

Pakenham South Employment Precinct Structure Plan

Background Report

October 2019
(Updated August 2020)

CONTENTS

1	Introduction	4
1.1	Purpose of this report.....	4
1.2	Background Documents.....	4
2	Strategic Context.....	6
2.1	Metropolitan and Regional Context.....	6
3	Local Context	8
3.1	PSP Size, Lot Size and Ownership Pattern	8
3.2	Topography, Geology and Waterways.....	8
3.3	Surrounding Areas	8
4	Aboriginal Cultural Heritage	10
4.1	Cultural Values	10
4.2	Post Contact Heritage Values.....	11
5	Site Suitability Assessment	14
5.1	Contamination.....	14
5.2	Geology	14
5.3	Soils	14
5.4	Hydrology.....	14
5.5	Hydrogeology.....	15
5.6	Separation Distances for Existing Industry	15
5.7	Outcomes and Recommendations.....	15
6	Landscape Assessment	17
6.1	Landscape Characterisation	17
6.2	Outcomes and Recommendations.....	17
7	Arboricultural Assessment.....	18
7.1	Outcomes and Recommendations.....	19
8	Biodiversity.....	20
8.1	Biodiversity Conservation Strategy	20
8.2	Retention and Offset Requirements.....	20
9	Bushfire Development Assessment	21
9.1	Outcomes and Recommendations.....	21

10	Economic Assessment	22
10.1	Employment.....	22
10.2	Local Commercial Centre	255
10.3	Outcomes and Recommendations.....	266
10.4	High Voltage Electricity Transmission Easement.....	266
11	Transport and Movement.....	288
11.1	Road Network	288
11.2	Bus Services.....	299
11.3	Pedestrian and Cycle Network.....	299
12	Utility and Service Infrastructure.....	30
12.1	Sewerage.....	30
12.2	Drainage	30
12.3	Water Supply	30
12.4	Electricity Supply	30
12.5	Gas Supply	31
12.6	Telecommunications.....	311

1 INTRODUCTION

Cardinia Shire Council has prepared a draft Precinct Structure Plan (the PSP) for the Pakenham South Employment precinct. A PSP is a 'big picture' plan that sets the vision for developing new communities and is the primary plan for guiding urban development in the growth areas of Melbourne.

The precinct was included in the Urban Growth Boundary in 2005 as part of the broader Cardinia Employment Corridor. This employment corridor, approximately 2500 hectares, was created by the State Government in response to *A Plan for Melbourne's Growth*, identifying the need for local employment opportunities that better match the needs of the population in the Casey-Cardinia growth area.

In summary, the Pakenham South Employment PSP:

- Sets out plans to guide the delivery of quality urban environments in accordance with the Victorian Government guidelines;
- Enables the transition of non-urban land to urban land;
- Sets the vision for how the land should be developed and the outcomes to be achieved;
- Outlines the projects required to ensure that future workers within the area can be provided with timely access to services and transport necessary to support a quality employment precinct;
- Sets out objectives, requirements and guidelines for land use, development and subdivision;
- Provides Government agencies, the Council, developers, investors and local communities with certainty about future development; and
- Addresses the requirements of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) through Federal approval of the Biodiversity Conservation Strategy and Sub Regional Species Strategies for Melbourne's Growth Areas (September 2013).

1.1 Purpose of this report

This report summarises the key findings presented by the technical reports and analysis that informed the preparation of the PSP and explains how this information guided the preparation of the proposed future urban structure.

More specifically, this report:

- Summarises the strategic context of the precinct;
- Outlines the physical context of the site including topography, vegetation, waterways and contamination; and
- Identifies the land use and development needs for the precinct.

1.2 Background Documents

The technical reports listed below, provide specific detail on the key elements outlined in this background report.

Technical investigation and findings that were used to inform the preparation of this report and the Pakenham South Employment PSP include:

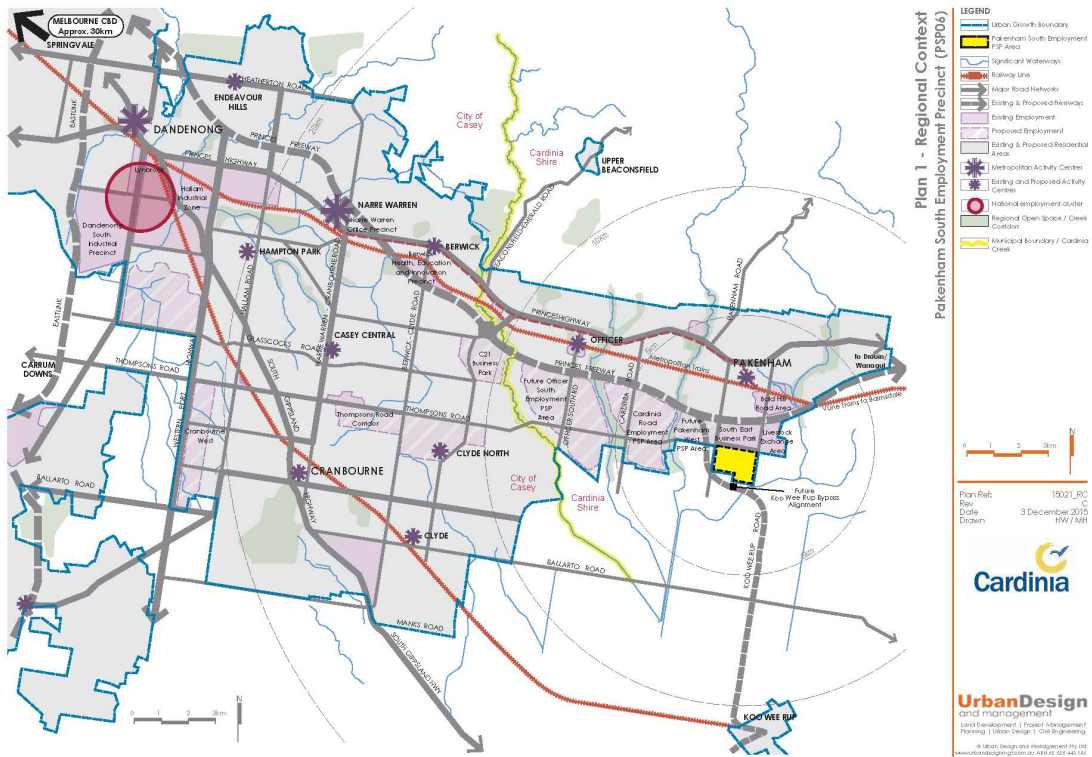
- *Pakenham South Employment Precinct (Stage 2) Cultural Heritage Management Plan #10517*, Archaeology at Tardis, November 2013
- *Post-Contact Heritage Assessment Pakenham South Employment Precinct*, Context, February 2014 (Revised January 2020)
- *Landscape Heritage Review Significant Tree Assessment – 'Windarra' 40 Greenhills Road, Pakenham*, John Patrick Landscape Architects, May 2019

- *Bushfire Planning Assessment Pakenham South Employment Precinct Structure Plan*, Bushfire Planning, April 2019
- *Pakenham South Employment Precinct Structure Plan: Economic Assessment*, SGS Economics and Planning, August 2019
- *Flora and Fauna Assessment for Pakenham Industrial and Employment Precinct*, Ecology Partners, January 2007
- *Pakenham South Employment Precinct Structure Plan Functional Design of Drainage Assets and Concept Design of Overland Flow Paths*, Stormy Water Solutions, Final May 2020
- *Pakenham South Employment Precinct - Phase 1 Environmental Site Assessment*, Aecom, October 2015
- *Pakenham South Employment Precinct Traffic Impact Assessment Report*, Trafficworks Pty Ltd, Final August 2020

2 STRATEGIC CONTEXT

2.1 Metropolitan and Regional Context

The Pakenham South Employment precinct is located in the South-East Growth Corridor approximately 60 kilometres east of Melbourne's Central Business District. The PSP area is bordered by Greenhills Road to the north, McGregor Road to the west, Healesville-Koo Wee Rup Road to the east and the Urban Growth Boundary to the south.



The PSP is part of the larger Precinct Structure Plan, Pakenham Employment Area Stage 1 (PSP06), and comprises:

- South East Business Park (168 hectares of existing, well developed industrial land)
- Livestock Exchange (110 hectares of existing, well developed industrial employment land)
- Pakenham South Employment PSP (185 hectare of future employment land)



The Growth Corridor Plans (GCP) prepared by the Growth Areas Authority (now Victorian Planning Authority) and released by the Minister for Planning in June 2012 provide a high level framework to guide the planning of new communities in each of the state's growth corridors. These plans seek to accommodate close to half of Melbourne's future housing and employment land supply over the next 30 to 40 years.

The South-East Growth Corridor is expected to accommodate a population of 230,000 people with the capacity to provide 86,000 jobs and incorporates land within the municipalities of Casey and Cardinia. The South-East Growth Corridor plan identifies the PSP area as being industrial land and supports Principle 3 of the GCP document which is to *plan for local employment creation*.

The Corridor makes provision for:

- 2370 (gross) hectares of industrial land;
- 1290 (gross) hectares of business land.

The PSP is located within the Cardinia Employment Corridor which is 2,500 hectares in area located south of the Pakenham Bypass. The precinct is also situated within the Officer-Pakenham Industrial Precinct which is identified in *Plan Melbourne 2017-2050* as a place of state significance for investment and growth.

The section of the Corridor in which the PSP is located is recognised as having good freight and public transport connections with last mile access for high performance heavy vehicles. This makes it an attractive location for a wide range of advanced manufacturing and commercial enterprises, as well as the more traditional manufacturing, warehouse and logistics uses.

While the PSP will need to provide its own local services, consideration needs to be given to the broader growth area to ensure no shortfall or loss of services will result across all PSP boundaries. It will also complement existing and planned employment locations within Cardinia Shire and externally with the City of Casey and the City of Greater Dandenong.

3 LOCAL CONTEXT

The PSP is located on the broad, flat alluvial plains associated with the former Koo Wee Rup Swamp. The only prominent elevated hill in the area is Green Hill, south of Greenhills Road. This gentle ridgeline exists from the north to the south along the western section of the precinct.

A number of watercourses flow outside of the PSP, including Deep Creek, which flows to the south and is a man-made channel created to drain the landscape. Other streams to the east and west of the precinct are tributaries of Deep Creek and Toomuc Creek.

Historically and currently the area has been used for agricultural purposes. As a result, the precinct has been largely cleared of any native vegetation and primarily what remains is within road reserves.

Along the southern portion of the precinct, the land is encumbered with an east-west 154 metre wide transmission easement which contains a 500kV high voltage electricity transmission line and a 66 kV local supply overhead power line.

The area is currently zoned Urban Growth Zone and subject to a Land Subject to Inundation Overlay, Heritage Overlay 42 (proposed to be removed), Public Acquisition Overlay 1 and Road Zone Category 1 in the Cardinia Planning Scheme. One existing dwelling in the precinct has been identified to be included in a proposed Heritage Overlay.

Given its proximity and access to major arterial roads, Pakenham South Employment precinct will be well connected to surrounding facilities and nearby residential precincts.

3.1 PSP Size, Lot Size and Ownership Pattern

The Pakenham South Employment PSP applies to approximately 185 hectares of land.

The precinct contains five lots ranging in size from 1 hectare to 100 hectares with only four landowners. The majority landholder, taking up the eastern half of the precinct, comprises approximately 70% of the land.

3.2 Topography, Geology and Waterways

The precinct comprises the alluvial plains associated with the former Koo Wee Rup Swamp. The only prominent elevated hill in the region is Green Hill, south of Greenhills Road. The south facing slope has a gradient of 0.02 which grades into the flood plain. The area has a highly modified landscape due to extensive cultivation over the past century of farming uses and has been subject to draining of the swamp by channel modification.

Whilst there are no waterways within the PSP area, a number of watercourses flow outside of the precinct including Deep Creek, which flows to the south and is a man-made channel created to drain the landscape. Other streams to the east and west of the precinct are tributaries of Deep Creek and Toomuc Creek.

3.3 Surrounding Areas

A number of new settlements are currently planned, being developed or development has recently finalised around Pakenham South. Surrounding land uses and developments relevant to the precinct include:

Cardinia Road Precinct Structure Plan

The Cardinia Road PSP was approved in November 2008. The precinct is located north-west of Pakenham South Employment PSP on the northern side of Princes Freeway and west of Pakenham township. Princes Highway runs east-west through the centre of the precinct, with the railway line running through the southern area. The 1051 hectare precinct is planned to be predominantly residential, with a large Neighbourhood Activity Centre (NAC), a small NAC and a Neighbourhood Convenience Centre.

Cardinia Road Employment Precinct Structure Plan

Cardinia Road Employment PSP is located to the west of Pakenham South Employment PSP. The PSP was approved in October 2010 and will guide the development of a 595 hectare integrated business and industrial park, supported by a Neighbourhood Activity Centre and some high density housing.

Officer Precinct Structure Plan

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

Pakenham East Precinct Structure Plan

Pakenham East PSP has been prepared and is awaiting a decision by the Minister for Planning. Situated to the north-east of Pakenham South Employment PSP and north of the Princes Freeway, Pakenham East will be home to approximately 19,000 residents in the next 20-30 years. The precinct will be serviced by a Local Town Centre and a Local Convenience Centre incorporating retail, specialty retail and mixed use/commercial areas.

4 ABORIGINAL CULTURAL HERITAGE

A Cultural Heritage Management Plan (CHMP) was carried out for the Pakenham South Employment precinct by Archaeology At Tardis Pty Ltd. The CHMP was completed in November 2013 and was sponsored by Cardinia Shire Council.

At the commencement of the project, the Wurundjeri Tribe Land and Compensation Cultural Heritage Council (WTLCCHC), the Bunurong Land Council Aboriginal Corporation (BLCAC) and the Boonwurrung Foundation Ltd (BWFL) all had Registered Aboriginal Party (RAP) applications pending which included the activity area. As the BLCAC and BWFL have traditionally been responsible for the administration of the activity area, these groups were considered to be the major stakeholders and were given priority consultation. The BWFL and the BLCAC applications were rejected by the Victorian Aboriginal Heritage Council (VAHC) on the 27th August 2009 and 1st September 2011 respectively. The current RAP applicant for the activity area is the WTLCCHC. The VAHC considers all three groups to represent traditional owners (TOGs) in the region, therefore all three groups were consulted throughout the project.

The geographic region relevant to this investigation is land within 4 kilometres of the activity area. There is a total of 114 previously registered Aboriginal heritage places within the geographic region, with the majority of those consisting of stone artefact scatters (56%) and low density artefact distributions (31%). Many of these places are located on plains and floodplains landforms, with the remainder of places located on creek banks.

One area of legislated cultural heritage sensitivity exists within the precinct and that is land within 200 metres of Deep Creek. The precinct has suffered disturbance via historic clearing of trees, repeated ploughing and cropping, grazing and erosion, therefore the integrity of any archaeological material within the activity area is poor.

4.1 Cultural Values

A desktop, standard and complex, assessment was undertaken. The results of the desktop assessment were used to assess the likelihood of the activity area to contain Aboriginal cultural heritage. The most likely site types to occur within the activity area were identified as stone artefact scatters.

Based on the ground surface survey, the activity area contains two landforms of sensitivity for stone artefact scatter sites. These are limited to primarily dry elevated areas associated with Green Hill. The sensitivity was confirmed by the presence of two low density stone artefact scatters, but it is not likely that any other site-type occurs within the precinct area.

A complex assessment was carried out to test the site prediction model and determine the extent of known Aboriginal cultural heritage within the activity area. In summary:

- Three new Aboriginal cultural heritage places (stone artefact scatters VAHR7921- 1083, 1084 & 1453) were located within the activity area.
- The results of the complex assessment indicate that apart from known locations, Aboriginal cultural heritage is unlikely to be present within the remainder of the activity area.
- No organic material with cultural association was identified during the sub-surface testing.

The location of the stone artefact scatters on the southern slopes of Green Hill demonstrates that it was utilised by Aboriginal people in the past. Green Hill would have provided a vantage point of surrounding areas however, these slopes would have also been highly exposed to prevailing winds and rain.

Given the low artefact density and small size of located scatters, these places are not likely to have been campsites. It is more likely that the southern part of Green Hill may have been visited only sporadically to exploit resources associated with the floodplains or traversed on the way to the Koo Wee Rup Swamp.

4.1.1 Outcomes and Recommendations

Places VAHR7921-1083, 1084 & 1453 comprise very low density stone artefact scatters which possess very low scientific significance and high cultural significance. There is no scientific reason why these places should be preserved or salvaged, and harm is permitted to these places through the approved CHMP.

The located artefacts have been collected and recorded and the data for the place submitted to the VAHR. Any scientific data which can be derived from the place has been recorded in the VAHR and in the CHMP.

No specific management requirements for the area have been identified in the CHMP however, the below recommendations were made following the assessment:

- In the unlikely event Aboriginal cultural heritage is found during the conduct of the activity, the contingency plan (Section 12 of the CHMP) provides the custody and management procedures.
- For the Aboriginal cultural heritage located during the desktop assessment, custody of the material will remain with the Cultural Heritage Adviser and be reburied in an area of open space following completion of the activity. The reburial locations should be as close as practicable to the original find locations and be determined in consultation with relevant traditional owner groups for the area.

4.2 Post Contact Heritage Values

Context was engaged by Cardinia Shire Council to prepare a Post-Contact Heritage Assessment for the Pakenham South Employment precinct. The report was originally prepared in 2014 and was updated in 2019.

The heritage assessment reviewed the existing Heritage Overlay within the precinct:

- HO42 – ‘YU Milking Shed’ – 100 Greenhills Road, Pakenham

Context determined that the extent of alteration to its building fabric (very low integrity) means that its historical associations are no longer reflected in the fabric. The site inspections and comparative analysis established that the former YU Milking Shed (and site) falls below the threshold of local heritage significance. As such, it no longer requires protection under the Heritage Overlay.

A further property within the study area was recommended for inclusion in the Heritage Overlay:

- HO14 - ‘Windarra’, 40 Greenhills Road, Pakenham

The recommended controls for this property include protection for the dwelling, shearing shed, dairy and particular trees on the property.

The revised Context report in 2019 responds to changes on site at 40 Greenhills Road, Pakenham identified by Council officers. It also incorporates a separate landscape assessment undertaken by John Patrick Landscape Architects.

The initial heritage assessment recommended the inclusion of the shearing shed and dairy within the Heritage Overlay curtilage however, since that time both have severely deteriorated due to exposure to the elements. Council officers consider these buildings no longer suitable or viable for appropriate reuse options for the site.

4.2.1 Outcomes and Recommendations

The proposed curtilage to the heritage place at 40 Greenhills Road, Pakenham is smaller than the title boundary and has been drawn to provide adequate protection for the identified elements of heritage significance, their setting and context. The *Pakenham South Employment Precinct Post-Contact Heritage Assessment, 2014 (revised 2019)* identifies two potential curtilage areas, one proposed in 2014 and Council’s preferred curtilage proposed in 2019 which is reduced to exclude the two deteriorated outbuildings.

John Patrick Landscape Architects’ report reviewed the trees at 40 Greenhills Road, Pakenham. It was their view that the landscape features of the property do not merit its inclusion in a Heritage Overlay. While the features may be said to make a minor contribution to the legibility of the property as a historically situated

domestic landscape centred on the farmhouse, they determined the trees to be in generally poor and fragmentary condition and do not contribute to any heritage significance of the farmhouse. As such, Council officers have only identified one tree close to the dwelling and those along the driveway which are of a higher arboricultural value to be included within the proposed Heritage Overlay (further details included in Arboricultural Assessment - Section 7).

In summary, it is proposed to:

- Apply a Heritage Overlay (HO14 – individual place) for the heritage dwelling and trees at 'Windarra' 40 Greenhills Road, Pakenham; and
- Delete the Heritage Overlay (HO42) from 'ITU Milking Shed' 100 Greenhills Road, Pakenham as it is considered no longer locally significant.

The PSP document will include a number of requirements and guidelines that seek to ensure the proposed heritage place is protected from inappropriate urban development and properly integrated with future surrounding subdivision. These guidelines also reference the below Conservation Guidelines extracted from the post-contact heritage assessment in 2014.

CONSERVATION GUIDELINES

In order to conserve the significance of the heritage place at 40 Greenhills Road Pakenham, it is recommended that the following conservation guidelines, as appropriate, be given priority in the future maintenance, development or management of the place:

- Conserve the fabric of the building or other built elements, which is identified as contributing to the significance of the place. This includes the original fabric as well as fabric that may demonstrate important successive stages in the historic development of the place and/or provide evidence of changing architectural styles or techniques. For specific guidelines about how to conserve buildings, please refer to the Restoration Guidelines in the 'Cardinia Shire (Pakenham) Heritage Study, Volume 1: Heritage Program, 1996'.
- The house is in a generally good condition and should have regular maintenance. Such maintenance is most easily ensured by keeping the house occupied.
- Restoration of altered elements to the front of the house should be encouraged. This includes the reinstatement of the timber floor to the verandah and reopening the east side of the verandah.
- Conserve significant plantings on the property (refer to specific conservation guidelines for trees) and maintain a visual relationship between the plantings and the significant buildings on the property.
- Encourage the removal of non-significant or intrusive elements, particularly where this would assist in understanding or revealing the significance of the place.
- Ensure that the siting and design of new development does not overwhelm the historic setting of the building and the site as a whole by becoming a dominant element or by interfering with key views to and from the site. For specific guidelines about new development or additions to buildings, please refer to the Restoration Guidelines in the 'Cardinia Shire (Pakenham) Heritage Study, Volume 1: Heritage Program, 1996'.
- Encourage any new development on the property to relate and be complementary in form, scale and materials to the significant buildings and other elements, but be clearly contemporary in design. For specific guidelines about new development or additions to buildings, please refer to the Restoration Guidelines in the 'Cardinia Shire (Pakenham) Heritage Study, Volume 1: Heritage Program, 1996'.
- In the case of subdivision of the property, encourage the retention of the significant buildings, trees and related elements on one lot.

SPECIFIC CONSERVATION GUIDELINES – TREES

In order to conserve the identified trees which contribute to the heritage place, it is recommended that the following guidelines are used in the future management or development of the place (also refer Tree Protection Table in Arboricultural Assessment - Section 7):

- Undertake regular maintenance, monitor tree condition, pruning, and pest and disease management.
- Manage surrounding vegetation to maintain the integrity and condition of the tree/s. Remove weed vegetation species.

5 SITE SUITABILITY ASSESSMENT

5.1 Contamination

Aecom Australia completed an Environmental Site Assessment at 30-100 Greenhills Road, Pakenham in October 2015. The assessment was to gain an understanding of potential soil and/or groundwater contamination impacts from current or historical uses of the site which may impact future development plans. A desktop literature, map (geology) and database (hydrogeology) assessment was undertaken as well as a site inspection.

The assessment concluded:

- The site has been used for agricultural purposes since at least 1947;
- The site is not subject to an Environmental Audit Overlay;
- No Environmental Audits have been conducted at the site or within a 1 kilometre radius;
- Two EPA licenced activities (ie. a sewage treatment plant and an abattoir) are located within a 1 kilometre radius of the site; and
- Based on historical land use activities, there is potential for localised areas of contamination.

Overall, the potential for contamination has been assessed as low based on site observations and a review of relevant current and historical site information.

5.2 Geology

Geological mapping indicates that the site's underlying geology is characterised by Pleistocene to Holocene aged alluvium gravels, sands and silts. Late Devonian aged granite underlies some of the site along the western side of the norther boundary.

5.3 Soils

Sodosol soils are most likely to cover approximately 70% of the site. These are high in sodium and have an abrupt increase in clay as you descend through the profile. The remaining 30% is covered by Kurosols soils. These have a strong texture contrast between 'A' horizons and strongly acid 'B' horizons and contain high levels of magnesium, sodium and aluminium. There are no acid sulfate soil areas at the site.

5.4 Hydrology

The PSP drainage design proposes north-south overland flow paths and stormwater treatment infrastructure (a wetland) directly south of the precinct.

Overland Flow Paths

Generally, the PSP region grades north to south from Greenhills Road to the Urban Growth Boundary at a grade of approximately 1V:120H. However, sections of the PSP region, particularly the south eastern corner are flatter, grading north to south at approximately 1V:250H.

Deep Creek

Upstream of the PSP outfall, Deep Creek services approximately a 73 km² (7,300 ha) catchment.

In the vicinity of the proposed wetland site, Deep Creek has levees on both its northern and southern edges.

The levee on the southern edge of Deep Creek, downstream of Healesville-Koo Wee Rup Road is at approximately a uniform level of 9.80 metres AHD. This levee ensures all flows in Deep Creek are directed west into the Cardinia Creek Outfall Drain and are not conveyed south directly into the Koo Wee Rup Flood Protection District (KWRFPD).

The levee on the northern edge of Deep Creek is informal, varying (non-uniformly) between approximately 7.20 metres AHD and 8.40 metres AHD in the vicinity of the wetland site. This northern levee is also currently covered in vegetation and as such, assumed to be 'untouchable' (i.e. complete northern levee removal is not an option due to ecological constraints).

The proposed wetland site is located within the Deep Creek floodplain, north of the informal northern Deep Creek levee.

An important constraint in the design of the stormwater treatment infrastructure is to ensure relative independence of the local stormwater treatment infrastructure from very frequent and frequent events within Deep Creek. That is, that any proposed treatment asset will not be affected by Deep Creek interactions for the majority of the 'low flow' treatment events. This requires that Deep Creek flood levels do not create backwater effects or pond back into the treatment assets for the majority of the storms which relate to the treatment assets operation.

The existing topography of the proposed stormwater treatment infrastructure site grades at approximately a 1V:240H from the west to the east varying between approximately 9.60 metres AHD (north western corner of the site) to 7.00 metres AHD (south eastern corner of the site).

Stormy Water Solutions have updated the drainage design in 2020 in conjunction with Melbourne Water.

5.5 Hydrogeology

The following information provided in the Aecom Australia report was sourced from Hydrogeology Map of Australia (Geoscience Australia):

- The aquifers on site are porous
- Extensive aquifers of low to moderate productivity
- The groundwater salinity ranges between 3,500 milligrams/litre (mg/L) to 7,000mg/L over the entirety of the site
- The depth to the water table is less than 5 metres for 89% of the site, 5 to 10 metres for 10% of the site and 10 to 20 metres at 1% of the site

Three groundwater bores are located on the site positioned near the northern boundary.

5.6 Separation Distances for Existing Industry

The Pakenham Water Recycling Plant (PWRP) owned by South East Water (SEW) is located directly east of the PSP area. SEW have undertaken odour modelling and determined a buffer separation distance of 772 metres for a potential odour impact area. This significant infrastructure asset requires protection from future uses. The proposed PSP and schedule to the Urban Growth Zone identify the potential odour buffer separation distance which extends over almost half of the precinct in the east. Although no sensitive uses are proposed within the industrial PSP, particular uses that would otherwise not require a planning permit will trigger a planning permit application if they are proposed in the buffer area. These uses include those that could be sensitive to potential odour such as food and drink and informal outdoor recreation.

The Pakenham Abattoir and food production premises is situated directly east of the southern boundary of the PSP area. The existing abattoir is subject to EPA's Scheduled Premises Regulations 2017 and has a separation distance of 500 metres from sensitive uses. As the source of the production is located almost 1 kilometre east of the Healesville-Koo Wee Rup Road, their 500 metre separation distance (buffer) does not currently extend to the proposed PSP precinct.

5.7 Outcomes and Recommendations

Development of the land following the amendment will alter the existing farming landscape of the precinct by changing stormwater flows and intensifying industrial activities in the area.

It is proposed that the above matters have been considered with the following outcomes:

- An environmental site assessment has been carried out for the land to determine the existence of any contamination. The assessment identified that the potential for contamination to be present on the land is low.
- Land is set aside south of the PSP for a wetland reserve which will store and treat stormwater generated within the precinct. This wetland has been designed to meet current legislative standards noting its location within a floodplain and the existing nearby industries. The Deep Creek will be protected through the proposed drainage design.
- It is proposed to introduce referral requirements to South East Water for planning permits within the Pakenham Water Recycling Plant buffer.

6 LANDSCAPE ASSESSMENT

6.1 Landscape Characterisation

The precinct comprises the alluvial plains associated with the former Koo Wee Rup Swamp. The only prominent elevated hill in the region is Green Hill, south of Greenhills Road. The south facing slope has a gradient of 0.02 which grades into the flood plain.

Generally, the PSP region grades north to south from Greenhills Road to the Urban Growth Boundary along the southern boundary of the precinct. However, sections of the PSP region, particularly the south eastern corner are flatter, grading north to south at approximately 1V:250H.

The area has a highly modified landscape due to extensive cultivation over the past century of farming uses and has been subject to draining of the swamp by channel modification.

A number of watercourses flow outside of the precinct, including Deep Creek, which flows to the south and is a man-made channel created to drain the landscape. Other streams to the east and west of the precinct are tributaries of Deep Creek and Toomuc Creek.

6.2 Outcomes and Recommendations

Although the landscape has been highly modified due to farming uses over the years, it is recommended that landscape features such as the ridgeline are used to guide the pattern of development, streets and public places.

7 ARBORICULTURAL ASSESSMENT

John Patrick Landscape Architects (JPLA) undertook an arboricultural assessment of the trees identified as having heritage significance in the 2014 Context post-contact heritage report at 'Windarra' 40 Greenhills Road, Pakenham.

JPLA noted that the two principal landscape elements which would narrate the domestic residence's historical ties to agricultural production, the remaining Cypress windrows and orchard remnants, are now fragmentary and in decline. As such, although they make a minor contribution to the historical domestic landscape of the farmhouse they are generally in poor condition.

Of the 45 trees or groups of trees assessed from the 2014 Context post-contact heritage report, 11 were identified as having higher arboricultural value to retain within the heritage landscape of the farmhouse.

'Windarra' Heritage Curtilage and Significant Trees



Tree Protection Table (refer aerial map above for Tree ID)

Tree ID	Botanical name	Heritage and aboricultural assessment comments
1	<i>Hesperocyparis macrocarpa</i>	Retain as part of driveway planting
2	Tree group (18) - <i>Melaleuca linariifolia</i>	Retain as part of driveway planting
3	Tree group (4) - <i>Ulmus procera</i>	Retain as part of boundary planting
4	<i>Quercus palustris</i>	Retain as part of boundary planting
5	Tree group (2) - <i>Photinia serratifolia</i>	Retain as part of boundary planting
6	<i>Grevillea robusta</i>	Retain as part of boundary planting

7	<i>Euonymous japonicus</i>	Retain as part of border/driveway planting
8	<i>Crataegus monogyna</i>	Retain as part of border/driveway planting
9	<i>Grevillea robusta</i>	Retain, individually noted in Statement of Significance
10	Tree group (3) - <i>Hesperocyparis macrocarpa</i>	3 specimens inter-planted along row. Retain as part of original windrow planting
11	<i>Ulmus glabra</i> 'Lutescens'	Retain, individually noted in Statement of Significance

7.1 Outcomes and Recommendations

The significant heritage elements at 'Windarra' 40 Greenhills Road, Pakenham include the farmhouse which was constructed c1910-16 along with a number of trees, most of which line the current driveway to the farmhouse. Trees of particular note are the *Ulmus glabra* 'Lutescens' Golden Wych Elm (tree ID 11) south of the residence and *Grevillia robusta* Silky Oak (tree ID 9) to the north east of the residence. The driveway established in the 1950s is lined with mixed plantings of small trees and shrubs including Photinia, Hawthorn, Silky Oak, and Melaleuca.

The exotic trees planted in the garden and the driveway are significant as plantings dating from different eras of the property's long use as a small farm with mixed agricultural uses between c1916-80s. They also provide an attractive and appropriate setting for the residence and demonstrate the highly residential nature of the farmstead block.

The trees identified in Tree Protection Table above will be protected within the Heritage Overlay and through the 'Windarra' Statement of Significance incorporated into the Cardinia Planning Scheme.

8 BIODIVERSITY

8.1 Biodiversity Conservation Strategy

The precinct does not contain any flowing waterways with Deep Creek located outside the PSP area in the south east corner. Further west of the site, approximately 1 kilometre, is Toomuc Creek. An adjacent waterbody to the Toomuc Creek, also outside of the PSP area, has been identified as a habitat for nationally threatened species the Growling Grass Frog.

The study area is highly modified and dominated by exotic pasture grasses of low ecological value. Very little remnant vegetation remains with only small patches mainly along roadsides. No flora species of national and state significance were recorded within the study area during the assessment undertaken by Ecology Partners in 2007.

The precinct is identified within the Biodiversity Conservation Strategy however, there is no requirement within the site for any biodiversity conservation. A referral of the PSP was made to the Melbourne Strategic Assessment team of the Department of Environment, Land, Water and Planning who provided the following exemption to be included in the Schedule to Clause 52.17:

All native vegetation removal, destruction or lopping of which is required for any development that is subject to and carried out in accordance with 'Final approval for urban development in three growth corridors under the Melbourne urban growth program strategic assessment, 5 September 2013' made pursuant to section 146B of the Environment Protection and Biodiversity Conservation Act 1999 (Cth).

8.2 Retention and Offset Requirements

The Pakenham South Employment precinct is included in the approval granted by the Commonwealth Department of Environment and Energy for urban development in Melbourne's Growth Corridors under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

Provided the conditions of this approval are satisfied, individual assessment and approval under the EPBC Act is not required. These conditions include but are not limited to the following:

- Urban development must comply with habitat compensation arrangements and fees described in 'Habitat compensation under the Biodiversity Conservation Strategy – Melbourne Strategic Assessment (Victorian Government Department of Environment and Primary Industry, August 2013) and as amended by the Victorian Government from time to time.

As noted above, habitat compensation obligations are applicable for the removal of native vegetation within the precinct. These obligations can be calculated from the Melbourne Strategic Assessment website: www.msa.vic.gov.au

The proposed industrial precinct is likely to have minimal impact upon ecological values. The PSP provides requirements and guidelines to ensure infrastructure is designed to minimise impacts on biodiversity values.

9 BUSHFIRE DEVELOPMENT ASSESSMENT

A bushfire assessment was completed by Bushfire Planning in April 2019. The precinct lies within an identified bushfire prone area. Most of the land within and surrounding the precinct (east, west and south) is currently used for agriculture and grazing. To the north, land has already been developed for industrial uses or is planned for future industrial uses in the medium term. The bushfire risk to the study area is from grassfire. There is no potential for extreme fire behaviour due to the lack of larger, non-grassland areas of vegetation and the relatively flat terrain.

9.1 Outcomes and Recommendations

The landscape provides good proximity and access to locations that are low fuel where human life can be better protected from the harmful effects of bushfire, including immediately north of the study area and within the study area once it is developed.

The identified landscape type is landscape type one. This positions the study area at the lower end of bushfire risk in Victoria. The landscape and strategic bushfire risk to the study area is low to moderate. There is no landscape bushfire feature that impacts on the use of the study area for employment uses.

Site Scale Bushfire Considerations

An assessment of site based exposure confirms that the precinct structure plan can satisfy the site-based exposure elements of Clause 13.02-1S in the Cardinia Planning Scheme subject to:

- **Recommendation 1:** Development is set back at least 19 metres from grassland areas to the east, south and west boundaries of the study area, with the setback contained in proposed perimeter roads.
- **Recommendation 2:** If woodland vegetation on the north-west boundary of the study area is retained, development is set back at least 33 metres from woodland vegetation.
- **Recommendation 3:** If roadside trees in the study area along McGregor are retained, development is separated from it by a service road.
- **Recommendation 4:** Vegetation management for bushfire purposes is applied for a distance of 50 metres from the study area boundary on the west, east and south perimeter. Vegetation management should accord to Clause 53.02 Bushfire, Table 6 Vegetation management requirements in the Cardinia Planning Scheme. All landscape plans and proposals should give effect to this requirement.
- **Recommendation 5:** Vegetation management for bushfire purposes is applied to land within the powerline easement. Vegetation management should accord to Clause 53.02 Bushfire, Table 6 Vegetation management requirements in the Cardinia Planning Scheme. All landscape plans and proposals should give effect to this requirement.
- **Recommendation 6:** Interim vegetation management for bushfire purposes is applied around all stages of development within the study area for a distance of 50 metres. Vegetation management should accord to Clause 53.02 Bushfire, Table 6 Vegetation management requirements in the Cardinia Planning Scheme. All landscape plans and proposals should give effect to this requirement.

The above recommendations provide for future development in the study area to be exposed to no more than 12.5 kilowatts/square metre of radiant heat during the development phase and in the completed development.

The Urban Growth Zone Schedule 6 (UGZ6) will include planning controls to ensure that the fire risk is managed during the staging of development across the precinct. These controls will work in combination with the building regulations and standard bushfire risk management provisions in a manner suitable for an area transitioning from rural to urban land uses. The CFA provided feedback to inform the controls included in the UGZ6.

10 ECONOMIC ASSESSMENT

SGS Economics and Planning were engaged to provide guidance relating to the future employment opportunities in Pakenham South, including an assessment of the potential floorspace and viability of a Local Convenience Centre.

10.1 Employment

The PSP will contain requirements that regulate the subdivision and development of land in order to create an employment precinct with a high standard of urban design and amenity. A path network linked to an integrated public transport will provide nearby residents with good access to local employment opportunities.

The protection of a heritage building on the dominant ridgeline within the PSP area and incorporating this building within a local park setting adjacent to the Local Convenience Centre, will assist in creating a sense of place within the precinct, as well as providing for passive recreation spaces.

Development Options

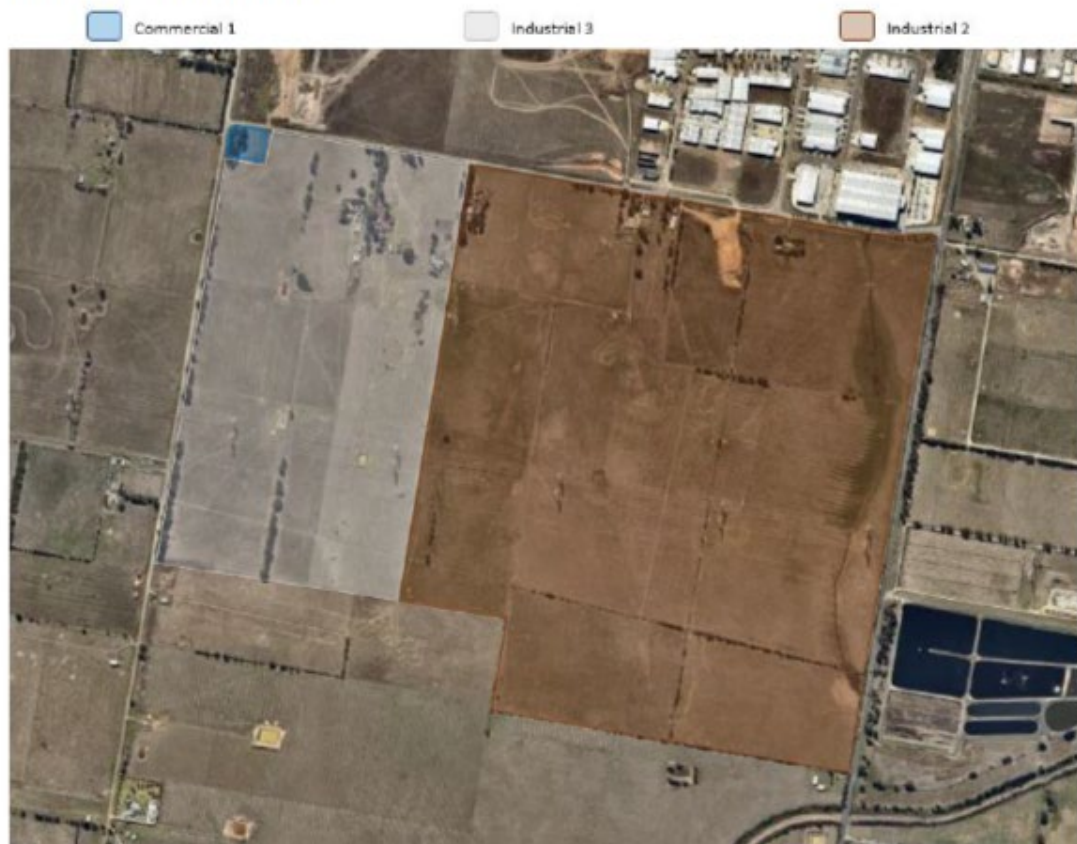
SGS Economics and Planning developed three potential development scenarios. The table below shows potential take-up by broad land use category across the PSP, under each of these Options, which are discussed in detail in the SGS report.

POTENTIAL LAND TAKE-UP BY BROAD LAND USE CATEGORY, PAKENHAM SOUTH EMPLOYMENT PRECINCT

Sector	Probable range across the PSEP	Proportions same as across the wider Pakenham-Officer SSIP	Option 1		Option 2		Option 3	
			Proportion	Hectares	Proportion	Hectares	Proportion	Hectares
Business / Office Parks	0% to 10%	15.9%	0.0%	0.0	0.0%	0.0	0.0%	0.0
Office	0% to 1.5%	1.9%	0.1%	0.1	0.0%	0.0	0.2%	0.3
Retail - Big Box	0%	0.0%	0.0%	0.0	0.0%	0.0	0.0%	0.0
Bulky Goods Retail	0% to 5%	1.4%	0.0%	0.0	0.0%	0.0	0.0%	0.0
Retail - Main Street	0% to 0.5%	0.1%	0.1%	0.1	0.0%	0.0	0.2%	0.3
Short-term Accommodation	0%	0.0%	0.0%	0.0	0.0%	0.0	0.0%	0.0
Dispersed Activities	1.5% to 5%	4.0%	1.5%	2.2	0.5%	0.7	2.0%	2.9
Special Activities	0 to 10%	10.2%	0.0%	0.0	0.0%	0.0	0.0%	0.0
Local light industrial and urban support	5% to 10%	11.8%	10.0%	14.7	5.0%	7.4	15.0%	22.1
Manufacturing - Light	7.5% to 25%	8.2%	15.0%	22.1	10.0%	14.7	10.0%	14.7
Manufacturing - Heavy	5% to 10%	2.2%	23.3%	34.4	39.5%	58.3	12.6%	18.6
Freight and Logistics	36% to 60%	35.8%	45.0%	66.4	42.5%	62.7	55.0%	81.1
Urban Services	10% to 15%	8.4%	5.0%	7.4	2.5%	3.7	5.0%	7.4

Source: SGS Economics and Planning

INDICATIVE ZONING, OPTION 1



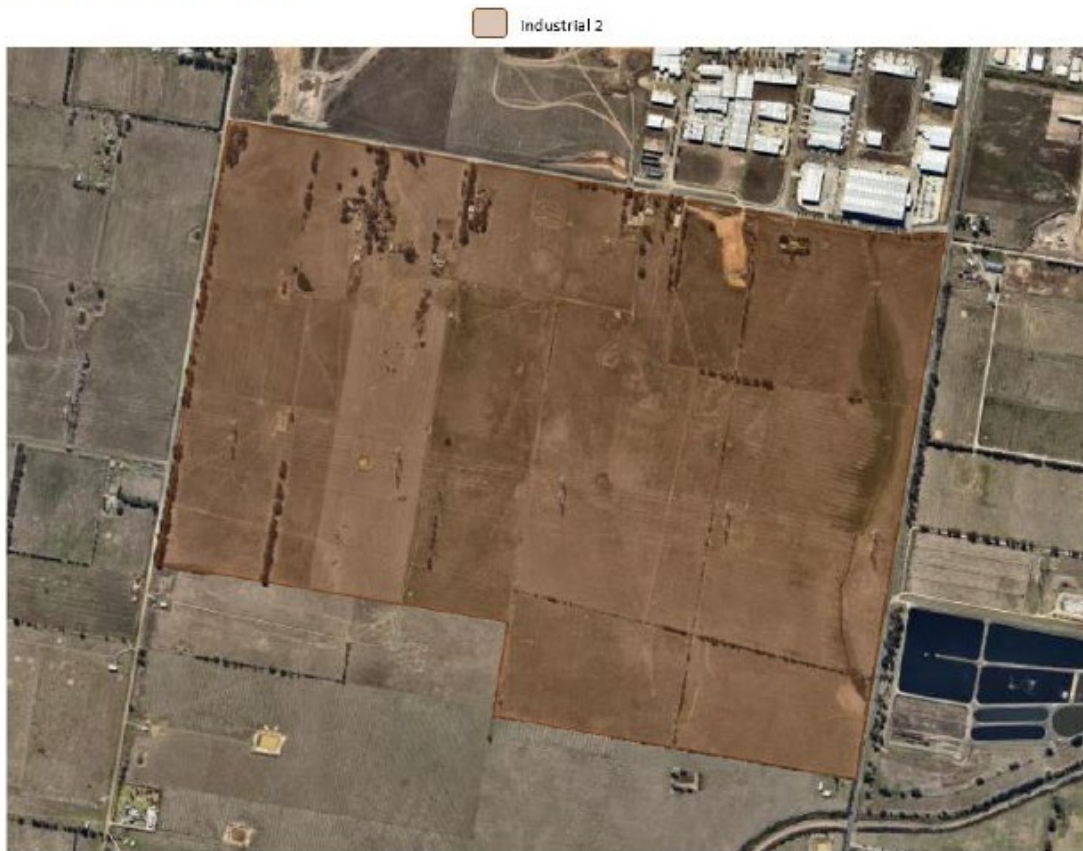
Source: Nearmap, SGS Economics and Planning

Option 1 - Employment Summary

Assuming comparable job densities and building plot ratios to those observed in similar precincts elsewhere in metropolitan Melbourne, it is estimated that around 3,600 workers would be employed across the PSP once it is fully built out and operational.

This total employment figure translates to 24.7 jobs per net hectare of land, and 19.8 jobs per gross hectare across the precinct. In terms of employment land area per worker, the net figure is 404.8 square metres in net terms, rising to 506.0 square metres gross.

INDICATIVE ZONING, OPTION 2



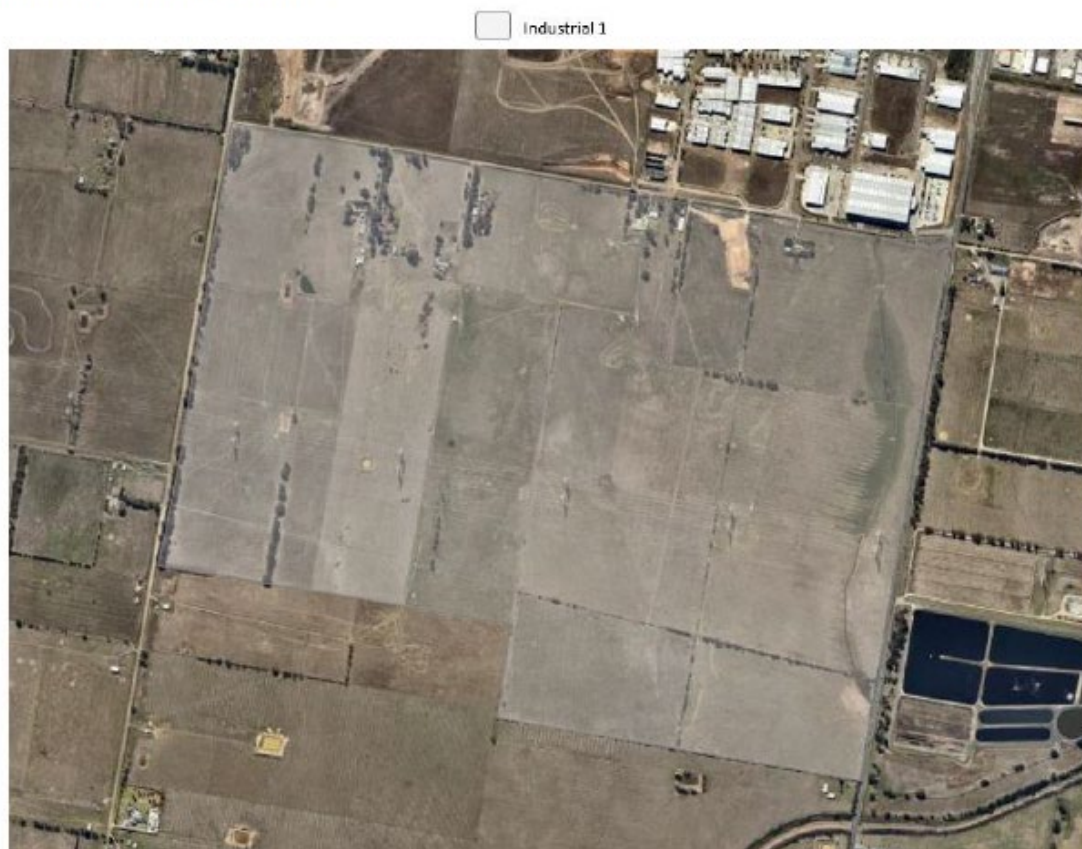
Source: Nearmap, SGS Economics and Planning

Option 2 – Employment Summary

Employment densities are expected to be lower under Option 2, and it is estimated that around 2,800 workers would be employed across the PSP once it is fully built out and operational. The lower quantum of employment on site is largely a consequence of the greater prominence of freight and logistics in the precinct under this option.

This total employment figure translates to a total of 19.1 jobs per net hectare of land, and 15.3 jobs per gross hectare across the PSP. In terms of employment land area per worker, the net figure is 248.5 square metres, rising to 354.9 square metres gross.

INDICATIVE ZONING, OPTION 3



Source: Nearmap, SGS Economics and Planning

Option 3 – Employment Summary

Under Option 3, it is estimated that around 3,700 workers would be employed across the PSP once it is fully built out and operational. A commercial centre would be located in the north western part of the precinct adjacent to the heritage overlay proposed for 40 Greenhills Road.

This total employment figure translates to a total of 25.2 jobs per net hectare of land, and 20.2 jobs per gross hectare across the PSP. In terms of employment land area per worker, the net figure is 396.1 square metres, rising to 495.2 square metres gross.

10.2 Local Commercial Centre

A Local Convenience Centre (LCC) will be delivered as part of the PSP in order to service the needs of the local catchment, workers and visitors to the precinct. The LCC will provide for day to day needs offering basic goods and services with capacity for commercial, retail and office tenancies. The nearby Activity Centres in Pakenham (approximately 4-6km) and the Koo Wee Rup town centre (approximately 13km) provide a larger range of goods and services.

Possible Centre Size

A range of factors influence the level of supportable retail and commercial floorspace within a centre, including location, catchment population and worker characteristics, and the cost of land/ leases. A centre in this location is likely to be almost entirely reliant on expenditure from workers in the region.

'Marketinfo' data reveals that expenditure for residents *across all retail categories* in the Pakenham region is approximately \$13,000 per annum. SGS assumed that each worker within the PSP will have a similar level of annual retail expenditure. SGS has discounted expenditure linked to retail categories most closely

associated with larger retail centres, assuming that worker expenditure will be limited to a proportion of the following two categories:

- Restaurants, cafes, takeaways, pubs and
- Retail services.

In each case it is reasonable to assume that 20 per cent of workers' expenditure within these two retail categories would be spent in the PSP. This amounts to about \$600 in annual expenditure within the precinct per worker. Further, SGS assume that around \$5,000 per annum in expenditure would be required to support a single square metre of retail floorspace.

The table below shows that the level of supportable retail floorspace at the PSP would be expected to be between 300 and 480 square metres depending on the number of workers employed within the precinct.

TABLE 16. POSSIBLE CENTRE FLOORSAPCE ESTIMATES (WITH \$600 EXPENDITURE PER WORKER)

Number of PSEP workers	Breakdown by BLC (%)	Expenditure per sqm of floorspace	Total supportable floorspace (sqm)
2,500	\$1,500,000	\$5,000	300
3,000	\$1,800,000	\$5,000	360
3,500	\$2,100,000	\$5,000	420
4,000	\$2,400,000	\$5,000	480

Source: SGS Economics and Planning

10.3 Outcomes and Recommendations

SGS Economics and Planning note their preferred Development Option of those outlined above is Option 3. The justification for this conclusion includes:

- The Industrial 1 zone would accommodate the vast majority of uses that are likely to seek to locate in this part of Cardinia Shire.
- Sensitive uses that may prejudice the ongoing operation of the PSP as an employment precinct are not permitted under the zoning.
- A lack of passing traffic (relative to other parts of the State Significant Industrial Precinct) and buffers along the Healesville-Koo Wee Rup Road make the precinct generally unsuitable for highway-based retail and offices.
- It is important to Council that a small quantity of retail floorspace is enabled within the precinct. This is more likely to be viable under the Industrial 1 zone, then with Industrial 2 zone.
- Although the site represents a unique opportunity for the accommodation of externality-generating activities (which would typically seek to locate in an Industrial 2 zone), the relative proximity of uses that might be sensitive to these uses makes application of this zone undesirable.

Council officers have taken into consideration the proposed Motorsports facility directly to the west of the precinct as well as the future upgrade of Greenhills Road to the Thompsons Road extension. On this basis, a larger Local Convenience Centre of approximately 3,800 square metres including car parking is proposed adjacent to a local park on Greenhills Road.

10.4 High Voltage Electricity Transmission Easement

The 500kV electricity transmission easement accounts for just under 25 hectares (around 14 per cent of the total land area), and places restrictions on the sorts of land uses that can occur within this area. Ausnet has indicated that metal structures in the easement would not be permitted.

Land use underneath and adjacent to transmission lines can be occupied, though the range of possible uses is heavily restricted. The existence of the lines excludes a number of use types that would ordinarily locate on employment land, depressing the value of that land. As a result, low value uses are more likely to locate

in these areas, including uses such as (non-metallic) material recycling, as well as those with no inherent requirement for on-site amenity, including freight and distribution and manufacturing.

Research on uses of other transmission line easements across metropolitan Melbourne suggests appropriate uses within the easement may include one or more of the following:

- Car parking linked to businesses within adjacent structures;
- Non-metallic materials recycling; and
- Goods storage and distribution.

All development within the transmission line easement must be in accordance with the *Guide to Living with Transmission Line Easements, Ausnet Services*.

11 TRANSPORT AND MOVEMENT

11.1 Road Network

Vehicular access to the precinct is provided directly onto Greenhills Road and McGregor Road, with wider access provided from Healesville-Koo Wee Rup Road and through the adjacent industrial development within South East Business Park, to the north of the precinct.

An internal trafficable road network comprising industrial connector streets is to be provided within the precinct, inclusive of a shared path network providing links along key connector streets and through areas of open space.

The following intersection upgrades are proposed within the PSP:

- Traffic signals at:
 - Greenhills Road / Healesville-Koo Wee Rup Road intersection (The initial signalised intersection is to be provided as part of the State Government's upgrade of Healesville-Koo Wee Rup Road. The PSP will provide any additional works required to cater for additional traffic generated by the precinct)
 - Greenhills Road / McGregor Road intersection
- Roundabouts at:
 - Greenhills Road / Commercial Drive intersection
 - Greenhills Road / Precision Drive intersection
 - McGregor Road / proposed E-W Road intersection
- 2 x left-in left-out intersections along Greenhills Road
- 1 x left-in service lane entry and 1 x left-out service lane exit along McGregor Road, located between Greenhills Road and the proposed E-W Road (roundabout).

The precinct will provide for the provision of a single carriageway for Greenhills Road, with an ultimate second carriageway being provided by the Department of Transport when the extension of Thompsons Road is provided to the west. The extension of Thompsons Road across Cardinia Creek will form the primary east-west arterial through the precinct in the future.

McGregor Road will be upgraded from the precinct to the freeway interchange, whilst Healesville-Koo Wee Rup Road will be upgraded by Major Roads Projects Victoria.

Based on the Traffic Impact Assessment undertaken by Trafficworks Pty Ltd in 2020, it concluded that:

- The precinct is anticipated to generate 31,791 vehicles per day to and from the site, with 4,084 vehicles per hour in the AM and PM peak periods
- SIDRA analysis undertaken for the key intersections for the subject site indicates that each of the intersections will operate satisfactorily (below practical capacity) in both peak periods, should the intersection layouts be implemented as designed
- The daily traffic volumes along each of the key roads within the precinct are generally in accordance with the intended function, amenity and capacity of each road and the proposed road hierarchy
- The proposed road hierarchy and road cross sections are generally in accordance with the VPA standard cross sections, with some alterations made due to the industrial nature of the precinct
- A portion of the Pakenham South Employment Precinct could be developed prior to the generated traffic volumes requiring the Healesville-Koo Wee Rup Road / Greenhills Road intersection or the Greenhills Road / McGregor Road intersection to be upgraded
- A traffic impact assessment should be prepared for each development site during the planning permit stage and should assess and identify the trigger points for infrastructure upgrades within the precinct.

11.2 Bus Services

A bus capable road network is provided throughout the precinct to allow for the future expansion of bus services for workers within the PSP. A potential local bus route has been identified along Greenhills Road with a service already operating along Healesville-Koo Wee Rup Road.

11.3 Pedestrian and Cycle Network

The PSP incorporates an extensive road and shared path network that links the proposed bus route, major roads, Local Convenience Centre and local parks within the precinct.

12 UTILITY AND SERVICE INFRASTRUCTURE

12.1 Sewerage

South East Water has advised two sewer pump station are required in the north west and south east corner of the precinct. Indicative sewerage pipe alignments and piping sizes have been included in the PSP document. Sewer will be treated at the nearby South East Water Pakenham Water Recycling Plant.

12.2 Drainage

Stormy Water Solutions were engaged to review and design the drainage infrastructure to service the precinct. The final report (May 2020) also includes revisions to meet current statutory design standards. The site is situated within the 1601 Deep Creek South Drainage Scheme.

The precinct will be drained via constructed pipelines and overland flow paths within road reserves to a substantial treatment wetland to the south of the precinct before discharge to Deep Creek.

Due to the floodplain and overland flow path drainage proposals in the PSP area and surrounds, significant filling of the PSP region is required to:

- Delineate catchment areas; and
- Protect future development from flooding (from both the regional Deep Creek Floodplain and the 'local' overland flow paths).

The designs provided by Stormy Water Solution aim to minimise the amount of fill required.

12.3 Water Supply

12.3.1 Potable Water Supply

South East Water has advised that water services can be extended south for existing pipes along Greenhills Road. The location of future potable water pipes has been included in the PSP document.

12.3.2 Recycled Water Supply

Existing recycled water pipes run along Greenhills Road. A "third pipe" system has been allowed for within the road reserve of the central north south connector.

12.4 Electricity Supply

The electricity distribution network may be subject to future upgrade works as the precinct is developed, which may include:

- Replacement of overhead network with underground;
- Overhead conductor upgrade of the 22kV network;
- Extension of underground network to new precinct.

AusNet Transmission Group has two 500 kilovolt transmission lines crossing through a portion of the subject land, with a future line planned within the easement also. Any proposed development (including roads, earthworks or landscaping) within 60 metres of the easement must be referred to AusNet Transmission Group for approval as required by the Cardinia Planning Scheme.

There are strict requirements regarding roads in transmission easements including road length, clearance to existing and future towers and overhead conductors as well as safety considerations relating to installation, operation and maintenance of services within road reserves. Roads should be designed to cross AusNet easements as perpendicular as possible.

It should be noted there are restrictions on development within the AusNet Transmission Group easement, and that vehicle access is required by AusNet Transmission Group at all times.

Any service (including drainage) must pass a minimum of 30 metres from the transmission tower steel work.

12.5 Gas Supply

APT O&M Services Pty Ltd, (APA Networks), operating as a subsidiary of APA Group, manages and operates the gas reticulation assets located within the vicinity of the above on behalf of Australian Gas Networks (Vic) Pty Ltd.

APA Networks has existing gas reticulation assets immediately adjacent to this precinct alongside Healesville-Koo Wee Rup Rd, contained within a 2 metre wide easement immediately west of the currently defined road reserve.

APA Networks does not make provision for the reticulation of natural gas within Industrial and Commercial subdivisions. The extension of natural gas supply is on a needs basis in response to the request for connection to natural gas provided through a Retailer. It should be noted, that capacity within this portion of the system is constrained, and connection to natural gas may incur a contribution by the applicant. If the proposed demand is substantial, a new gas supply facility may also be required as part of the connection proposal, its location to be determined. If a new facility were required it would need to be situated either within the Livestock Exchange or South East Business Park Precincts, immediately adjacent the existing gas supply easement with provision of an approximate area of 900 m² with road access.

12.6 Telecommunications

NBN Co is the responsible agency for the delivery of the National Broadband Network (NBN). Existing properties within the precinct are ready for connection to the NBN broadband via Fixed Wireless access network. Applications for new connections require development designs to be submitted to the NBN and may take up to 6 months in total.