrastructure provided within the boundary of the Huntingdale Activity Centre, reducing the ability of the area to be a community hub. In contrast Clayton and Oakleigh Stations have a significant clustering of community facilities.

2.2.1 *Audit and capacity analysis findings – community infrastructure*

Table 5 details the results of the audit of community infrastructure and capacity analysis (excluding public open space, which is addressed in section 2.2.1).

The audit findings address:

- Facility count: the total count of community facilities within the catchment, performed using PwC GIS analysis.
- Population in catchment: the total population that falls within a 1,600 metre catchment of a community infrastructure type.

[10] As per section 11.4.2, a radius of 1600 metres has been applied to the boundary of the Huntingdale Activity Centre

The capacity analysis findings address:

- The target rate of provision: the total population that one unit of a community infrastructure type can typically provide for (based on the provision rates in Table 4).
- Capacity of existing infrastructure: the total capacity of all infrastructure of a certain type, equal to the facility count multiplied by the rate of provision.
- Utilisation: the extent to which the total catchment population of a community infrastructure type utilises the total capacity of that community infrastructure type.
- Surplus / deficit capacity: the surplus or deficit of the total catchment population compared to the total capacity of existing community infrastructure.
  - Where there is excess capacity this may be utilised to serve the estimated future population growth of the Huntingdale Activity Centre.

Table 5: Existing community infrastructure & estimated utilisation

Community Infrastructure	Facility count	Catchment Populat'n [11]	Rate of Provision	Existing facility capacity	Utilisation	Surplus / deficit capacity
Aged care	8	10,400	1 facility / 1000 people aged 70+	8,000	130%	-2,400
Community health centre / maternal health centre	1	18,500	1 facility / 50,000 people	50,000	37%	32,000
Kindergarten Sessional day care Long day care	41	6,500	1 facility / 130 children aged 0-6	5,300	122%	-1,200
Community centre or small multipurpose room	6	69,400	1 room / 6000 people	36,000	193%	-33,400
Hall or large multipurpose room	13	74,000	1 room / 20,000 people	260,000	28%	186,000
Neighbourhood house	0	N/A	1 house / 15,000 people	-	N/A	N/A
Art gallery (or community arts facility)	0	N/A	1 centre for every 60,000 residents	-	N/A	N/A
Library	2	44,600	1 library / 30,000 residents	60,000	74%	15,400
Primary school	10	7,900	Places for 93% of children aged 5-11 Avg. School 300 people	3,000	262%	-4,900
Secondary school	4	5,100	Places for 83% of children aged 12-17 Avg. School 750 people	1,400	378%	-3,300
Indoor sports stadium	0	N/A	1 facility / 10,000 people	-	N/A	N/A

[11] Population has been adjusted to include only the population that requires that infrastructure, for example, aged care facilities only includes the surrounding population above the age of 70.

Community Infrastructure	Facility count	Catchment Populat'n 11	Rate of Provision	Existing facility capacity	Utilisation	Surplus / deficit capacity
Sports ground	12	87,000	1 facility / 5,000 people	60,000	145%	-27,000
Other outdoor sports facilities	13	202,500	1 facility / 7,000 people	109,000	186%	-93,500
Playground	24	99,200	1 playground / 5,000 people	120,000	83%	20,800

Source: PwC analysis

Table 5 shows that there are capacity supply issues across a range of infrastructure categories relative to target rates of provision, with seven of the 11 infrastructure categories assessed as in deficit of supply.

2.2.2 *Audit and capacity analysis findings – public open space*

The results of the public open space are presented separately as:

- public open space has been considered on the basis of proportion to the total land area of the Huntingdale Activity Centre study area, rather than on a per-site basis
- *the boundary considered is the Huntingdale Activity Centre study area only* – and the analysis excludes passive open space such as pedestrian sidewalks.

Table 6 details the results of the audit of public open space and capacity analysis.

The audit findings address:

- Available sqm: the approximate total area of public open space currently within the Huntingdale Activity Centre study area only – this excludes passive open space such as pedestrian sidewalks.
- Total sqm served: the approximate total area of the Huntingdale Activity Centre, being the area that the existing open space should serve.

The capacity analysis findings address:

- Rate of provision: the total percentage of net developable area (NDA) that open space should cover to sufficiently provide for the Huntingdale Activity Centre (based on the provision rates in Table 4).
- Service area of existing sqm: the total area that the current provision of open space services based on the rate of provision.
- Utilisation: the service area of existing open space compared the total area requiring to be serviced, being the NDA of the Huntingdale Activity Centre.
- Surplus / deficit capacity: the surplus or deficit of the total land area being serviced by the current provision of open space compared with the required land area to be serviced.
  - Where there is excess capacity this may be used to serve the estimated future population growth of the Huntingdale Activity Centre.
  - Where land area is insufficient it determines the additional space that may be required to appropriately serve the area.

Table 6: Existing public open space & estimated utilisation

Community Infrastructure	Available sqm	Total sqm served	Rate of Provision	Service area of existing sqm	Utilisation	Surplus / deficit capacity
Open space @ 8% of NDA	36,700 sqm	1,450,800 sqm	8% of NDA	460,000 sqm	315%	-73,775 sqm

Source: PwC analysis

Table 6 shows that there is a deficit of public open space relative to target rates of provision.

3 Forecast of future community infrastructure needs

The purpose of this section of the report is to understand what kind and how much additional community infrastructure will be required to meet provision targets, given forecast population and employment growth in Huntingdale. This is achieved by:

- analysing additional community infrastructure demand following on from forecast employment and population growth estimates developed in the *Economic Background Report*
- assessing the extent to which additional demand can be accommodated by excess capacity identified in section 2.2 and section 2.2.2
- analysing where additional community infrastructure is required to meet target rates of provision.

3.1 Additional community infrastructure demand

The estimation of additional community infrastructure demand following on from forecast population and employment growth[12], net of any excess capacity that exists within existing surrounding community infrastructure, is shown in Table 7.

This provides details on the following:

- Existing excess capacity: any excess capacity in existing surrounding community infrastructure that has been identified as part of the survey results shown in Table 5[13].
- Additional demand from Huntingdale at 2040: the estimated future population growth for the Huntingdale Activity Centre that would demand community infrastructure type being considered (i.e. aged care only considers the population aged greater than 70 years).
- Net additional demand from Huntingdale at 2040: The additional demand from Huntingdale at 2040 remaining existing excess capacity has been used to service the estimated future demand.
- Additional units of infrastructure demanded: the estimate number of facilities that would be required to be provided to service the net additional demand at 2040 based on the provision rates for community infrastructure identified in Table 4.
- Unit: the type of building that could be provided to facilitate the community infrastructure need.

[12] See Table 2 and Table 3 for forecast population and employment growth

[13] Where the existing surrounding infrastructure is overutilised (i.e. the total population within the catchment of the infrastructure is greater than the total service capacity of that infrastructure, as identified in Section 12.2) it is unable to serve the estimated future population's needs and has not been considered further. Overutilised infrastructure should be considered in a more comprehensive needs analysis that should be undertaken prior to finalising a Precinct Structure Plan for the Huntingdale Activity Centre.

The output of this analysis ***only*** identifies ***additional*** community infrastructure needs relation to the estimated future population growth within the Huntingdale Activity Centre. It does not:

- Consider the impact of prevailing population growth beyond the study area boundaries.
- Calculate the demand for community infrastructure by the existing population

Table 7: Estimated additional community infrastructure demand

Community Infrastructure	Existing excess capacity	Additional demand from Huntingdale @ 2040	Net additional demand from Huntingdale @ 2040	Additional units[14] of infrastructure demanded	Unit
	(measured in population)				
Aged care	N/A – existing infrastructure over utilised	436	436	**0.44**	Purpose Built Facility
Community health centre / maternal health centre	32,000	3,340	0	**0**	Multi-purpose Facility
Kindergarten Sessional day care Long day care	N/A – existing infrastructure over utilised	384	384	**2.95**	Purpose Built Facility
Community centre or small multipurpose room	N/A – existing infrastructure over utilised	3,015	3,015	**0.50**	Multi-purpose facility
Hall or large multipurpose room	186,000	3,015	0	**0**	Purpose Built Facility
Neighbourhood house	N/A – existing infrastructure over utilised	3,015	3,015	**0.20**	House
Art gallery (or community arts facility)	N/A – existing infrastructure over utilised	3,015	3,015	**0.01**	Multi-purpose facility
Library	15,400	3,232	0	**0**	Library
Primary school	N/A – existing infrastructure over utilised	213	213	**0.71**	Primary School
Secondary school	N/A – existing infrastructure over utilised	195	195	**0.25**	Secondary School
Indoor sports stadium	N/A – existing infrastructure over utilised	3,340	3,340	**0.33**	Purpose Built Facility
Sports ground	N/A – existing infrastructure over utilised	3,340	3,340	**0.67**	Oval or Pitch

[14] A unit of community infrastructure being the proportionate number of typical facilities as defined in Table 4, for example Libraries are defined as provided at one library for every 30,000 people, in which case one unit would be equal to one library.

Community Infrastructure	Existing excess capacity	Additional demand from Huntingdale @ 2040	Net additional demand from Huntingdale @ 2040	Additional units[14] of infrastructure demanded	Unit
Other outdoor sports facilities	N/A – existing infrastructure over utilised	3,340	3,340	**0.48**	Multi-purpose Facility
Playground	20,800	3,015	0	**0**	Playground
Open space @ 5% of NDA	36,700 sqm	72,550 sqm	N/A	**35,850 sqm**	Sqm open space
Open space @ 8% of NDA		110,475 sqm	N/A	**73,775 sqm**	Sqm open space
Open space @ 10% of NDA		145,080 sqm	N/A	**108,380 sqm**	Sqm open space

Source: PwC analysis

Table 7 shows there is very little excess capacity in the existing infrastructure to support the future growth of Huntingdale.

A challenge in meeting future demand is the lumpy nature of the investment - service capacity of new community infrastructure facilities is typically large. Table 7 shows that while the population and employment growth forecast for Huntingdale will result in excess demand, the quantum of demand will be too small to provide the high utilisation to support new infrastructure. In the majority of cases were unmet demand is forecast, investment in facilities would result in up to 50% surplus capacity in 2040.

3.2 Additional community infrastructure provision to meet demand

Section 3.1 documents forecast additional demand for community infrastructure to 2040, based on forecast population and employment growth.

A traffic light system is used to prioritise the response to this demand in Table 8, noting the considerations around lumpy capacity investment.

In light of the lumpy nature of capacity investment in dedicated facilities, community infrastructure categories have been grouped for assessment where there are complementary or comparable building demands. This allows for identification of opportunities to address multiple community infrastructure needs with a multi-purpose facility. The aim is to balance the need to meet specific community infrastructure needs with the challenge of surplus capacity.

The categories are as follow:

- There is sufficient capacity in the existing facilities to service estimated future growth in the Activity Centre. These facilities have not been shown in Table 8.
- The estimated future growth in the Huntingdale Activity Centre population does not justify delivering a whole new facility – however, existing infrastructure is overutilised and should be more comprehensively assessed as part of the wider council area needs prior to finalising a Precinct Structure Plan.
- The estimated future growth in the Huntingdale Activity Centre population justifies the delivery a new facility to service only the needs of the future Huntingdale Activity Centre community.

Table 8: Summary of estimated community infrastructure needs

Community Infrastructure	Additional units of infrastructure demanded	Unit	Comments
Aged care	0.44	Purpose Built Facility	The projected growth in the Huntingdale Precinct is insufficient to demand a new facility. However, the analysis in section 2.2.1 indicates that existing Aged care facilities may be overutilised and justify the need for additional facilities to serve the wider community.
Kindergarten Sessional day care Long day care	2.95	Purpose Built Facility	The analysis indicates that there will be demand to provide up to 3 child care facilities to serve multiple child care purposes. This is driven by the forecast increase in young population, and demand from employment population. Refer to Section 4 for infrastructure strategy.
Community centre or small multipurpose room	0.50	Multi-purpose facility	These community needs could likely be addressed with a single small multi-purpose facility that would be approximately 70% utilized by the local community. Given existing overutilization of surrounding assets this may also serve the wider Monash community. Refer to Section 4 for infrastructure strategy.
Neighbourhood house	0.20		
Art gallery (or community arts facility)	0.01		
Total	**0.71**		
Primary school	0.71	Primary School	There is potential to deliver an additional school based on the additional demand from within Huntingdale, and should be considered in relation to the wider area's needs.
Secondary school	0.25	Secondary School	The projected growth in the Huntingdale study area is insufficient to demand a new facility. However, the analysis in section 2.2.1 indicates that existing secondary schools may be overutilised and justify the need for additional facilities to serve the wider community.
Sports grounds	0.67	Multi-purpose outdoor sports facility	The projected growth in the Huntingdale study area is insufficient to demand a purpose built facility, however a multi-purpose facility maybe be able to serve multiple sports and recreational purposes. A single outdoor facility to serve multiple needs. Refer to Section 4 for infrastructure strategy.
Other outdoor sports facility	0.48		
Total	1.15		
Indoor sports stadium	0.33	Purpose built sports facility	Outputs support the addition of a purpose built indoor sports stadium. However, no stadium was identified as existing within the area and so should be considered in terms of the wider needs of the surrounding areas.
Open space @ 5% of NDA	35,850 sqm	Purpose built open space or sporting facility	There is substantial demand for additional green space within the study area. Given other demands for outdoor sports and recreational facilities this can be delivered in conjunction to serve multiple purposes. Refer to Section 4 for infrastructure strategy.
Open space @ 8% of NDA	73,775 sqm		
Open space @ 10% of NDA	108,380 sqm		

Source: PwC analysis

Table 8 shows that the highest priority areas for investment are the following community infrastructure groupings:

- kindergarten/ sessional day care/ long day care
- community centre or small multipurpose room/ neighbourhood house/ art gallery (or community arts facility)
- sports grounds/ other outdoor sports facility
- public open space

4 Community Infrastructure strategy & costing

The purpose of this section is to suggest efficient and effective way to deliver the community infrastructure facilities prioritised in section 3.2[15] to support meeting target provision rates, by:

- testing the ability to group community infrastructure into a single facility where functional demands are similar or complementary.
- locating facilities in sites
    - that respond to the *Land Use Background Report* and to support its objectives of activation and amenity uplift
    - where the highest population density is targeted in the *Land Use Background Report* to optimise access
    - that support frequent and regular social interaction within the community to encourage social cohesion.

4.1 Child care strategy

The analysis identified that is a current and forecast future surplus of demand for facilities relative to target provision rates for the infrastructure grouping of child care, providing kindergarten, sessional day care, and long day care services (see section 2.2.1 and 3.2). All these services have homogenous needs in terms of function, and could be provided at key points across the study area to serve both residential and employee population demand.

The characteristics and build cost[16] of a typical facility is shown in Table 9.

Table 9: Potential child care strategy

Facility characteristics and needs	Facility size & cost	Example facility type
Provision of three facilities for long day and sessional child care and kindergarten uses • One facility to include a dedicated kindergarten room with capacity for 33 children. • Residential or retail locations. • Close proximity to residential and employment areas, but not within employment areas. • Close proximity to open space and	1 small facility (or room) of approx. 300 sqm Indicative build cost (excluding land): $600,000 - $720,000	

[15] Facilities and locations proposed only relate to those facilities that were estimated as being demanded in relation to the estimated future population growth of the study area.

[16] Costs relate to build cost only, and exclude land acquisition, consultants and other development costs. All costs obtained from Rawlinsons 2017 Construction Handbook.

sporting facilities.

- Likely privately provided with support from Local Government to ensure sessional service included.
- Typically high standard of fitout required.

1 medium facility of approx. 600 sqm

Indicative build cost (excluding land): $1,200,000 – $1,440,000

Proposed locations

0 – 10 years

Sessional / long day child care delivered as part of mixed-use retail development.

10 – 20 years

Purpose-built kindergarten / child care facility delivered in mixed use zone – high level of access to open space and accessible for both residential and employee communities. Opportunity to be delivered as part of a major mixed use residential development.

PwC analysis, costs sourced from Rawlinsons 2017 Construction Handbook

4.2 Community hub strategy

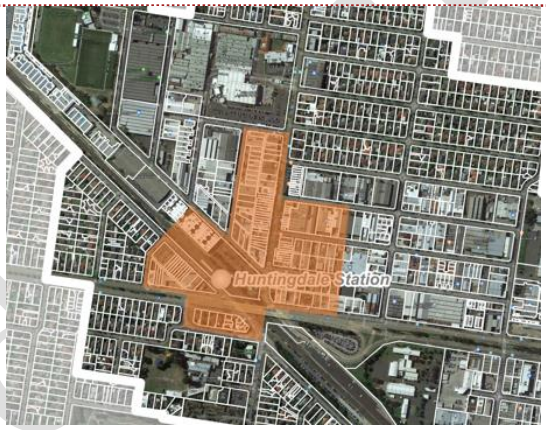
The analysis identified that there was current and forecast future surplus of demand relative to target provision rates for the grouping of arts facilities, a small multi-purpose facility or room for mixed community activities and uses, and a neighbourhood house (see section 2.2.1 and 3.2).

Whilst none of these needed a dedicated facility, they have homogenous functional needs and could be delivered in a single multi-purpose community facility that would be approximately 70% utilised by the local community. This would also likely play an important role in positively developing the Huntingdale community.

The characteristics and cost[17] of a typical facility is shown in Table 10.

[17] Costs relate to build cost only, and exclude land acquisition, consultants and other development costs. All costs obtained from Rawlinsons 2017 Construction Handbook.

Table 10: Potential community hub strategy

Facility characteristics and needs	Facility size & cost	Example facility type
Provision of 1 small multi-purpose facility • Basic fitout. • Multiple rooms. • Access to public transport and high levels of local retail and service amenity is preferred. • Central location to develop social cohesion and sense of local community is preferred.	300 – 500 sqm Indicative build cost (excluding land): $500,000 - $600,000	
Proposed locations		
Huntingdale Road will be the vibrant heart of the study area. This area will become a central community location with high levels of access to amenity and public transport. Furthermore, it currently has minimal existing infrastructure. Current Industrial Zoning off retail strip, and projected high turnover of land represents opportunity for council to acquire low cost land.		

PwC analysis, costs sourced from Rawlinsons 2017 Construction Handbook

4.3 Open Space & Recreational Space strategy

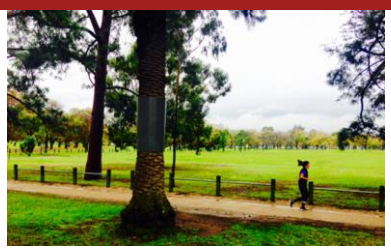
The analysis identified that there was a significant current and forecast future surplus demand relative to target provision rates for additional open space and multi-purpose outdoor sporting facilities.

Open space may include passive open space and green open space – where it relates to green open space it should provide for sports and recreational needs as well. Location of open space is important to provide opportunities for extensive exercise, emphasise pedestrian flows and integrate with existing trail networks.

The characteristics and cost[18] of a typical facility is shown in Table 11.

[18] Costs relate to build cost only, and exclude land acquisition, consultants and other development costs. All costs obtained from Rawlinsons 2017 Construction Handbook.

Table 11: Open space strategy

Facility characteristics and needs	Facility size & cost	Example facility type
Green Open Space • Provide for a mix of activities, including football oval / soccer pitch, including flood lights, irrigation etc. • Connect with wider trail network to enable extensive recreation. • Provide WSUD and biodiversity function. • Co-location with other community facilities to foster social cohesion and community.	1 green open space / sporting field Indicative build cost (excluding land): $1,100,000 - $1,700,000	
Passive Open Space • Passive Open Space should be in locations of high pedestrian activity to create safety and ensure space is utilised. • High levels of street infrastructure and public art.	Passive open space (i.e. paved and landscaped area) 10,000 -15,000 sqm Indicative build cost (excluding land): $1,200,000 – $1,800,000	
Multipurpose outdoor sporting facility • Serve multiple purposes, including basketball, netball, and unstructured play.	Multipurpose outdoor court 500 – 600 sqm Indicative build cost (excluding land): $40,000 - $45,000	

Proposed locations

Green open space:

- Locations aim to improve pedestrian flow and connect with wider trail network along the rail line and between Huntingdale and Oakleigh
- Location near areas of high residential density that will benefit most from green open space.
- Projected development activity may create opportunity for spaces to be funded by developer contributions.

Passive open space will be partially delivered through improved sidewalks and street infrastructure. This is addressed within the Urban Design Framework Background Report.

PwC analysis, costs sourced from Rawlinsons 2017 Construction Handbook

Appendices

Appendix A Analysis Assumptions

Assumptions

PwC referred to the following reports in providing benchmark analysis data of various community infrastructure needs.

- Key reports referenced to determine the GFA requirements of various facilities based on best practice and benchmarking, include:
  - Fishermans Bend Community Infrastructure Plan, 2017
  - Fishermans Bend Preliminary Community Infrastructure Needs Assessment, 2012
  - Lilydale Community Infrastructure Needs analysis, 2018
  - Former Holroyd Council Developer Contributions Plan, 2013
  - Wydnham City Council Guide to Social Infrastructure Planning, 2009
  - Mooroondah City Council Physical & Community Infrastructure Overview, 2015
- Other reports references in developing methodology
  - Monash Open Space Strategy, 2013
  - Monash Open Space Strategy, 2017 [Draft for consultation]
- All costs based on Rawlinsons 2017 Construction Handbook

Appendix B Detailed Methodology

The following methodology was developed with reference to the community infrastructure needs analysis that have been detailed in Appendix A. However, this report's purpose is to give an initial and high level view of the future infrastructure needs that will occur under the development scenario estimated in the PwC *Economic Background Report* and *Land Use Background Report* reports. As such this report less detailed and should not be considered a substitute for a comprehensive needs analysis. This should be undertaken prior to finalisation of a Precinct Structure Plan.

Survey of existing community infrastructure

The methodology described below corresponds to the work performed in Section 2.

The following steps were undertaken to perform the community infrastructure survey:

a) Identify all community infrastructure 'features' within the defined catchment, being 1,600 metres from the Huntingdale Activity Centre study area boundary.

   This was done using GIS software to perform a comprehensive sweep of all data points occurring within the study area catchment. This was done using DELWP Features of Interest data, manipulated by PwC to exclude those items that did not relating to community infrastructure as defined in Table 1.

b) Determine the aggregate total of population that fall within the catchments of each community infrastructure.

   This was done using GIS software to calculate the total population count of all 'mesh blocks' that fall within a 1,600 metre catchment of each feature identified. This was done using ABS 2016 census data.

c) Calculate the total service capacity of all features identified.

   This was calculated by multiplying the total count of features identified (by community infrastructure type) by, the, per unit service capacity (or provision rate) for the infrastructure type, as defined in Table 4. In lieu of available Monash Council provision rates, these were developed as an amalgamation of community infrastructure needs analysis reports reviewed as part of the report preparation (listed in Appendix A).

   For example, if three small community centres were identified, each with a provision rate of one facility to 6,000 people, then the total capacity of those facilities would be 18,000 people.

d) Calculate the utilisation of identified infrastructure and estimate potential excess capacity.

   Using the previous steps, utilisation was calculated by the ratio of total population following within the catchments of a community infrastructure type (calculated in section b) to the total capacity of all community infrastructure of that type (calculated in section c).

   Excess and insufficient capacity was calculated as the difference between the total population falling within the catchment of each infrastructure type (calculated in

section b) and the total service capacity of all community infrastructure of that type (calculated in section c).

Where the calculation provides a positive figure, this implies that the total service capacity of that community infrastructure is greater than the total population it is serving within its catchment, and consequently there is excess capacity that the future Huntingdale population could used (based on PwC *Economic Background Report* estimated future population at 2040).

Note that this methodology differs in relation to public open space (excluding passive space). In this instance the provision rate is a percentage of the net developable area (NDA) of the study area. Three rates have been provided based on the Fishermans Bend needs analysis which provides for a variety of population densities and employment mixes.

Forecast of future community infrastructure needs

The methodology described below corresponds to the work performed in Section 3.

The following steps were undertaken to forecast the estimated future needs for community infrastructure. Estimated future population growth and consequent demand is provided by the PwC *Economic Background Report* report.

a) Calculate the total applicable population that would demand each infrastructure category.

   This step calculates the total population that would demand a particular infrastructure category, using the estimated future population growth. This considers only the forecast additional population, and not the existing population, as the purpose is to calculate the *additional* community infrastructure that would be needed. The analysis does not comment on the needs of the existing population.

   The applicable population (by age and population type, i.e. residential or employment population) for each community infrastructure type is defined in Table 4. Population distribution by age and employment are provide in Table 2 and Table 3. Note that the employment population only considers 78% of the estimate future population growth, as 22% of this population work and live in the area, and so are already considered within the residential population figures. The populations are broken down by age category according to the age distribution provided by the ABS 2016 Census data.

b) Calculate the net demand for infrastructure where excess capacity currently exists.

   Net demand calculates the remaining demand generated by estimated future population growth where there is excess capacity in the existing community infrastructure in the surrounding area, as identified in the survey of existing community infrastructure. This is calculated as the additional demand based on estimated future population growth less the excess capacity (if applicable) of surrounding infrastructure. This implies that where excess capacity exists, it may be able to serve the community infrastructure needs for the future population.

c) Calculate the additional 'units' of infrastructure that should be provided to satisfy this demand.

   The additional units of infrastructure demands is based on the net additional demand that would be generated by the estimated future population growth for the Huntingdale Activity Centre, after utilising any excess capacity in existing infrastructure identified in the survey section.

The additional units demanded are estimated by dividing the total net additional demand figure (calculated in section b) by the per unit rate of provision for that community infrastructure type defined in Table 4. For example if 3,000 people are estimated to need a small community centre in the future, and the provision rates for a community service suggest one community centre to every 6,000 people, then this would justify 50% of a community centre to be required by this estimated future population growth.

d) Group community infrastructure types that share similar or complementary functions need to determine where whole facilities (i.e. demand equals one or more) could be provided to serve multiple service needs. This will help to provide facilities for community groups where the demand alone would not justify the delivery of a facility.

Community infrastructure strategy and costing

The methodology described below corresponds to the work performed in Section 4.

The community infrastructure strategy uses the estimated demand for new facilities to suggest potential locations, sizes and costs to deliver new community infrastructure. These steps are estimated as following:

a) Determine the potential location for new community infrastructure facilities. The following principles were applied in developing the community infrastructure locations:

Utilising the findings of the PwC *Land Use Background Report* report to propose locations for infrastructure where:

- The facility location would be agreeable with the proposed future use of the area, such as close to retail and services amenity, residential areas and public transport.
- The facility was not located in areas that have been defined in the *Land Use Background Report* report as being constrained from development, such as areas occupied by high value industries.
- The facility is located in areas that minimise the impact of North Road and the rail line as a barrier to access for populations north and south of these.
- The facility is located in areas where population density is expected to occur and there will be a greater demand for community infrastructure.
- The facility is located in areas where there is a high turnover of land and change of land use predicted, possibly providing opportunities for cheaper land acquisition.
- The facility is located within proposed development opportunities such as a mixed use development.

Utilising the findings of the SJB *Urban Design* report to propose locations that align with the movement and access analysis performed.

Clustering complementary community infrastructure facilities together to promote positive community development by fostering high levels of use, and frequent and regular interaction with the local community.

b) Calculate size and cost of the proposed community infrastructure facilities. This was done using the following resources and methods:

Facility sizes were estimated with reference to the community infrastructure needs analysis reports listed in Appendix A. These reports provide recommendations of size of various facilities with reference to the population that these facilities will service, producing a rate per sqm of community infrastructure of a particular type per person. This rate was then applied to the Huntingdale Activity Centre population that was being served by that particular community infrastructure type.

Cost was estimated using the Rawlinsons 2017 Construction Handbook, which provides per square metre construction costs for a range of residential, commercial and civic construction projects. Costs stated do not include land acquisition, consultant costs and other development costs. These costs will need to be validated by a Quantity Surveyor.

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