

Officer South Employment PSP Background Report Summary

Contents

Arboricultural Assessment.....	2
Aboriginal Cultural Heritage Impact Assessment	5
Land Capability Assessment.....	8
Utility and Service Infrastructure.....	10
Historical Heritage Assessment	14

Officer South Employment PSP

Background Report Summary

Topic	Arboricultural Assessment
Technical Report	<i>Preliminary Tree Assessment</i> , Assessment of trees within the proposed Officer South Employment Precinct, Homewood Consulting Pty Ltd, 24 September 2020

What was the purpose of the report?

- To identify trees worthy of retention within defined areas in the Officer South Employment Precinct.
- To provide an assessment of the identified trees with regard to their health, structure and retention value in the landscape.
- To provide preliminary recommendations for tree protection that should be incorporated in the design and construction process.

What do we know so far?

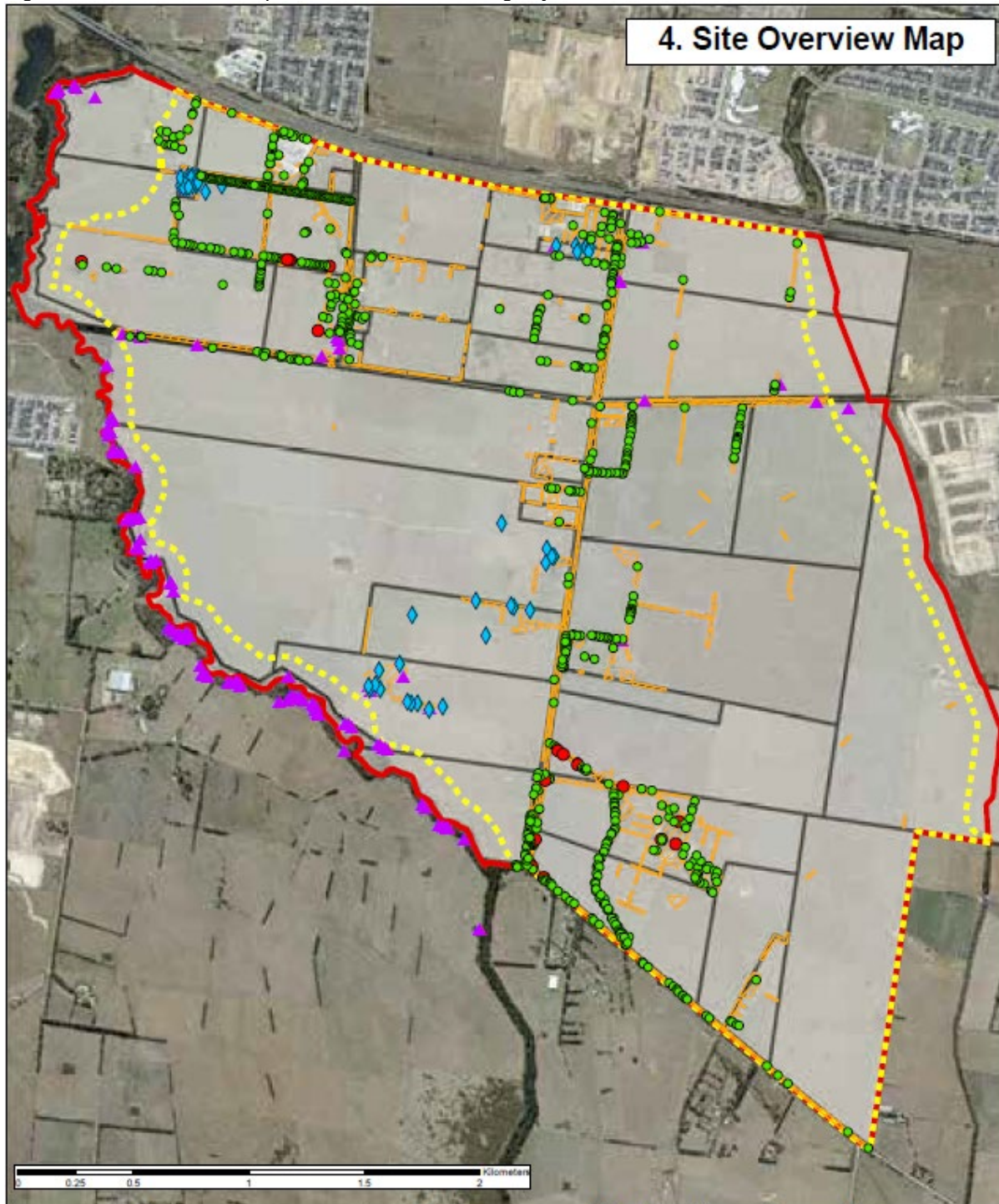
- A total of 10,430 trees were assessed as part of this proposal, with a further 53 inaccessible trees noted as potentially 'High' retention value.
- A 'Visual Tree Assessment' (VTA) was conducted for each tree and was conducted from ground level with no instruments used other than a diameter tape to measure trunk diameter. Any assessments of decay are qualitative only.
- Much of the land consists of open paddocks containing few trees. The majority of trees within the assessment area have been planted for windbreaks/shelter belts, around residences for amenity and screening purposes, or are located along roadside verges.
- The arboricultural retention values for assessed trees are shown in Table 1 below (table extracted from report).

Table 1 Retention Values for assessed trees

Retention Category	No of Trees
Very High	16
High	699
Medium	3993
Low	5722
Total	10430

- 16 'Very High' retention value trees and 699 'High' retention value trees are to be retained and incorporated into any new development/design.
- As many 'Medium' retention value trees as possible are incorporated into the design.
- Low retention value trees are not considered a constraint on the design process for this site.
- Scattered Trees as defined by DELWP have also be detailed as high retention value.

Figure 1 Site Overview Map, Homewood Consulting Pty Ltd



Assessment of Trees within the South Officer Employment Precinct

Legend

- High Retention Value Trees
- Very High Retention Value Trees
- Assessment Area Boundary
- Precinct Boundary
- Land Parcels
- ▲ MSA Scattered Trees
- ◆ Potential High Retention Trees
- Low & Medium Retention Tree Groups

Base information supplied by:
 Victorian Planning Authority
 Plotted: JMB
 Coordinate System:
 GDA 1994 MGA Zone 55
 Date: 24/09/2020

N

Unit 10/ 350 Settlement Rd
 Thomastown VIC 3034
 Ph: 1300 404 556
 ABN: 39 531 880 706

What does this mean for the Officer South ePSP?

- The PSP will identify the high value and very high value trees within the precinct features plan.
- The place-based plan will consider the location of high valued trees when determining locations local park, road reserves and other assets which may allow for trees to be retained.
- The PSP may include guidance for subdivision stage for how existing high value trees should be incorporated into development.

Emerging Questions/Opportunities to consider

- How can the open space network and other assets maximise the retention of existing high value trees?
- How can roads be aligned to ensure as many high retention value trees are retained?

Officer South Employment PSP

Background Report Summary

Topic	Aboriginal Cultural Heritage Impact Assessment
Technical Report	<i>Aboriginal Cultural Heritage Impact Assessment</i> , prepared in order to develop a broader understanding into the Aboriginal cultural heritage values and statutory obligations for the Officer South Employment Precinct (Activity Area), Archaeology At Tardis Pty Ltd, 28 April 2021

What was the purpose of the report?

- To investigate the known and potential Aboriginal cultural heritage within the activity area.
- To provide preliminary recommendations and advice in terms of statutory obligations, further work, and conservation and management of cultural heritage within the activity area.

What do we know so far?

- There are 14 previously recorded Aboriginal cultural heritage places located within the activity area and 9 further record Aboriginal places within 50 metres of the activity area.
- The highest likelihood of subsurface and surface artefact scatters, shell middens are within Cardinia Creek (including anabranches). Artefacts are also likely to be located within prominent sandy rises located around waterways. Most recorded places are within, or adjacent to, Cardinia Creek.
- Lower Gum Scrub Creek was subject to redevelopment in the last century and the current alignment is artificial therefore there is lower potential for archaeological deposits along this alignment. In addition, no Statutory Areas of Aboriginal Cultural Heritage Sensitivity attached to Lower Gum Scrub Creek within the PSP activity area.
- Cardinia Creek was likely the major route for movement travelling north and south between Dandenong Ranges and Koo Wee Rup, with major campsites likely to be adjacent to permanent waterholes. The small rise within the south-west of the activity area provided a good vantage point over the immediate area but this location is unlikely to contain a permanent campsite due to the better locations closer to the Cardinia Creek.
- Mandatory Cultural Heritage Management Plans will be required within the following locations:
 - Land within 200 metres of Cardinia Creek;
 - Land within 200 metres of an unnamed lake and unnamed swam/wetland area; and
 - Land within 50 metres of Registered Aboriginal places.

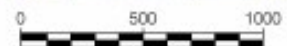
The Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation (WWWCHAC), Bunurong Land Council Aboriginal Corporation (BLCAC) and the Boonwurrung Land and Sea Council (BLaSC) must be consulted during the preparation of any future Cultural Heritage Management Plans.

- The assessment recommended that a 100-metre conservation zone be created from Cardinia Creek to protect significant archaeological deposits.

Figure 1 Desktop Assessment – Areas of Archaeological potential (pg. 63)



Aerial Photograph: Courtesy of DPI Website 2019



Scale of Metres

Legend:

-  Activity Area Boundary
1,068 hectares (approx)
-  Contour Line

-  Areas of High Aboriginal Cultural Heritage Sensitivity
-  Areas of Moderate Aboriginal Cultural Heritage Sensitivity
-  Areas of Low Aboriginal Cultural Heritage Sensitivity



Map 5 Desktop Areas of Archaeological Potential

What does this mean for Officer South ePSP?

- Passive recreation is preferred use within 100 metres of Cardinia Creek, with other uses to be located outside of this buffer.
- The north-western area of the precinct presents as the potential location for high cultural sensitivity and could be preferred location for open space.

Emerging Questions/Opportunities to consider

- Cardinia Creek presents as the key conservation corridor for cultural heritage protection, and storytelling within the landscape.
- Cardinia Creek is historically the key movement corridor for people, with a connection to the waterway, this element should be reinforced through the place-based plan.

Officer South Employment PSP

Background Report Summary

Topic	Land Capability Assessment
Technical Report	<i>Land Capability Assessment: Officer South Employment Precinct Structure Plan</i> , prepared in order to develop an understanding of the environmental conditions and constraints within the Officer South Employment Precinct, Aurecon, 02 October 2020

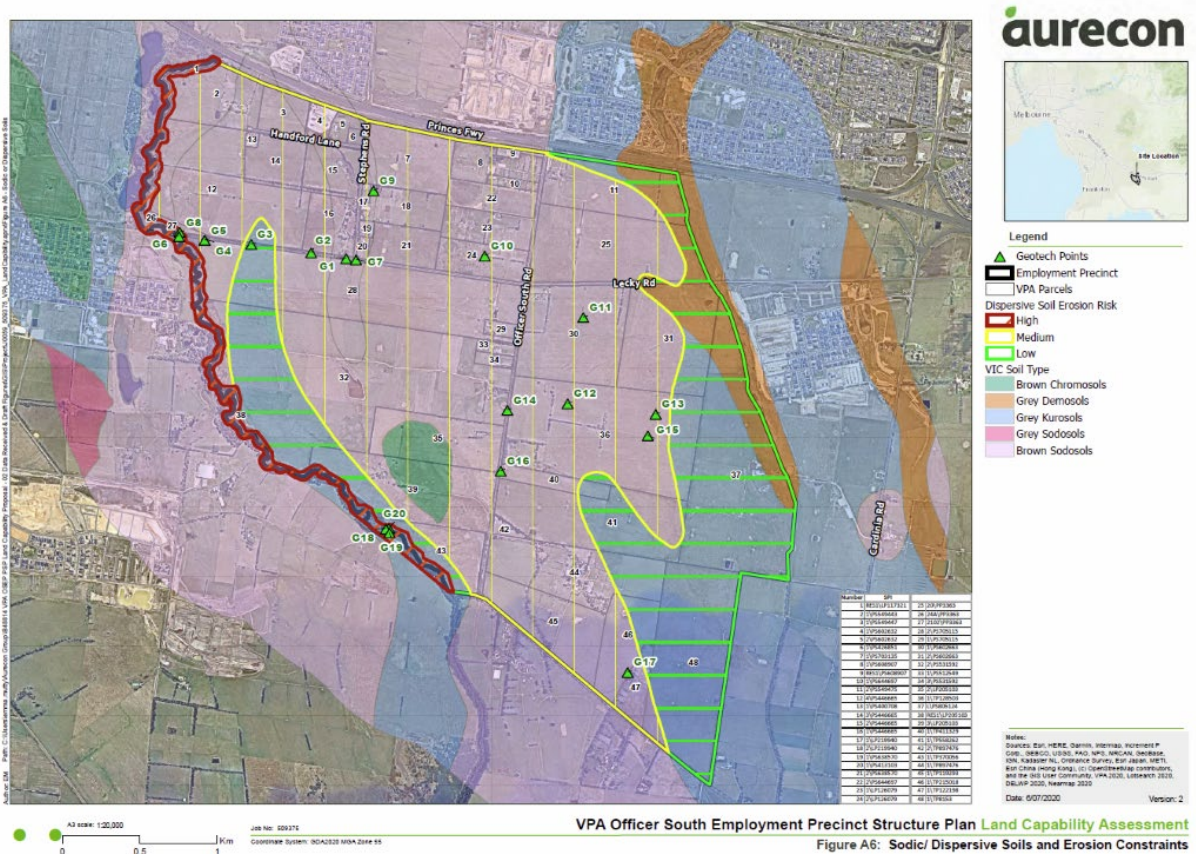
What was the purpose of the report?

- To assess the existing environmental conditions of the precinct
- To identify areas of issues and constraints which may effect the viability of development land in the future

What do we know so far?

- Localised soft areas within alluvial deposits are likely to exist throughout the precinct and may result in higher construction and maintenance costs for foundations and pavements.
- There is a medium possibility of acid sulfate or dispersive soils, sodic soils present across a large majority of the precinct, and further soil testing has been recommended.
- Should the presence of dispersive soils or acid sulfate soils be found through further testing, appropriate controls may be required within the PSP and UGZ to manage the issue, such as requiring more detailed testing and management plans at development stage.
- The precinct features two significant waterways, a major overland flow path and additional water treatment assets related to water management within the locality.
- The conversion of rural land to urban provides an opportunity to rehabilitate the land and assist the natural water balance to support sustainable development and to integrate water into the precincts future urban structure in a manner that will facilitate amenity, connectivity and liveability.
- The Cardinia Creek - Conservation Area 36 is a planned area for the protection of the Growling Grass Frog. Dwarf Galaxia and Australian Grayling are also protected within this waterway.
- Generally, there is a low to medium level of potential contamination of land, with potential contamination arising from historical agricultural activities. The BP Service Station along Princes Freeway presents as the highest risk of general contamination, common for such uses.

Figure 1 – Sodic/Dispersive Soils and Erosion Constraints



What does this mean for Officer South ePSP?

- The findings of this report informs land capability and development generally.
- Presence of sodic soils may result in additional works during construction stages which can increase the cost of development, including the cost of infrastructure.

Emerging Questions/Opportunities/Constraints to consider

- Is there an opportunity to locate drainage assets on encumbered land such as the existing transmission easement?
- The need to determine the presence of dispersive soils and the impact this can have on development and infrastructure.
- Are there other opportunities to co-locate assets on other encumbered land?
- How should development interface with the conservation areas?

Officer South Employment PSP

Background Report Summary

Topic	Utility and Service Infrastructure
Technical Report	<i>Officer South Employment PSP Utility Assessment Situational Analysis Report, GHD, October 2020 (Part 1)</i>

What was the purpose of the Part 1 report?

- Identification of any utility services that may have implications for precinct planning.
- Determine key opportunities and constraints relating to the existing utility infrastructure within and servicing the Precinct.
- To provide an assessment of stormwater, water, sewerage, electricity, gas and telecommunications infrastructure to assist the VPA to prepare the Officer South Employment PSP.
- Identify ESD opportunities.

What will the Part 2 (Utility Servicing Assessment) report do?

- After the future structure of development has been set out and the development assumptions are known, Utility providers will map out the potential placement of utility services to respond to the future redeveloped Officer South Employment Precinct.
- The Precinct Structure Plan (PSP) will include a utility plan that details the proposed utility servicing provisions and locations that have been set out by the utility providers.

What do we know so far?

As part of this assessment, GHD consulted with the following authorities:

- **Electricity** - AusNet Electricity and AusNet Transmission (AusNet)
- **Gas** - APA Group Networks and APA Group Transmission (APA)
- **Sewer** - South East Water (SEW)
- **Stormwater Drainage** - Cardinia Shire Council and Melbourne Water Corporation (MW)
- **Telecommunications** - NBN Co, Optus / Uecomm, Opticomm and Telstra
- **Water** - South East Water (SEW)

Stormwater Drainage Infrastructure and Flooding

- There are two development drainage schemes (DSS) for the Precinct, the Officer South DSS and Lower Gum Scrub Creek DSS. These DSS's are under development by Melbourne Water to be completed in parallel with the PSP. A historic draft plan has been prepared by MW, which can inform structure plan options, and will be revised by MW.
- Melbourne Water Corporation is responsible for a short length of 1800 mm diameter pipe crossing Lecky Road at the Lecky Road and Officer South Road intersection, and a short length of 1200 mm diameter pipe on Lecky Road on the eastern perimeter of the Precinct.
- Council drainage infrastructure within the Precinct is predominantly above ground drainage channels (swales) and short stormwater pipes connecting the swales.
- It is likely that majority of the Precinct is currently subject to shallow sheet flooding, and areas have been mapped as land subject to inundation overlay and flooding overlay. Updated flood modelling from Melbourne will occur through the development of the DSS and the DSS will address any existing areas of flooding within the precinct.

- Flooding impacts on nearby areas outside of the precinct will need to be considered by Melbourne Water.
- The potential retarding and treatment basin in the north east of the Precinct and its implications will need to be considered throughout development of the Precinct.
- There is an unmapped tributary in the western portion of the Precinct that would have an associated flood extent.
- Opportunity for integrated water management (IWM) and a closed loop, carbon neutral integrated water network, is complementary investment is supported.

Water

- South East Water (SEW) is the water retailer responsible for the distribution and reticulation infrastructure within the Precinct.
- There are currently limited potable water reticulation assets within the Precinct.
- SEW indicated that as part of the current capital works program it is currently not proposed to provide recycled water supply to the Precinct and there are currently no recycled water assets within the Precinct. If recycled water is required in the Precinct, it will be supplied from the future Cranbourne – Clyde – Officer R.W (recycled water) 80 m zone.

Sewerage

- SEW is the authority responsible for the distribution and reticulation sewerage network in the Precinct.
- Existing sewer assets are located predominantly along the northern boundary of the Precinct and comprises of both gravity pipelines and pressured rising main pipelines parallel to the Princes Freeway.
- The Officer South Road sewer pump station is located in the north of the Precinct, to the west of Officer South Road.
- A proposed South East Water pump station is proposed in the southern end of the precinct which will likely require a 200m odour buffer.

Electrical

- The entirety of the Victorian electricity transmission network is owned and operated by AusNet Services (AusNet).
- Three AusNet overhead transmission lines (two overhead 500 kV lines and an underground 220 kV line) run east-west in the southern portion of the Precinct. These transmission assets are located within a 146.30 m wide easement which restricts development and construction.
- The servicing strategy for the Precinct is dependent on the available capacity of the existing network and proposed load requirements of the Precinct
- There is limited capacity to support the Precinct via the surrounding 22 kV distribution feeders and therefore AusNet indicated two possible scenarios to service the Precinct:
- distribution feeders from the existing OFR and/or CLN zone substations. This scenario involves a second 22 kV switchboard in the OFR zone substation that requires a 3-year lead time.
- A new zone substation requiring approximately 10 000 m² land take and a capital expenditure of approximately \$25 million. This scenario involves new 66 kV double circuit lines along Officer South Road that are generally installed above ground.

Gas

- APA Group owns the gas transmission network and APT O&M services (APA) operates and manages the natural gas reticulation network within the Precinct on behalf of Australian Gas Networks (AGN).
- There is a 450 mm diameter high pressure transmission gas pipeline has an associated 20.1m wide easement. Measurement Length of 275 m either side of the gas pipeline restricting sensitive land uses.

- A Safety Management Study (SMS) is required when the land use classification changes within the measurement length.
- There are limited gas distribution assets within the Precinct.
- The existing distribution assets will require a 2.0 m clearance from title boundaries and a 3.0 m clearance from building facades, inclusive of verandas and canopies.
- There are development constraints and costs associated with crossing the gas pipeline, such as for the drainage scheme, road crossings, and other assets.

Telecommunications

- The Precinct is serviced by three telecommunication service providers: Telstra, NBN and Optus.
- There is a lack of fixed line infrastructure throughout the Precinct.
- Telstra assets throughout the Precinct currently comprise of pit and pipe infrastructure in Handford Lane, Officer South and Stephens Road road reserves. Telstra advised that it may require one or more parcels of land for mobile phone towers.
- Optus cables are present on Officer South Road, the west of Lecky Road and along Stephens Road and requires clear access to its critical fibre asset at all times.
- NBN advised that there is no NBN pit and pipe infrastructure in the area available for connection.
- Telstra may require land for one more mobile phone towers within the precinct.
- The Part 2 Utility Assessment will resolve the final servicing requirements for the Precinct.

Ecologically Sustainable Development (ESD)

- Ecologically Sustainable Development potential options for Employment Precincts include:
 - Distributed and Renewable Energy Generation;
 - Energy Efficient Buildings;
 - Smart Separation and Disposal;
 - Encouraging Electric Vehicle Use;
 - Integrated Water Management and WSUD; and
 - Gas Free Energy Servicing.
 -

What does this mean for Officer South ePSP?

- The Phase 2 technical investigation will propose a utility servicing strategy to support the desired future urban structure and seek to inform or address resolution of key challenges for effective utility service delivery or the planning for adjacent land uses.
- We expect to have restricted crossings of the gas and electrical easements.

Emerging Questions/Opportunities to consider

- How can the PSP or other implementation mechanisms implement higher targets for sustainability such as a closed loop water re-use and carbon neutral precinct?
- What is the best use or uses for the high voltage electricity transmission easement such as such as whether it can be used for other service infrastructure, open space or private development?
- What are the appropriate locations for the required utility services that require a land take within the precinct?
- What restrictions will we have in planning for and delivering road and movement crossings of the gas and electrical easements?
- What are the spatial impacts from the APA Gas Pipeline measurement length in terms of the future uses identified under the PSP?

- What are the spatial implications for the proposed Melbourne Water Drainage Schemes on the future precinct layout?
- Are there opportunities to co-locate existing and future servicing assets, particularly where buffer requirements are needed and where road crossing should be minimised such as over the gas pipeline?
- How will the proposed sewage pump stations and buffers impact on proposed land uses?
- How can the utility services such as fibre create opportunities to attract future employment uses?

Officer South Employment PSP

Background Report Summary

Topic	Historical Heritage Assessment
Technical Report	<i>Post-Contact Heritage Assessment: Officer South Employment Precinct</i> , prepared in order to develop a detailed understanding of the places of heritage significance within the Officer South Employment Precinct, Benchmark Heritage Management, 15 April 2021

What was the purpose of the report?

- To review existing heritage listings and develop a list of known heritage places
- To provide a local historical account of the precinct
- To survey, assess and document places of potential heritage significance that are not protected under statutory measures
- To review and document known heritage places and features of both local and state significance

What do we know so far?

- The precinct contains **two (2) existing heritage overlays** which are listed as follows:
 - H091 – Cardinia Park, Former Gin Gin Bean Pre-Emptive Right Site and 410 Officer South Road, Officer
 - H092 – Jesmond Dene House and Trees.
- The precinct does not contain any evidence of early (pre 1850) significant historical cultural heritage features or buildings.
- In the unlikely chance that there are any early sites within the precinct, they are likely to be in a highly disturbed state and therefore assessed as being of lower scientific and cultural significance.
- There may be unknown/unregistered sites within the original subdivision allotments, which may comprise of residential and farming activities.
- The Gin Gin Bean Pre-emptive Right site (HO91) is significant to Cardinia Shire as an early house connected with the pioneering pastoral period, as well as being closely related to early farming activities on the property. It is also considered to be the oldest in the Shire.
- Jesmond Dene House (HO92) still has Edwardian origins but has been extensively altered. The picketed gate along Patterson Road is notable and mostly original and considered to be significant to the Cardinia Shire. The house is of local interest only due to its altered state.
- **Two sites types** were identified during the archaeological survey:
 1. **Archaeological interest:**
 - 90 Handford Lane, Officer South - No surface evidence of the original Murray Homestead remains; however, there is potential for subsurface material relating to the former house to remain in-situ. The site has potential to yield information about the occupation of the site; the establishment of small farm complexes and the development of pastoral activity in the area.
 - It is recommended that the PSP should designate the Murray Homestead site complex at 90 Handford Lane as an area of 'archaeological interest' on all maps of the precinct.

2. Sites (including trees) that **appeared to meet the threshold for local significance** (and qualify for the Heritage Overlay to be applied):

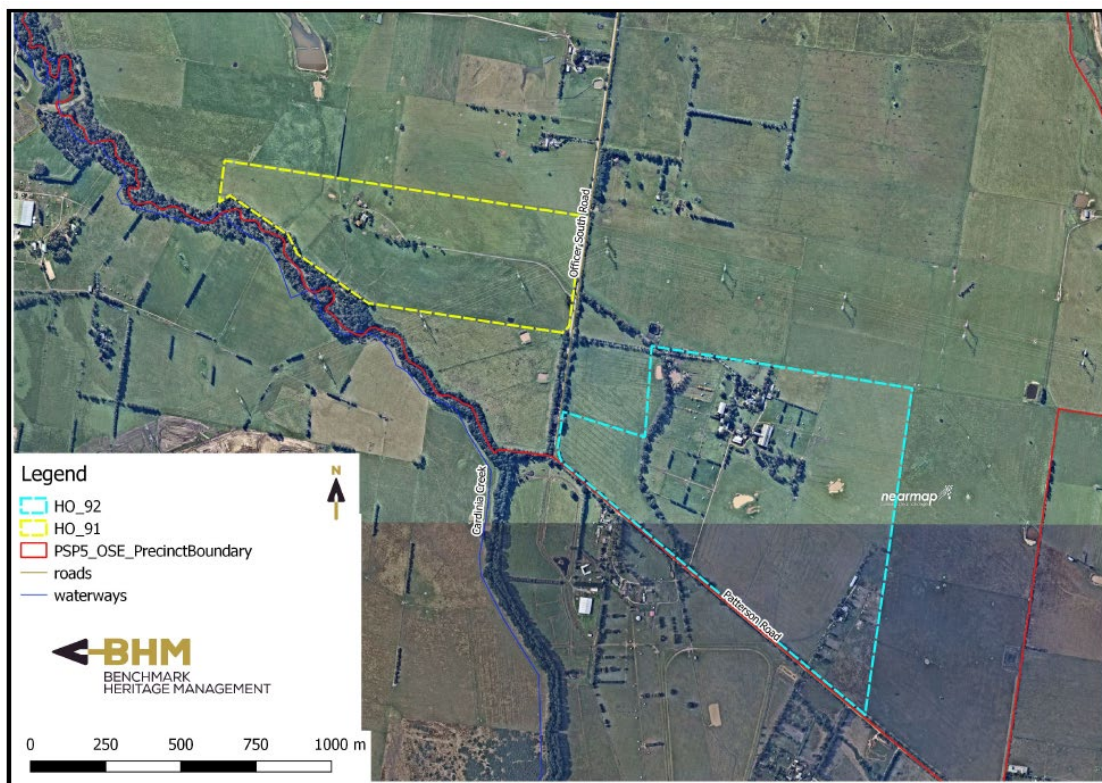
○ **345 Officer South Road:**

- > The historical associations could not be well established and are not reflected in the fabric because of low integrity;
- > The place is common within the municipality or already well-represented in the Heritage Overlay;
- > It is a typical, rather than outstanding example of an architectural style or technical achievement and there are better representative examples in the municipality;
- > The social or historical associations could not be well established or demonstrated; and
- > No recommendations are made for 345 Officer South Road.

○ **185 Officer South Road:**

- > The place is associated with twentieth century agricultural and pastoral activities in the Shire of Cardinia but is not unusual or unique in comparison to other places;
- > The contents of the dairy are rare with the Shire of Cardinia, however the building type is common; and
- > It is recommended that Prior to demolition the contents of the dairy should be recorded in detail and the contents of the dairy; namely the intact brick and render water trough and the tin feed room relate to early twentieth century farming practices and should be transferred to the Berwick-Pakenham Historical Society.

Figure 1 – Heritage Overlays



Map 3: Locations of HO91 and HO92

What does this mean for Officer South ePSP?

- An update to the Heritage Victoria site registrations and any recommendations on the extent of the Heritage Overlay.
- Ensure the Heritage Victoria's Archaeology team is contacted if works are planned that may disturb an identified archaeological site.

Emerging Questions/Opportunities to consider

- Is there an opportunity to adapt the Jesmond Dene picketed gates (Along Patterson Road) into the public realm, streetscape or open space?
- How does future industrial development provide for adaptive re-use of the Gin Gin Bean Pre-Emptive Right Site?