

# **Pakenham East Precinct Structure Plan – Economic Assessment**

**November 2015**

**Prepared by Tim Nott for Cardinia Shire Council**

## Report Data

Version	Date	Approved By	Sent to
Draft	11/11/2015	TN	Scott Sibly, Cardinia Shire Council
Final	18/11/2015	TN	Scott Sibly, Cardinia Shire Council

Prepared by:

Tim Nott  
economic analysis + strategy  
ABN: 29 590 304 665

20 Scotia Street  
West Preston  
Victoria 3072  
Australia

Tel: 0401 993 451  
Email: [tim@timnott.com.au](mailto:tim@timnott.com.au)  
Web: [www.timnott.com.au](http://www.timnott.com.au)

## TABLE OF CONTENTS

Pakenham East Precinct Structure Plan – Economic Assessment: summary .....	i
1 Introduction .....	1
1.1 Background .....	1
1.2 The issues dealt with here .....	1
2 Pakenham East.....	2
2.1 The PSP area.....	2
2.2 Pakenham East Population .....	2
3 Demand for Retail Development .....	4
4 Proposed Activity Centres in Pakenham East .....	6
4.1 Centres in the Precinct Structure Plan.....	6
4.2 Parklea Town Centre.....	7
4.3 Pakenham East convenience centre .....	8
5 Broad Retail Assessment of proposed centres .....	10
5.1 Trade areas.....	10
5.2 Broad estimate of retail demand .....	12
5.3 Notional composition of the centres .....	13
5.4 Conclusions on the centre location options .....	15
6 Employment Provision .....	17
6.1 Jobs required by Pakenham East residents .....	17
6.2 The employment target .....	18
6.3 Employment spaces within the precinct.....	19
6.4 Employment supported elsewhere in Cardinia .....	20
6.5 Summary of employment generation.....	21
7 References .....	22

## **PAKENHAM EAST PRECINCT STRUCTURE PLAN – ECONOMIC ASSESSMENT: SUMMARY**

Cardinia Shire Council is working with the Metropolitan Planning Authority on a precinct structure plan (PSP) for the Pakenham East area which is located at the eastern edge of the South East Growth Corridor and the rapidly growing town of Pakenham. As part of the planning process, Council has sought advice on the appropriate size and location of retail activity centre(s) in the precinct and on the contribution that those centres are likely to make to the provision of jobs for local residents. This report provides that advice.

The key findings of the report are:

- 1) At full development, around 2036, the Pakenham East precinct will have approximately 5,930 dwellings and a population estimated at 16,090.
- 2) This population will be sufficient to warrant two neighbourhood level activity centres but not a sub-regional centre. This corresponds to the activity centre network indicated in the draft precinct structure plan for the area which shows a local town centre (neighbourhood centre) and local convenience centre (small neighbourhood centre) serving the area.
- 3) A catchment analysis for this report shows that, at full development, the local town centre will be serving 14,600 people in a trade area that comprises the eastern half of the Pakenham East precinct and as far east as the township of Garfield. The centre will be able to provide the closest full-line supermarket for these residents as well as a variety of other retail, commercial and community services. The spending of the trade area residents will support, as a broad estimate, a full-line supermarket, a further small supermarket and a wide variety of convenience stores that could be expected in a neighbourhood level centre. The total retail floorspace of the centre could be around 9,100 square metres. This is very close to the floorspace proposed by the proponents of the Parklea local town centre (8,900 square metres of retail space and 13,600 square metres overall).
- 4) A local convenience centre in the location identified in the draft precinct structure plan would have a trade area covering the south western quadrant of the precinct and a little beyond the precinct boundary to the west. The trade area population of 6,600 at full development would support retail provision of 4,100 square metres. This would be sufficient for a medium-sized supermarket and a variety of specialty stores.
- 5) The catchment analysis suggests that, given the current network of activity centres, there will be sufficient demand for both centres to be viable. In addition, without the local convenience centre, many residents of the precinct will be an unacceptable distance (up to 2.5 km) from a food and grocery service.
- 6) An assessment of the network coverage suggests that there may be a need to provide a local activity centre to service the residents of the north-west part of the precinct who will otherwise be much more than 1 kilometre from any shops. This local centre could take the form of a convenience store to provide top-up groceries and coffee shop. It need be no more than 300 square metres and would have a negligible impact on the retail trade of the other centres in the network. Such a centre need not be identified in the PSP but could be dealt with by permit application at an appropriate time.
- 7) The residents of Pakenham East at full development will likely require around 7,900 jobs. Council and MPA policy is to encourage the provision of one job per dwelling within the municipality in order to reduce commuting and improve urban sustainability. For Pakenham East therefore approximately 5,900 job opportunities will need to be created within Cardinia by

full development in order to meet the target. I have estimated that given good planning around 3,700 new jobs could be expected in order to adequately serve the new population. These jobs would be located in the activity centres and schools within the precinct, in the Pakenham town centre and the developing industrial areas. This leaves a gap of 2,200 jobs that will need to be found in trade exposed activities and regional services.

# 1 INTRODUCTION

## 1.1 Background

Cardinia Shire Council and the Metropolitan Planning Authority (MPA) are preparing a precinct structure plan (PSP) for the Pakenham East development area. As part of the planning process, Council has sought advice on the appropriate size and location of retail activity centre(s) in the precinct and on the contribution that those centres are likely to make to the provision of jobs for local residents. This report provides that advice.

## 1.2 The issues dealt with here

This report looks at the following questions:

- What will be the demand for retail goods and services from the population of the Pakenham East precinct and how much of that can be satisfied locally?
- What is the appropriate network of activity centres in the Pakenham East precinct?
- What will be the most appropriate size and composition of the activity centres in Pakenham East?
- How many jobs will be needed by the precinct population and how many job opportunities can be expected locally to reduce the need for high levels of commuting?

### Disclaimer

The analysis in this report is broad and is intended to provide a general indication of retail, activity centre and employment demand for the Pakenham East precinct to allow Council and the MPA to plan centre locations and sizes. The report has relied on secondary sources and the best estimates of the author. The reader should bear in mind that there is no certainty in future predictions. The evolving population and employment situation will need to be monitored in order to ensure that the predictions remain on track.

## 2 PAKENHAM EAST

### 2.1 The PSP area

The Pakenham East Precinct Structure Plan (PSP) area is shown in the draft drawing below. The precinct is on the eastern fringe of the Pakenham urban area and is located north of the Princes Freeway and either side of the Princes Highway.

**Figure 1: Draft Pakenham East Precinct Future Urban Structure**



Source: MPA, unpublished draft 2015 (REPLACE WITH REVISED PLAN WHEN AVAILABLE)

### 2.2 Pakenham East Population

As the PSP is still being finalised a definitive estimate of the population capacity of the Pakenham East precinct is not possible. For the purposes of this work, Council officers have estimated the residential development capacity of the precinct and I have calculated the population capacity of the precinct at full development using standard estimates of persons per dwelling. These results are shown in the table below.

**Table 1: Estimate of population capacity at full development, Pakenham East PSP**

<b>Dwelling type</b>	<b>Dwellings</b>	<b>Persons per household</b>	<b>Population</b>
Standard separate dwellings	4,515	2.8	12,642
Medium density dwellings	988	2.2	2,174
Large lot dwellings	424	3.0	1,272
<b>Total</b>	<b>5,927</b>	<b>2.7</b>	<b>16,088</b>

Source: Cardinia Shire Council; Tim Nott

I expect that full development will be achieved by around 2036. This broadly accords with the forecasts of .id consulting prepared for Council in February 2015. These had the population of the precinct reaching 16,445 by 2036, although the forecasters may have been expecting a more dense form of development than is now being planned for. Nevertheless there are many factors that influence the timing of housing development, external and internal, and the rate of development should be monitored in order to adjust the forecasts as required.



### 3 DEMAND FOR RETAIL DEVELOPMENT

The incoming residents of the Pakenham East precinct will have demands for a variety of retail goods and services, some of which can be satisfied locally within the precinct. This section of the report looks at the demands which the precinct residents will generate and how the activity centre network could be expanded to respond. Subsequent sections look at the ways in which the proposed network inside the precinct will be supported outside the precinct.

The hierarchy of activity centres for the Pakenham growth corridor is set out in work for Council by Macroplan (Macroplan, 2007). This work is now rather dated in that the hierarchy takes its lead from the Melbourne 2030 metropolitan strategy which has since been superseded; and it was undertaken prior to the inclusion of Pakenham East as a growth precinct. Nevertheless, the work is useful in that the functional levels of the hierarchy remain the same, that is:

- Principal (regional or sub-regional) activity centre, in this case, the Pakenham town centre with capacity for 60,000 square metres of retail floorspace by 2021, including a wide range of comparison shopping
- Major (sub-regional) activity centre, with up to 40,000 square metres of retail space, including a discount department store, supermarkets and a range of specialty stores
- Neighbourhood activity centre, typically with 3,000 to 7,000 square metres of retail space and including a supermarket
- Special/bulky goods centre

Extrapolating from work undertaken for the Growth Areas Authority (now the MPA) by Essential Economics (2011), I have previously estimated how much floorspace is supported by the retail spending of each person living in a growth area at each level in the hierarchy (Nott, 2013).

**Table 2: Notional retail floorspace supported per person, metropolitan growth areas, to 2036**

Level in the activity centre hierarchy	Share of floorspace supported at each level of the hierarchy	Floorspace per person	Typical catchment population	Typical size of retail provision
	%	square metres	no.	square metres
Regional	25%	0.58	150,000+	90,000+
Sub-regional	43%	0.99	40,000+	40,000+
Neighbourhood	27%	0.62	8,000-12,000	5,000-8,000
Other (local centres and stand-alone bulky goods precincts)	5%	0.12	Varies	Varies
Total	100%	2.30		

Source: Essential Economics, 2011; Tim Nott

Note: The share of floorspace is different from the share of retail sales given the varying level of sales per square metre in different retail categories. For example, neighbourhood centres usually have a higher share of total retail sales than of floorspace since these centres have a larger share of food and grocery retailing which typically has higher levels of sales per square metre.

Using these standards, it is possible to calculate the notional requirement for retail provision to serve the Pakenham East precinct, and this is shown in the table below.

**Table 3: Notional floorspace supported by Pakenham East residents at each level in the activity centre hierarchy, at full development**

Level in the hierarchy	Floorspace	Activity centre
Regional	9,331	Fountain Gate/Pakenham Town Centre
Sub-regional	15,927	Pakenham town centre
Neighbourhood	9,974	Potential for new centres within the precinct
Other (local centres and stand-alone bulky goods precincts)	1,931	
Total	37,162	

Source: Tim Nott

This table shows that the residents of Pakenham East will notionally support 37,200 square metres of retail floorspace at full development of which, approximately 10,000 square metres is at neighbourhood level which could be provided within the precinct in a new centre(s). The table also shows that the number of people in Pakenham East is not sufficient to support a new sub-regional centre: such a centre would require at least 40,000 square metres of retailing but only 16,000 is supported by these residents. This demand will support expansion of the Pakenham town centre. Similarly, the regional retail floorspace supported will likely be provided in the nearest regional level centres – Fountain Gate and, possibly, Pakenham town centre, which will be taking on some regional functions by the time Pakenham East is fully developed.

The neighbourhood level retailing of 10,000 square metres would be sufficient for two full-line supermarkets and a wide variety of specialty stores if provided within the precinct. Some of this demand may be satisfied in nearby neighbourhood centres outside the precinct, including Cardinia Lakes, for example. Equally though, the neighbourhood centres within the precinct could service residents outside the precinct. A new neighbourhood centre in Pakenham East could provide the closest full-line supermarket for residents of Mary Knoll, Nar Nar Goon and Tynong, for example.

## 4 PROPOSED ACTIVITY CENTRES IN PAKENHAM EAST

### 4.1 Centres in the Precinct Structure Plan

The draft precinct structure plan shown in Figure 1 identifies two activity centres in Pakenham East:

- a local town centre (neighbourhood centre) on the Princes Highway just to the west of Hancock's Gully
- a local convenience centre (small neighbourhood centre) in the south west of the precinct

This plan identifies:

- the need for one significant neighbourhood centre that will serve, broadly, the eastern half of the precinct
- that people living in the north west of the precinct will be quite close to the existing Cardinia Lakes neighbourhood centre
- that residents of the south west of the precinct will be up to 2.5km from the nearest grocery service and that a subsidiary centre is required to serve the area

In locating neighbourhood activity centres a key principle is for the network to minimise car travel by having most residents living within a 1km radius of a centre (see, for example, the Growth Areas, Authority (GAA), 2009 and the standard in the adjacent box).

In a fully developed urban growth area without major constraints, this standard implies that the average neighbourhood centre will have a catchment population of around 10,000 people. A

catchment population of 10,000 people would generally allow a supermarket of between 3,400 square metres and 3,900 square metres depending on the turnover expectations of the operator and the share of food and grocery spending captured by the supermarket compared with other local retailers<sup>1</sup>.

*80-90% of households should be within 1km of a town centre of sufficient size to allow for provision of a supermarket*

Standards for locating town centres, Growth Areas Authority, 2009

A supermarket of more than 3,000 square metres is generally considered a full-line supermarket, able to provide a comprehensive food and grocery service to its catchment. The 1km radius therefore allows for a viable full-line supermarket provision in most cases.

Supermarket operators have been increasing the typical size of new supermarkets over the past decade and more in order to capture market share and to take advantage of economies of scale. Currently, 4,200 square metres is the preferred size for the two main operators which provide full-line supermarkets. However, this can be varied to fit the circumstances, with full-line supermarkets from 3,200 square metres currently being developed around Victoria.

There is therefore a tension between the aim of maximising viability by the supermarket operators and maximising accessibility for residents. The standards outlined by the GAA are a reasonable compromise between these two aims and should be the standard where possible.

<sup>1</sup> This calculation is based on \$5,400 spending per person per year on food, groceries and liquor; 70% captured by the neighbourhood centre; 80% to 90% of this captured by the supermarket with a retail turnover density (that is sales per square metre) of \$8,800 per year.

## 4.2 Parklea Town Centre

The Local Town Centre (neighbourhood centre) identified in the draft precinct structure plan for the area has been the subject of further design work by the proponent. The proposed design of the centre – to be called the Parklea town centre - is shown in the figure below.

**Figure 2: Draft proposed Parklea town centre, Pakenham East**



Source: i2C (architects) unpublished via Council

This plan shows an attractive centre design with the following features:

- a main street with commercial uses on both sides
- a pedestrianised town square and other central pedestrian areas
- a large supermarket as the anchor tenant
- integration of retail, commercial and community uses
- connection to linear open space
- visual connection to the Princes Highway, the main road through the precinct
- car-parking to the rear of the uses on the main street
- medium density housing surrounding the centre

In my view, the overall design successfully blends the desire to create interesting and attractive places – pedestrian plazas, links with open space, creation of a main street - with the commercial requirements of the major user, although I have some concerns that there is a large amount of undifferentiated small retail space (which is not necessarily supported by likely demand – see Section 3). I have three suggestions about the design:

- Positioning more active uses at the centre of the pedestrian precinct would add to the vibrancy and use of the space. The current plan indicates that this central position will be taken up mainly by medical uses. These could be pushed to the edge of the site such as the buildings at the western end of the centre, although some nearby quiet open space would be beneficial.
- There is potential to have two storey developments providing housing or offices above some of the retail/commercial spaces, particularly at the western end of the centre.
- There may be potential for another smaller supermarket to locate in the centre such as an ALDI or IGA. Nominating a site for such a use would be useful in order that the loading bay and truck access can be incorporated into the design. (To be clear, I anticipate that such a use would take up some of the undifferentiated retail space shown on the plan rather than be an addition to the existing retail stock.)

The proposed floorspace of the Parklea town centre at full development is shown in the table below.

**Table 4: Floorspace of proposed Parklea town centre**

Activity	Floorspace sqm
Supermarket	4,200
Specialty retail	4,685
Total retail	8,885
Commercial	900
Medical	1,650
Childcare	1,000
Community centre (CAC)	1,200
Total area	13,635

Source: i2C, unpublished

The proposed centre is to have a total of 13,600 square metres of activity space of which 8,900 square metres or 65% is retail. This represents a progressive level of non-retail space, creating the opportunity for a truly mixed use centre. This will have benefits in terms of urban sustainability through the reduction of trips and the creation of a multi-functional community hub.

### 4.3 Pakenham East convenience centre

As yet, there is no design for the Pakenham East convenience centre shown in the draft precinct structure plan.

The following section provides an assessment of the actual catchment that will be served by Parklea town centre and the Pakenham East convenience centre (small neighbourhood centre) and the

consequent demand for retail floorspace. This will allow us to understand whether or not the proposed centres will be viable and their likely composition.

## 5 BROAD RETAIL ASSESSMENT OF PROPOSED CENTRES

This section provides a broad retail assessment of the centres proposed in the precinct structure plan looking at their catchment populations at full development and using per capita retail averages to determine floorspace supported.

### 5.1 Trade areas

In calculating trade areas for centres in a developing network, I use a method which assumes mutually exclusive trade areas in which residents use the closest centre for their particular retail needs. For example, I assume that shoppers use the closest supermarket when all they require is food and groceries. The boundary between trade areas is the line of equal travel time separating two centres that are able to provide an equivalent service. Whilst understanding that shoppers sometimes travel in non-predictable ways and not always to the closest centre, this method allows new activity centres to be sized appropriately given their catchment population. This method is the best means of ensuring equity and accessibility of provision across growth areas.

In this case, two network options are tested:

Option 1 looks at the introduction of only the Parklea town centre

Option 2 looks at the introduction of both Parklea town centre and the Pakenham East convenience centre.

The following maps identify the surrounding centres that have significant supermarkets and plot which Statistical Area 1s (SA1s), or defined development cells within the PSP, are closest to which centre.

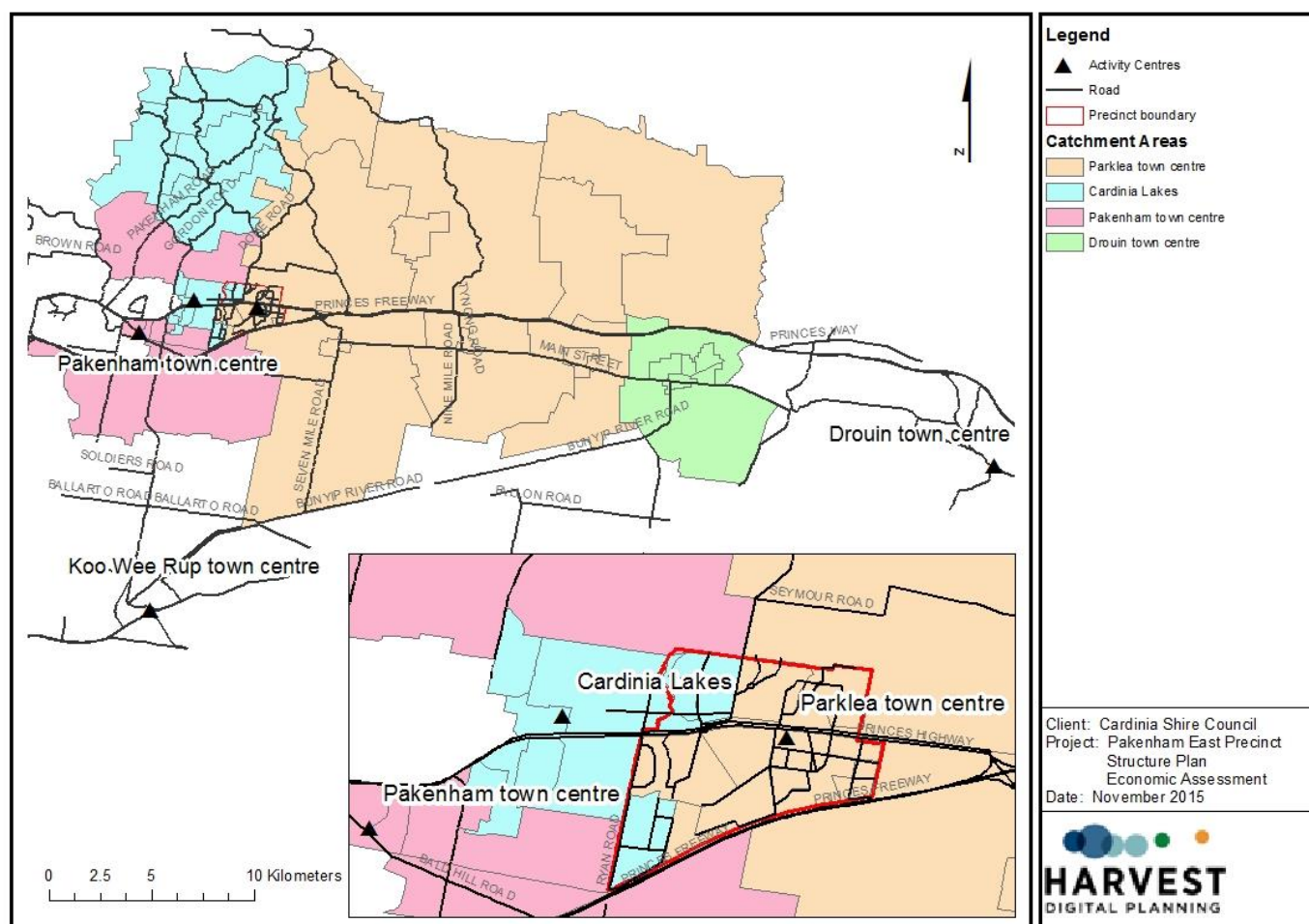
The 2036 population of the SA1s has been estimated with reference to the growth predicted by .id consulting for the corresponding forecast areas (.id consulting, 2015). The population of the development cells in the PSP area at full development has been estimated from the dwelling numbers in each cell estimated by Council.

The main surrounding centres that constrain the trade area of the centres within the PSP are:

- Cardinia Lakes
- Pakenham town centre
- Koo Wee Rup town centre
- Drouin town centre

There are small supermarkets at Bunyip and Garfield but these mainly provide a local top-up service and would be unlikely to compete directly with full-line supermarkets in the nominated centres.

Figure 3: Option 1 - trade area of Parklea town centre



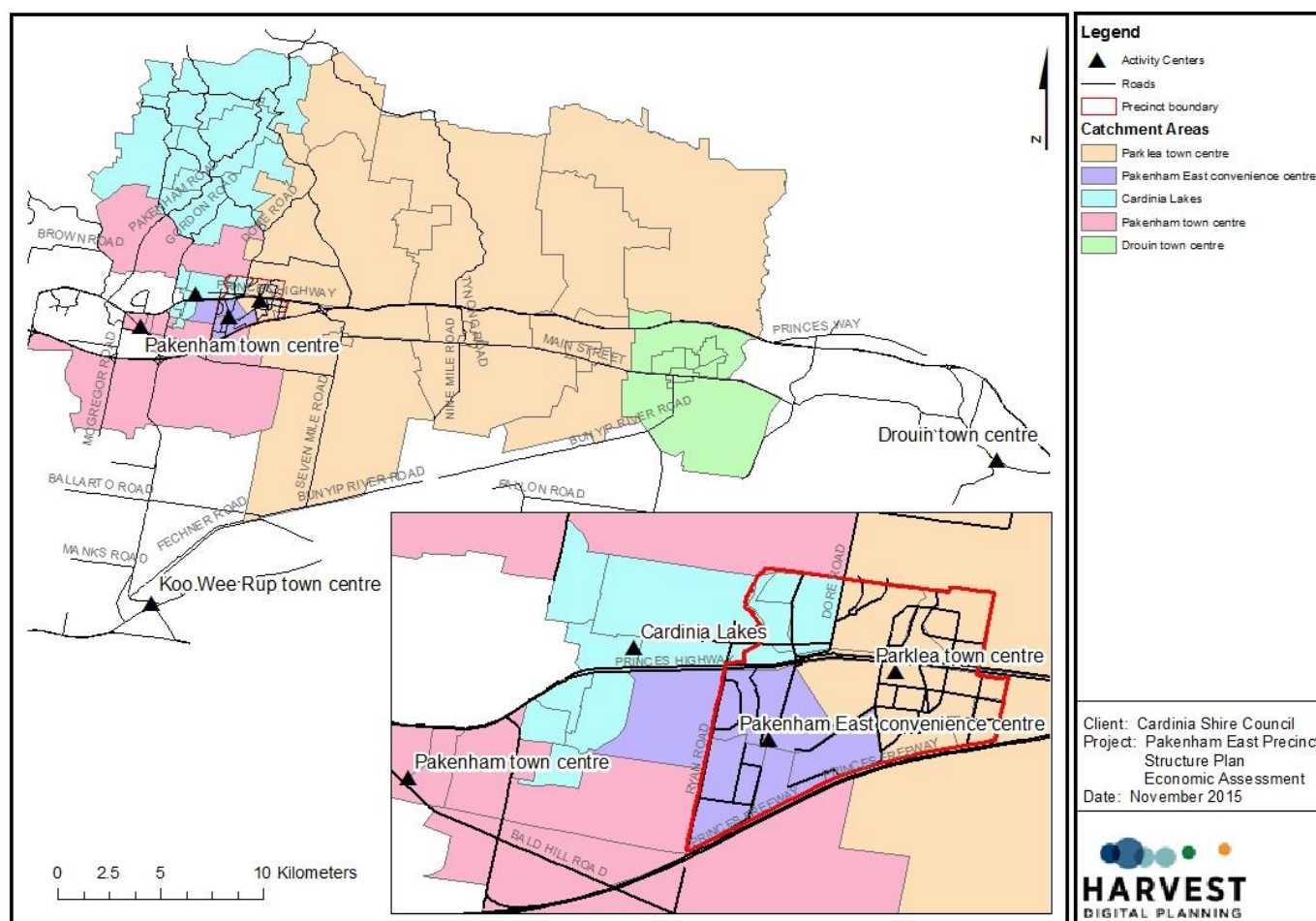
Source: Harvest Digital Planning for this project

Note: Only the entire trade areas of the two centres within the Pakenham East precinct are shown. Blank areas are trade areas of other centres.

In **option 1**, the trade area of Parklea town centre includes most of the PSP area except for the north western and south western extremities which are closer to Cardinia Lakes neighbourhood centre. The trade area of Parklea extends well to the east, including the townships of Garfield, Tynong and Nar Nar Goon as well as Maryknoll and areas up to the southern foothills of the Dividing Range. The population of this trade area is estimated here to be 17,900 at full development, up from around 6,500 currently.



**Figure 4: Option 2 - trade areas of Parklea town centre and Pakenham East convenience centre**



Source: Harvest Digital Planning for this project

Note: Only the entire trade areas of the two centres within the Pakenham East precinct are shown. Blank areas are trade areas of other centres.

In option 2, the trade area of Pakenham East convenience centre covers the south west quadrant of the PSP area and extends a little beyond the PSP boundary to the west. The population of this trade area is estimated to be 6,600 at full development, up from around 400 at present.

The trade area of the Parklea town centre covers the eastern half of the PSP area and extends to Garfield in the east. The population of this trade area is estimated to be 14,600 at full development, up from 6,500 at present.

## 5.2 Broad estimate of retail demand

Using the population figures above, and the broad standard of 0.62 square metres per person at the neighbourhood level, the following table provides an estimate of overall demand for retail floorspace in each centre.

**Table 5: Broad estimate of retail floorspace required at full development**

	Parklea town centre	Pakenham East convenience centre
<b>Option 1</b>		
Catchment population	17,902	-
Retail floorspace per person at neighbourhood level (sqm)	0.62	
Total retail floorspace required (sqm)	11,100	
<b>Option 2</b>		
Catchment population	14,647	6,572
Total retail floorspace required (sqm)	9,100	4,100

Source: Tim Nott

If Parklea town centre is the only centre provided in the precinct, as under option 1, the proposed retail floorspace of 8,900 would seem to be too little compared with the notional demand of 11,100 square metres at full development.

The proposed retail floorspace in Parklea town centre at full development appears to be more appropriate for option 2 which also allows for a small neighbourhood centre (convenience centre) in the south west of the precinct.

### 5.3 Notional composition of the centres

From section 3.1 above, I have used an average demand for retail floorspace of 2.3 square metres per person at full development. The following table breaks that down by retail type using the current share of space in each category. The table also uses a typical share of floorspace provided at the neighbourhood level to arrive at an average retail floorspace per person in each category that would typically be provided at the neighbourhood level of the retail hierarchy.

**Table 6: Estimate of retail floorspace per person in neighbourhood centres**

Retail activity	Typical floorspace per person	Notional floorspace in neighbourhood centres	
	sqm	%	Sqm
Food, groceries and liquor	0.67	67%	0.45
Non-food goods	1.15	7%	0.08
Food catering	0.36	15%	0.05
Retail services	0.11	28%	0.03
Total retail	2.30	27%	0.62

Source: Tim Nott

The following table applies the average floorspace per person to options 1 and 2 for the Pakenham East precinct.

**Table 7: Notional retail mix for each option in Pakenham East at full development**

Retail type	Option 1		Option 2	
	Floorspace per person	Parklea town centre	Parklea town centre	Pakenham East convenience centre
	sqm	sqm	sqm	sqm
Food, groceries and liquor	0.45	8,100	6,600	3,000
Non-food goods	0.08	1,400	1,200	500
Food catering	0.05	1,000	800	400
Retail services	0.03	600	500	200
Total retail	0.62	11,100	9,100	4,100

Source: Tim Nott

Under **option 1**, the Parklea town centre would be capable of hosting two full-line supermarkets and a wide range of specialty stores. In addition to the retail space, neighbourhood centres should accommodate a variety of non-retail spaces in order to be multifunctional community hubs. Calculating the supply and demand for the variety of non-retail activities that may wish to locate in neighbourhood centres is difficult to do with any accuracy and the usual approach is to allow a proportion of the total floorspace of the centre to be devoted to non-retail activities. The Growth Areas Authority (now the MPA) determined that 30% of space in neighbourhood centres was a reasonable target that would provide space for both desirable commercial and community facilities (see Essential Economics, 2011). Allowing for 30% of the total centre space to be non-retail (excluding schools), the total space in the Parklea town centre under option 1 would be approximately 15,900 square metres.

Option 1 provides for a very large neighbourhood centre somewhat larger than that envisaged in the current planning for Parklea, which has a total anticipated floorspace of 13,600 square metres.

Under **option 2**, the Parklea town centre would be a large neighbourhood centre capable of hosting a full-line supermarket plus a small supermarket such as an ALDI or IGA of 1,100 to 1,800 square metres and a variety of other food stores as well as a wide range of specialty shops. However, the present design of the Parklea centre does not identify a site for a smaller supermarket and this should be remedied in subsequent iterations of the design in order to properly plan loading bays and truck access. The present design allows for 4,685 square metres of undifferentiated small shop space. This appears to be excessive for a neighbourhood centre and a portion would most likely be used for a small supermarket.

Applying the target of 30% non-retail space, the total floorspace at the centre would be 13,000 square metres. This is close to the size of the current proposal for the centre.

The convenience centre would be capable of accommodating a mid-sized supermarket plus bakery and bottle shop as well as a range of specialty convenience shops – chemist, newsagent, cafés and take-away food, hairdressing etc. For this kind of small neighbourhood centre, a lower rate of non-retail space is likely, since it would be unlikely to host significant community facilities. If the non-retail space was 20% of the total, the overall floorspace of the centre would be 5,100 square metres.

## 5.4 Conclusions on the centre location options

### Is the proposed centre network accessible?

In my view, option 1 provides for a centre network that is too concentrated and which would position some residents of the Pakenham East precinct an unacceptable distance from services. People living in the south west of the precinct, for example would be up to 2.5 km by road from a food and grocery service. This is very far from the standard expectation that most people in the growth area would be within 1km of a neighbourhood centre.

The retail demand assessment shows that at full development the precinct will support two neighbourhood centres – one large and one small – as envisaged under option 2. Even then, the north western section of the precinct will be some distance from any centre, as shown in the following diagram.

**Figure 5: Approximate 1km radii around neighbourhood centres in Pakenham East under option 2**



Source: Cardinia Shire Council, unpublished (REPLACE WITH REVISED PLAN WHEN AVAILABLE)

There is insufficient demand in the north western part of the precinct to warrant a further neighbourhood centre. However, there would be justification for identifying a site for a convenience store in this part of the precinct to service the 1,800 residents anticipated in this location at full

development. Such a site should be classified as a local centre with no more than 300 square metres of retail space. This size would enable the provision of top-up groceries without impacting on other centres in the network and without establishing an expectation of a larger centre that could begin to rival the neighbourhood centres. Such a centre could be established by permit and would not need to be identified in the PSP.

### **Will the proposed network deliver viable centres?**

The centres envisaged under either option would be broadly viable as noted in the analysis above. This viability depends, amongst other things, on the Parklea town centre providing the closest full-line supermarket for the settlements and rural areas to the east as far as Garfield. Should these settlements grow substantially to a point where they could support their own full-line supermarket a portion of the Parklea trade area would be lost. However, such growth is not presently envisaged. Even without the population to the east of the precinct, Parklea would have a trade area population of more than 8,000 at full development. This is sufficient for a neighbourhood centre with a full-line supermarket, although supermarket and centre would not be as large as currently envisaged in the plans.

### **A note on timing**

This analysis has looked at the retail situation at full development which is likely to be 20 years in the future. In order to ensure that residents of the developing growth area have access to a good shopping and service hub it would be preferable to concentrate residential development in the catchment of one centre in order to enable at least a supermarket to be viable, before encouraging development in the trade area of the second centre. This would enable the respective centres to deliver services to resident in the most rapid possible timeframe whilst ensuring maximum accessibility.

## 6 EMPLOYMENT PROVISION

### 6.1 Jobs required by Pakenham East residents

The following table identifies the number of jobs that will be required by the residents of Pakenham East at full development. The calculations assume that the current share of population in the labourforce will continue.

**Table 8: Key employment parameters for Pakenham East**

Population at full development	16,088
Share of population in the labourforce	49%
Labourforce	7,883
Dwellings	5,927
Persons/dwelling	2.7
Workers per dwelling	1.3

Source: ABS, 2012; Tim Nott

The number of jobs required by residents of the PSP area will be approximately 7,900. In order to understand the likely type of workplaces that will be required I have made a forecast of the industry of employment of residents using a variety of existing data from the ABS and forecasts from the Commonwealth Department of Employment for Greater Melbourne and the South East Melbourne region (DoE, 2015). This forecast is shown in the table below.

**Table 9: Resident labourforce by industry, Pakenham East PSP area, 2036**

Industry	Share of resident labourforce, Pakenham South SA2, 2011	Share of resident labourforce, Pakenham East PSP area, 2036	Resident workers in each industry, Pakenham East PSP area, 2036
Agriculture, Forestry and Fishing	1.1%	0.9%	71
Mining	0.3%	0.3%	22
Manufacturing	15.2%	12.3%	970
Electricity, Gas, Water and Waste Services	1.3%	1.1%	83
Construction	12.4%	12.4%	976
Wholesale Trade	6.4%	4.7%	372
Retail Trade	13.1%	12.7%	997
Accommodation and Food Services	5.0%	5.2%	408
Transport, Postal and Warehousing	5.9%	6.0%	476
Information Media and Telecommunications	1.1%	1.4%	111
Financial and Insurance Services	2.3%	2.1%	163
Rental, Hiring and Real Estate Services	1.5%	1.4%	108
Professional, Scientific and Technical Services	4.6%	5.0%	396
Administrative and Support Services	3.1%	3.1%	245
Public Administration and Safety	4.6%	4.4%	345
Education and Training	6.1%	8.3%	654
Health Care and Social Assistance	10.4%	12.1%	958
Arts and Recreation Services	1.3%	2.4%	189
Other Services	4.1%	4.3%	338
<b>Total (All Industries)</b>	<b>100.0%</b>	<b>100.0%</b>	<b>7,883</b>

Source: ABS, 2012; Tim Nott

I have condensed this forecast and made an estimate of the number of jobs in each general type of activity space, shown in the table below.

**Table 10: Broad activity space type of the resident labourforce of Pakenham East, 2036**

Industry type	Labourforce workers
Industrial	3,110
Retail and related	1,575
Office	1,432
Other	1,767
Total	7,883

Source: Tim Nott

Notes: “Industrial” includes manufacturing, utilities, construction, wholesaling and transport and part of arts and recreation and other services; “Retail and related” includes retail trade, accommodation, cafes and restaurants, and part of other services; “Office” includes media, finance, property, business services, administrative services and government services and part of arts services; “Other” includes education, health and recreation

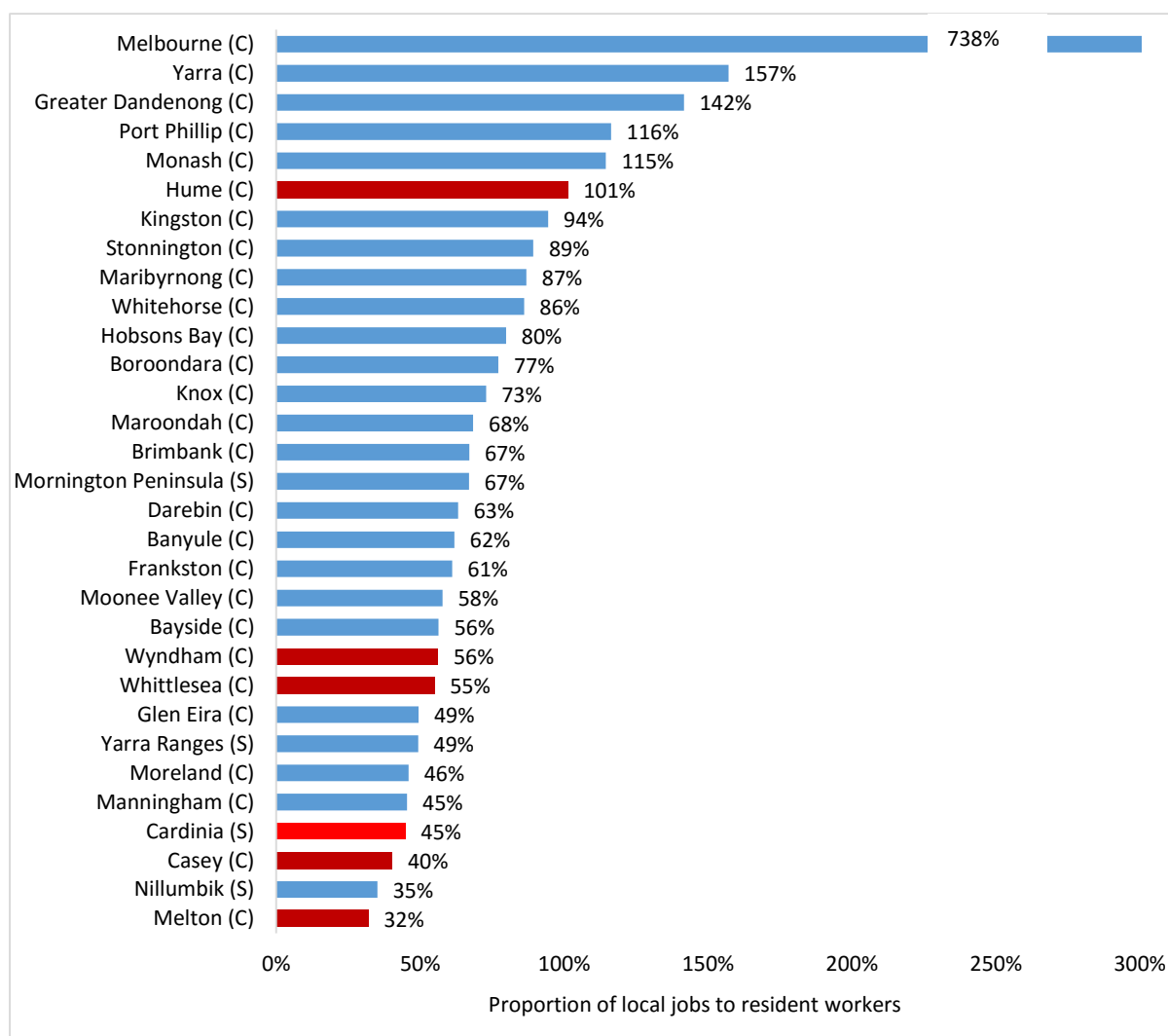
Not all workers in each category will work in “industrial” or “office” space; some will work from home or, as in the case of construction workers, from varying work-sites. Nevertheless this table gives some indication of the scale of the labourforce that needs to be accommodated.

## 6.2 The employment target

The job self-sufficiency in most growth area municipalities, including Cardinia, is low; that is, the ratio of local jobs to resident workers in growth area municipalities is lower than average. This is shown in the figure below.

The lack of local jobs means that most working residents spend a substantial amount of time commuting, with adverse impacts on household and community sustainability. To counteract this, the MPA and Council have the aim of providing opportunities for one local workplace for each dwelling constructed in the growth areas.

The Pakenham East precinct therefore generates a requirement for 5,930 jobs (see Table 8) to meet the target.

**Figure 6: Proportion of local jobs to resident workers, Melbourne municipalities, 2011**

Source: ABS, 2012

Note: Growth area municipalities in red.

### 6.3 Employment spaces within the precinct

The table below provides an estimate of employment spaces within the precinct. It is based on having two activity centres as per the precinct structure plan (that is, option 2 analysed in the previous sections).

**Table 11: Estimate of jobs in the Pakenham East precinct at full development**

Activity type	Floorspace sqm	Area per job sqm/job	Jobs no.
Retail	13,200	30	440
Office	1,400	30	50
Other	10,300	35	290
Total	24,900		780

Source: Tim Nott



Note: “Other” includes in-centre health services space as well as the three primary schools and one secondary school identified in the precinct structure plan. Figures for area per job have been taken from previous recent work.

The activity spaces in the precinct itself appear likely to generate approximately 780 jobs or 13% of the jobs required to meet the target of one job per dwelling.

In addition to the purpose-built activity spaces, I anticipate that one-in-twenty dwellings in the precinct (5%) will accommodate a job (and this based on figures from the latest Census of Population and Housing). These jobs will be in a wide variety of industries with a predominance of construction workers and professional service workers.

Altogether, then, perhaps 1,080 jobs or 18% of the job target will be met from within the Pakenham East precinct.

## **6.4 Employment supported elsewhere in Cardinia**

If only 18% of the job target is likely to be satisfied within the precinct, 82% of the job opportunities (4,850 jobs) will need to be generated elsewhere in Cardinia. I anticipate that the main locations for jobs will be in the Pakenham town centre and the existing and future industrial areas of the municipality – including the major employment precincts south of the Princes Freeway that will become one of Melbourne’s principal industrial areas.

### **Pakenham town centre**

The Pakenham town centre is the closest sub-regional activity centre to the Pakenham East PSP area and already has extensive retail, commercial and community development, including two discount department stores (DDS) and four supermarkets.

The additional population at Pakenham East will support a notional growth in retail floorspace in the nearest sub-regional centre of 0.99 square metres per person (see Table 2). This additional space will be required in Pakenham town centre. In addition, because it is already a double DDS centre, I anticipate that Pakenham town centre will begin to take on some regional retailing roles, with potential for large high street fashion and lifestyle chain stores as well as bulky goods outlets. In all, then, the Pakenham East PSP population may generate the need for around 1.1 square metres of retail floorspace per person in Pakenham town centre, or around 17,700 square metres. This level of floorspace would generate around 590 jobs (assuming an average of 30 square metres per job).

In addition to the retail jobs induced in the town centre by the population of Pakenham East, the town centre and surrounds will also be the logical place for a variety of other services:

- Entertainment – pubs, clubs and cinemas for example
- Accommodation
- Expansion of municipal services
- Sub-regional health and community services
- Sub-regional banking, insurance and other financial services
- Media, real estate, utilities offices and other services

In all, I would expect the jobs induced in the town centre by population growth in Pakenham East would be no more than 1,200.

### **Industrial Precincts**

The development of Pakenham East (and the other growth precincts) will generate demand for construction and manufacturing activities. In addition, the population of the PSP area will generate demands for car repairs, household goods repairs, wholesale activities to support local retailing, utilities, transport and warehousing, most of which will be located on industrial land. Looking at individual industries, my assessment is that the induced demand from the population of the PSP area will generate no more than 1,200 industrial jobs.

## 6.5 Summary of employment generation

My broad assessment of the number of jobs generated or induced in Cardinia by the population growth at Pakenham East is shown in the table below.

**Table 12: the estimated job gap for Pakenham East**

Jobs in the PSP area	1,100
Jobs in Pakenham town centre and surrounds	1,200
Jobs in industrial areas	1,200
Jobs elsewhere in Cardinia	200
<b>Total jobs induced in Cardinia</b>	<b>3,700</b>
<b>Job target</b>	<b>5,900</b>
<b>Job gap</b>	<b>2,200</b>

Source: Tim Nott

Taking into account the jobs in the PSP area and those in Pakenham town centre and the industrial areas, the total jobs induced in the municipality to service the growth area population are likely to be around 3,700. This falls short of the target of one job per dwelling in the PSP area by 2,200 jobs.

In order to meet the jobs target, it will not be sufficient simply to rely on the demand for jobs induced by the population growth in the precinct. Efforts will need to be made to attract economic activities in trade exposed areas and in activities that serve a wider than local market. These could include significant manufacturing or services such as freight transport, regional hospitals or tertiary education providers. However, even the population-induced jobs are not certain; securing these will rely on properly planned activity centres and industrial areas, ensuring that there is sufficient room to grow and attractive urban design.

## 7 REFERENCES

ABS, 2012, *Census of Population and Housing, 2011*, Canberra

ABS, 2015, *Retail Trade Australia*, Canberra

ABS, 2015, *Regional Population Growth Australia*, Canberra

Department of Employment, 2015, *Industry Employment Projections*, Canberra

Essential Economics, 2011, *Growth Corridor Plans: Activity Centre and Employment Planning*, for Growth Areas Authority

Growth Areas Authority, 2009, *Precinct Structure Planning Guidelines, Two – Preparing the Precinct Structure Plan*, Melbourne

.id consulting, 2015, *Population Forecasts Cardinia Shire*, for Cardinia Shire Council

Macroplan, 2007, *Cardinia Urban Growth Area Retail Review*, for Cardinia Shire Council

Nott, 2013, *Melton Retail and Activity Centres Strategy: Background Report*, for Melton City Council%