

## 6 Ordinary Business

### 6.1 Town Planning Reports

#### 6.1.2 Amendment C274 – Officer South Employment PSP/IPC

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##### Recommendation(s)

That Council having considered Planning Scheme Amendment C274 (Officer South Employment Precinct Structure Plan and Supplementary Infrastructure Contributions Plan), Council endorses the enclosed submission in Attachments 1-4 to be submitted to Victoria Planning Authority for consideration.

##### Attachments

1. Attachment 1 - Council sub to C 274 11.12.23 [6.1.2.1 - 57 pages]
2. Attachment 2 - Council review of PSP [6.1.2.2 - 43 pages]
3. Attachment 3 Council feedback to Clause 37 07s7 11 12 2023 (1) [6.1.2.3 - 19 pages]
4. Attachment 4 Trafficworks Traffic Impact Assessment 28 Nov 2023 [6.1.2.4 - 73 pages]

##### Executive Summary

The Victorian Planning Authority (VPA) has prepared Planning Scheme Amendment C274 to the Cardinia Planning Scheme. The Amendment proposes to facilitate the future development of the Officer South Employment Precinct Structure Plan (PSP) area and Supplementary Infrastructure Contribution Plan (ICP). Please refer to the following VPA link [Officer South Employment PSP - VPA](#) of the exhibited Amendment including the precinct structure plan and infrastructure contribution plan.

It is recommended that Council generally supports Amendment C274 and its proposed planning controls, subject to specific changes requested in the attached submission (Attachment 2-5), seeking changes to both the Officer South Employment Precinct Structure Plan and Officer South Employment Supplementary Infrastructure Contribution Plan.

##### Background

The Officer South Employment Precinct Structure Plan is a long-term strategic plan to guide urban development. It describes how land is expected to be developed, what natural assets must be protected, the infrastructure and services planned to support the new and growing community and how items will be funded and delivered through a Supplementary Infrastructure Contribution Plan (ICP).

The Officer South Employment Precinct Structure Plan covers approximately 1,069 hectares of land generally bounded by the Princes Freeway to the north, Lower Gum Scrub Creek to the east, Patterson Road to the south and Cardinia Creek to the west. The Officer South Employment Precinct Structure Plan aims to facilitate:

1. State significant industrial employment land.
2. Regionally significant commercial employment land.
3. A residential area with supporting community facilities, open space and activity center.
4. A pilot for the staging of infrastructure and
5. A pilot the protection of intangible heritage for the Bunurong Aboriginal Land Council.

The Officer South Employment Precinct Structure Plan area was included in an Urban Growth Zone in 2008, through the State Government Amendment VC48, which changed the Victorian Planning Provisions of five (5) Councils. Amendment VC48 applied an Urban Growth Zone to land in a Farming Zone located within the Urban Growth Boundary, to land identified for future urban development in a Growth Area Frameworks Plan 2006. The Officer South Employment area was subsequently identified in the South East Growth Corridor Plan 2012 for urban development (business with residential, industrial and land within biodiversity and landscape values) to cater for Melbourne's population growth. Plan Melbourne 2017-2050 and the relevant Melbourne Industrial and Commercial Land Use Plan (MICLUP) identifies the northern part of the precinct within a Regionally Significant Commercial Area and the southern part of the precinct within a State Significant Industrial Precinct.

The Victorian Planning Authority is the planning authority responsible for the development of Amendment C274 and has worked in collaboration with Council, State Government authorities and landowners to create the precinct structure plan.

Amendment C274 was formally placed on public exhibition for five weeks from the 25 September until the 27 October 2023. Based on the exhibited Amendment C274, Council staff are recommending a variety of changes as shown in Attachment 2-5, with key changes and/or issues summarized later in this report.

Submissions that cannot be resolved by the Victorian Planning Authority will be referred to an independent Standing Advisory Committee, that is currently schedule for March 2024.

### **Policy Implications**

Amendment C274 (Officer South Employment Precinct Structure Plan and Infrastructure Contributions Plan) has been prepared with guidance from key Commonwealth, State, and Local Planning policies.

Key policy documents utilized for guidance include:

- Commonwealth Policy and Legislation:
  - Environmental Protection and Biodiversity Conservation (EPBC) Act 1999
- State Policy and Legislation
  - Fauna and Flora Guarantee Act (1988)
  - Planning and Environment Act (1987)
  - Victoria Planning Provisions
  - Plan Melbourne refresh (2014)
  - South East Growth Corridor Plan (August 2012)
  - VPA - Precinct Structure Planning Guidelines – New Communities in Victoria Oct 2021
  - Transport Integration Act (2010)
  - Biodiversity Assessment Guidelines for the Permitted Clearing of Native Vegetation (2013)
- Local Policies:

The preparation of the PSP will implement provisions of the Cardinia Municipal Strategic Statement (MSS) and align with a variety of Council policies.

### **Relevance to Council Plan**

The Council Plan seeks to balance the needs of development (including economic development), the community and the environment. This balance has been a key consideration when reviewing the exhibited Amendment C74 (Officer South Employment Precinct Structure Plan and Officer South Infrastructure Contributions Plan). The precinct responds to the following principles of Councils Plan

#### **1.1 We empower our communities to be healthy, connected and resilient**

1.1.1 Plan for, and support the delivery of, accessible health and social services that address critical gaps in provision.

1.1.3 Lead by example in creating an inclusive and welcoming community for all by facilitating community education, capacity building, connection and celebration of our diversity.

#### **2.1 We support the creation of liveable spaces and places**

2.1.1 Advocate, plan for and deliver accessible community infrastructure and services that address community need.

2.1.2 Plan and maintain safe, inclusive and connected open spaces, places and active travel routes.

2.1.3 Plan for housing diversity that meets community need, is affordable and delivers environmental sustainability, safety and healthy living outcomes.

2.1.4 Advocate for increased and more-connected public transport options.

2.1.5 Upgrade Council's road network to improve safety and connectivity while considering traffic demand and freight transport needs.

#### **3.1 We value our natural assets and support our biodiversity to thrive**

3.1.2 Actively move towards zero waste through increasing waste recovery and reuse.

3.1.4 Plan and advocate for better water cycle planning and management to reduce environmental impacts.

#### **4.1 We support our productive land and employment land to grow local industries**

4.1.1 Facilitate better planning for our agricultural land to support industry, innovation, local food economy and local job growth.

4.1.2 Plan for sustainable employment precincts to entice new industries to the region and support new business.

4.1.3 Improve local learning and employment pathway opportunities through strategic partnerships.

4.1.4 Drive local innovation in technology to better support and attract businesses and industries.

4.1.5 Strengthen and promote our shire's unique identity and visitor attractions.

#### **5.1 We practise responsible leadership**

5.1.2 Manage our finances responsibly and leave a positive legacy for future generations.

5.1.5 Champion the collective values of the community through the Councillors' governance of the shire.

### **Climate Emergency Consideration**

The preparation of the Officer South Employment Precinct Structure Plan has considered State and local policy and actions that provide for both climate change mitigation and adaptation and recommends actions to prevent or minimize the impacts of climate change on the community, such as:

1. Encourage the reduction of greenhouse gas emissions.
2. Develop a sustainable water, drainage and wastewater systems.
3. Minimum 30% canopy tree coverage in the public realm to respond to urban heat island effect.
4. Gas connection will not be available for residential estates while gas will remain optional within the employment land.
5. Implement Environmentally Sustainable Design.

### **Consultation/Communication**

The Victorian Planning Authority placed Amendment C274 (Officer South Employment Precinct Structure Plan and Supplementary Infrastructure Contribution Plan) on formal public exhibition for five weeks from 25 September until 27 October 2023.

The exhibition program included:

1. A mail out to all landowners in the precinct
2. A mail out to adjacent precinct residents
3. A drop-in information session on the 7<sup>th</sup> October 11am-1pm at Officer Community Hub
4. A on-line information session on the 11 October at 6pm-7pm and
5. A drop-in information session on the 18 October 5pm-7pm at Toomah Community Centre
6. All information on the exhibited Amendment was made publicly available on the Engage Victoria, the Victorian Planning Authority website and a link from Councils website to Engage Victoria
7. Concurrently Melbourne Water exhibited the proposed Draft Drainage Service Scheme for the precinct and all background reports on their website with a link to the Victorian Planning Authority and Engage website.

Council is waiting for advice from the Victorian Planning Authority to confirm if submissions received during the public exhibition phase will be made publicly available.

Submissions that cannot be resolved by the Victorian Planning Authority will be referred to an independent Standing Advisory Committee currently scheduled for March 2023

### **Summary of Council Submission to Amendment C274**

It is recommended that Cardinia Shire Council generally support Amendment C274, subject to changes as requested in Attachment 2-5 and the resolve of issues associated with the Infrastructure Contributions Plan. A summary of the key issues is stated below:

#### **1. Affordable and Social Housing**

The exhibited Amendment proposes to provide 8% affordable and social housing as a Guideline. It is considered the allocation of affordable and social housing needs to be 10% and a Requirement, to be in alignment with Victoria Housing Statement the Decade Ahead 2024-2034.

#### **2. Active Sport Reserve**

The exhibited Amendment demonstrates 8.11 hectares for a sport reserve. It is considered the sport reserve shape will not appropriately accommodate the sporting facilities on site. It is considered the shape of the land needs to be increased by 1.39 ha to offset the inefficient shape of the existing reserve to comply with our Active Cardinia Strategy 2023 and Recreation Reserve Facility Standards Policy 2019 (or as amended).

#### **3. Community Centre**



The exhibited Amendment proposes a Level 2 Community Centre. Council cannot support the provision of a multipurpose Level 2 Community Centre, based on the allocation of kindergarten rooms. Council requests for all kindergarten rooms to be placed on the Government Primary School site, to be in alignment with the State Government Best Start, Best Life reforms regarding the Victorian School Building Authority, building kinders at schools. If the Department of Education commit to the inclusion of all kindergarten facilities on their school site, Council requests for the Level 2 Community Centre to be modified to a Level 1 Community Centre, on the basis all remaining facilities can fit on a Level 1 Facility.

**4. Centre of Excellence (Industry Training Institute)**

The exhibited Amendment demonstrates the opportunity for a future Centre of Excellence on Figure 1 (Sub-precinct Concept Plan). Council requests the vision in the precinct structure plan is altered to reference the opportunity for an industry training institute (Centre of Excellence). Council also requests the facility is demonstrated on Plan 3 (Placed Based Plan) as a potential Centre of Excellence (Industry Training Facility). This is not dissimilar to the proposed State Government Facility (TBC) demonstrated on Plan 3.

**5. Draft Drainage Plan**

The exhibited Amendment proposes various retarding basins and wetlands and a diversion pipe from the precinct to Cardinia Road Drain in Cardinia Road Employment PSP. Council has raised various questions on the proposed drainage service scheme to confirm the impacts on Cardinia Creek, Toomuc Creek and Lower Gum Scrub Creek systems and the flow outfalls from the PSP, including frequency of flooding does not compound flooding impacts to downstream landowners outside the precinct. Council considers it paramount these investigations are developed.

**6. Gas**

The exhibited Amendment references gas in the precinct structure plan as shown in the Table 1. On the 4 August 2022 Planning Scheme Amendment VC221 changed the Victoria Planning Provisions (VPP) and all Planning Schemes in Victoria by facilitating all-electric developments to support implementation of Victoria’s *Climate Change Strategy 2021 and Gas Substitution Roadmap 2022*. The amendment changed the Victoria Planning Provisions and all planning schemes by amending clauses that connecting to gas is optional. Council notes, commencing 1 January 2024 gas connections to all new dwellings, apartment buildings and residential submissions in greenfield and infill sites will be prohibited. Council also acknowledges that gas to employment areas will remain optional. Council supports the Victorian Governments aim to transition to renewable energy and request any reference to gas in the precinct structure plan, except for Appendix 8, is modified to assist decreasing confusion between residential and employment land and to assist the precinct moving towards achieving net-zero emissions as per Councils Climate Change Adaptation Strategy 2022-23. Gas will remain optional within the employment land, although changes are requested in three sections of the precinct structure plan to decrease confusion between residential and employment land. Please refer to Table 1 and Attachment 3 for the requested changes with regards to gas.

Table 1 – Proposed changes to precinct structure plan regarding gas in bold

PSP Page Number	How its referenced in PSP	How it is referenced in existing PSP
13	2.2 PSP Purpose	Third paragraph from top of page  Employment areas are configured to capitalise on the locational attributes that will support industries of the future. Large land parcels and direct access <b>to energy sources gas and high voltage power</b> encourages and supports industries to expand their businesses, and additionally leverage off access to the key freight corridor of Thompsons Road and beyond to the potential future south-east airport

53	R60	<p>Subdivision of land within the PSP must provide for and meet the cost for all local infrastructure, other than that provided for within the Officer South Employment ICP. This includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• All roads not provided by the Officer South Employment ICP</li> <li>• Local bus stop infrastructure (where locations have been agreed in writing by Head, Transport for Victoria)</li> <li>• Landscaping, including canopy tree planting of all existing and future roads and local streets for a minimum establishment period of 24 months as per the <i>Cardinia Council Landscape Developer Guidelines</i> (or as amended)</li> <li>• Intersection works and traffic management measures along arterial roads, connector streets, and local streets</li> <li>• Council approved fencing and landscaping (where required) along arterial roads and reserves</li> <li>• Pedestrian and bicycle paths and equestrian trails along local arterial roads, connector roads, utilities easements, local streets, waterways and within local parks including bridges, intersections, and barrier crossing points</li> <li>• Bicycle parking facilities</li> <li>• Electric vehicle charging stations</li> <li>• Optic fibre conduit within the road reservation for Smart City initiatives</li> <li>• Appropriately scaled lighting (including wildlife friendly lighting) along all roads, major shared bicycle, and pedestrian paths, and traversing public open space</li> <li>• Local drainage system, including land and works for water services (i.e. pressure reducing stations) and water sensitive urban design (WSUD) features</li> <li>• Construction of culverts for waterway crossings of boulevard connector streets, connector streets and local streets</li> <li>• Local street and pedestrian path crossings of waterways or electricity transmission easement unless outlined as the responsibility of another agency in Table 12.</li> <li>• Infrastructure as required by utility service providers including water, sewerage, drainage (except where the item is funded through a Development Services Scheme), <b>energy distribution electricity, gas</b> and telecommunications.</li> <li>• Construction of pedestrian and bicycle paths along waterways and open space</li> </ul>
54	R61	<p>All public open space (where not otherwise provided via the Officer South Employment ICP) must be finished to a standard that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including but not limited to:</p> <ul style="list-style-type: none"> <li>• Removal of all existing and disused structures, foundations, pipelines, stockpiles and contaminated soil</li> <li>• Basic levelling including the supply and spread of minimum 75 mm topsoil and subsoil if required on the proposed areas of open space to provide a stable free draining surface</li> <li>• Clearing of rubbish, weeds, and rocks, levelled, topsoiled, and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise).</li> <li>• Provision of water tapping, potable and recycled water connection points</li> <li>• Sewer, <b>energy system gas, and electricity connection points</b> must also be provided to land identified s sports reserve and local reserves</li> <li>• Planting of trees and shrubs (with drought tolerant species)</li> <li>• Adequate protection of existing trees that are to be retained including exclusion zones</li> <li>• Vehicular exclusion devices (preferably vegetative or may be fence, bollards, or other suitable method)</li> <li>• Maintenance access points</li> <li>• Construction of pedestrian and bicycle paths around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest             <ul style="list-style-type: none"> <li>• Installation of park furniture including barbeques, shelters, tables, local scale playgrounds and other local scale play elements such as half basketball courts and hit-up walls, skate parks with associated amenities, rubbish bins and appropriate paving to support these facilities, consistent with the type of public open space.</li> </ul> </li> </ul>
100	Appendix 8	<p>Minor change to reference gas in employment land</p>

## **7. Job Density**

The exhibited Amendment demonstrates estimated employment generation figures. Council is concerned the present planning controls in the precinct structure plan and Urban Growth Zone (Schedule 7) do not adequately ensure that future land use and development within the industrial area will achieve the intended job densities identified in the Economic Assessment, completed by SGS Economics for the precinct. Council has requested planning controls in the Urban Growth Zone (Schedule 7) that requires a planning permit application for the use of land for warehousing/logistics. The planning permit application will need to be accompanied by an Economic Impact Assessment, prepared a suitably qualified professional to determine the proposed use and development meets the economic needs of the Officer South Employment Precinct.

## **8. Location of Town Centre**

The exhibited Amendment demonstrates the local town centre split between two different landowners. Council requests the town centre is demonstrated on one land holding, preferable Development Victoria to assist its implementation and development.

## **9. Heritage**

The exhibited Amendment proposes to protect two heritage sites at 410 Officer South Road and 425 Officer South Road, while an archaeological site at 90 Handford Lane is identified to be protected. Council supports the protection of these sites and have requested the following changes:

- a. 410 Officer South Road – Council supports the proposed Heritage Overlay. Council requests the trees on site are assessed to determine if any of the trees are of heritage significance. Council was denied site access from the landowner and therefore unable to complete a heritage review of the site.
- b. 425 Officer South Road – Council supports the proposed Heritage Overlay. Council have requested the trees that contribute to the place, as identified in our submission need to form part of the Statement of Significance. Also, Council does not support the original timber gate being relocated and requests the gate be kept on site to assist protecting its heritage value.
- c. 185 Officer South Road - During recent fieldwork, Council learnt the remnant water trough extant in the milking shed and tin feed room have been damaged since the documentation of the elements in 2020. Due to the low intactness of the milking shed contents, Council requests that the shed including the contents such as the brick and render water trough and tin feed room are photographed and recorded prior to demolition.
- d. 345 Officer South Road - Council have identified various trees that should be retained in any redevelopment of the area and should form part of Plan 7 Native Vegetation Retention and Removal.
- e. 90 Handford Lane – Council requests the site is fully assessed as a potentially significant heritage place and documented for a Heritage Overlay (if applicable).

## **10. Integrated Water Management**

The exhibited Amendment demonstrates various options on how the water cycle will be managed under an integrated approach and identifies a pathway to realizing the benefits. Council has been co-operating with both the Victorian Planning Authority, South East Water and Melbourne Water to progress four innovative water servicing strategies as pilot areas in the precinct. Council has requested the precinct structure plan is updated to demonstrate these four water servicing pilot strategies.

## **11. Incorporated Plan Overlay (Schedule 3 to Clause 43.03)**

The exhibited Amendment proposes planning controls for the biodiversity conservation strategy area and proposed cultural heritage value area along Cardinia Creek. Council supports the proposed cultural heritage value area, although Council is concerned the transfer of ownership or vesting of

the conservation area is unclear and states it could be the Minister responsible for Section 5 of the *Crown Land (Reserves) Act 1978*, the Council or Melbourne Water. Council objects to being responsible for the future maintenance and management of the conservation area in relation to the biodiversity area and cultural heritage value area. Council requests that prior to the Amendment being finalised the transfer of ownership or vesting is resolved to determine who will be responsible for the future maintenance and management of the conservation area and the Amendment documentation is updated accordingly.

## **12. Site specific Control Overlay (Schedule to Clause 42.12) and Draft Incorporated Document on State Infrastructure September 2023.**

Council notes the Victorian Planning Authority's intention to pilot a staged approach in the development of infrastructure in Officer South Employment Precinct. In principal Council supports the staged approach, although expresses concern the proposed Staging Plan would unduly restrict the development of employment (industrial) land in the precinct, especially if Stage 1 does not develop. Council has highlighted various concerns with the staged approach in its submission under Section 12.7 and have requested the Victorian Planning Authority address these issues and make changes to the relevant documentation prior to finalizing the Amendment.

On the 20<sup>th</sup> November 2023 Council supported a Notice of Motion regarding the proposed Staging Plan and further actions will be progressed by Council.

## **13. Flora and Fauna**

The exhibited Amendment demonstrates various trees to be protected in Plan 7 Native Vegetation Retention and Removal Plan of the precinct structure plan. Council requests the location of the trees are reviewed and placed within the public realm as best as possible, to assist their protection. Council also requests the Patterson Road bio-link is acknowledged in Plan 3 and Plan 7 in the precinct structure plan.

## **14. Transport**

The exhibited Amendment demonstrates a road network, a bus capable road network and active travel network for pedestrian and cyclists. Council has raised various concerns with the proposed road and active travel network. The following matters are highlighted to be key matters for the Victorian Planning Authority consideration:

- a. Trafficworks on behalf of Council have completed a Traffic Impact Assessment and the assessment concludes the GHD traffic modelling and proposed road network will not accommodate the level of development proposed. Various changes are requested as per Section 13 of our submission.
- b. Request for interim transport modelling to be demonstrated in the precinct structure plan.
- c. Council requests for the earlier delivery of Thompson Road, specifically bridge BR-04. It is also unclear to Council the design or interaction of Thompson Road with the Drainage Service Scheme. Council seeks further information to confirm what changes to the PSP are required.
- d. Seek confirmation if an acoustic assessment is required along the Princes Freeway and Officer South Road for the proposed residential area.
- e. Request an active travel route is demonstrated from Patterson Road to connect to the pedestrian pathway demonstrated in the electrical transmission easement.
- f. Clarity if the Green Spine can be utilized for a pedestrian access over Lower Gum Creek into Cardinia Road Employment PSP. Council needs to understand if the existing bridge can accommodate the proposed drainage flows or whether a new bridge will be required.
- g. Request to demonstrate a potential Connector Road connection to outside the precinct to assist future proofing any future investigations that considers the expansion of the urban growth boundary.

- h. Council requests the precinct structure plan demonstrates a bus interchange and/or bus hub near the Officer South Road and Lecky Road intersection.
- i. Seek advice on how the equestrian and pedestrian network crosses Thompson Road, Lecky Road, and Melbourne Water's drainage waterway in the electrical transmission easement.
- j. Clarity on how the design and interaction of the Officer South Road interchange with the Drainage Service Scheme occurs and if any changes to the precinct structure plan are required.
- k. Council requests the PSP land budgets include splays for the Stephens Road Bridge as part of the public land provision to ensure the bridge connection can be accommodated in the future.

### **15. Urban Design Performance Area**

The exhibited Amendment demonstrates a residential area called an Urban Design Performance Area and a concept masterplan must be developed prior to any subdivision or development occurring in the area. Council supports the proposed intent of the residential neighborhood demonstrated in Plan 10 (Housing Plan) and the requirements of Table 5 (Housing density and diversity), Table 6 (UDPA performance measures) and Appendix 6 (which includes Table 10 and 11) to guide the development of a Concept Masterplan. Council requests changes to the wording in the various tables and plans and requests Table 6 and Appendix 6 (which includes Table 10 and 11) are amalgamated/ merged to decrease confusion when landowners and Council are reviewing and implementing the precinct structure plan.

### **Financial and Resource Implications Summary of Council**

Local infrastructure for the Officer South Employment Precinct Structure Plan will be facilitated through a Supplementary Infrastructure Contributions Plan (ICP).

A Supplementary Infrastructure Contributions Plan:

- Establishes the statutory mechanism for developers to make a financial contribution towards the cost of infrastructure projects.
- Confirms what funds will be collected through a standard levy.
- Confirms what funding will be collected through a supplementary levy; and
- Resolves what credits will be funded back to landowners who partly funded the preparation of the Precinct Structure Plan.

Council has considered the anticipated contributions of the residential and employment areas and estimated costings for the delivery of listed transport, recreation and community infrastructure categories and is significantly concerned that the Infrastructure Contributions Plan will provide insufficient funding.

The proposed Infrastructure Contributions Plan will generate a substantial funding shortfall for Council in the following ways:

- For Community and Recreation items due to the capped Standard Levy amount.
- Costs apportioned to neighbouring precincts with no way of recouping these contributions (at present); and
- Cost differences between the ICP costs and the respective item cost and cost differences between the ICP costs and the respective item cost (and therefore revenue that can be collected) in neighbouring precinct contributions plans.

The total Council shortfall in Officer South Employment ICP is estimated to total 63 million as shown in Table 1. Council notes the shortfall demonstrated in Table 2 could be greater based on differences between the estimated Victorian Planning Authority ICP costs for infrastructure and actual construction costs for infrastructure.

Table 2: Council ICP shortfall

Item	Reason for Shortfall	Cost of Asset	What's in ICP (Revenue)			Shortfall
		OS ICP	OS ICP	Cost apportioned to CREP	Cost apportioned to Minta Farnm	
All community & Rec	Capped standard levy	\$ 13,141,439	\$ 4,454,117	0	0	\$ 8687,322
All community & Rec	Apportioned to CREP but not in DCP	\$25, 509, 852	0		0	\$25, 509, 852
BR-01 (CREP RC-02)	Higher cost than CREP	\$18, 410,734	\$9205,367	\$1,856,860	0	\$7,348,507
BR-02 (CREP RC-04)	Higher cost than CREP	\$24,451,936	\$12,225,847	\$1,856,860	0	\$10,369,229
PB-01 (MF BR-01)	Higher cost than Minta Farm	\$24,268,238	\$12,134,141	0	\$1039,847	\$11,094,250
PB-02	Apportioned to CREP but not in the DCP	\$3,978,775	\$1, 989,388	0	0	\$1, 989,388
<b>TOTAL</b>			\$105,782,198	\$38,713,721	\$1,039,847	\$63,009,158

Council does not have sufficient funds or capacity in its long-term financial plan to meet the shortfall and therefore substantial financial risks exists. Council requests the Victorian Planning Authority investigate ways to mitigate the cost shortfall and risk to Council.

Council is also significantly concerned that if no changes are made to the ICP, development will stop, especially as development is linked to a Staged Plan. In Stage 1 of the staging plan Council is expected to borrow a substantial amount of money for Stage 1 to progress.

Please refer to Section 10 of Councils submission, highlighting Councils concerns with the proposed Supplementary Infrastructure Contribution Plan.

### Conclusion

Accordingly, it is respectfully requested that Council having considered Planning Scheme Amendment C274 (Officer South Employment Precinct Structure Plan and Supplementary Infrastructure Contributions Plan), Council endorse the enclosed submission in Attachment 2-5 to be submitted to the Victoria Planning Authority for consideration





# **Cardinia Shire Council Amendment C274**

**Council Submission**

**To exhibited Officer South Employment PSP/ICP**

**11 December 2023**



Corner of Patterson Road and Officer South Road in Officer South Employment PS

Record ID	Officer South Employment PSP/ICP		
Prepared by	Cardinia Shire Council Growth Area Strategic Planning Team		
Adoption of date of PSP and ICP	To be confirmed	Scheduled review date:	To be confirmed
Publication	Public Submission to Amendment C274		
Revision/version number	Version 1.2		

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## 1 Objectives of Submission

To provide the Victorian Planning Authority:

1. An explanation of Council concerns with the exhibited Amendment C274 (Draft Precinct Structure Plan and Draft Supplementary Infrastructure Contributions Plan) and.
2. Identify changes Council request to the exhibited Amendment C274 (Draft Precinct Structure Plan and Draft Supplementary Infrastructure Contributions Plan).

## 2 Key Issues

Please find enclosed Councils submission to Amendment C274. Cardinia Shire Council generally support Amendment C274, although requests consideration is given to the following key issues detailed in this submission (in Alphabetical order), prior to Amendment C274 being finalised:

1. Exhibition of Amendment
2. Affordable and Social Housing
3. Community infrastructure (Active and passive open space and Community Level 2 Facility)
4. Draft Drainage Plan
5. Economics
6. Heritage
7. Integrated Water Management Plan
8. Infrastructure Contributions Plan (Supplementary).
9. Planning Scheme Ordinance (specifically Site-Specific Control Overlay and Precinct Structure Plan)
10. Transport and Active Travel
11. Urban Design Performance Area

Cardinia Shire Council reserves its right to change its submission based on the merits of future conversations with the Victorian Planning Authority and relevant State/Local Government departments regarding this matter.

If you have any further enquiries regarding this submission, please contact:

1. Marcelle Bell (Principal Strategic Planner on (03) 59 434 287 or by email [m.bell@cardinia.vic.gov.au](mailto:m.bell@cardinia.vic.gov.au) or
2. Mir Faruque (Principal Strategic Planner on (03) 59 434 804 or by email [m.faruque@cardinia.vic.gov.au](mailto:m.faruque@cardinia.vic.gov.au)

## 3 Exhibition of Amendment

Council requests for the Amendment Explanatory Report to be updated to clearly identify the type of Amendment (For example Section 20 (4)) that is being sought from the Minister for Planning, to clearly communicate the type of Amendment process being embarked on.

Council supports both the Precinct Structure Plan and Supplementary Infrastructure Contributions Plan being exhibited together as a package, although Council would like it noted the five (5) week timeframe to review these documents was considered minimal, based on the complexities of these documents. Council would have preferred more time was provided during exhibition to review both documents.

Council notes the Environmental Significance Overlay Schedule was accidentally excluded from the exhibited Amendment package. Council appreciates this information was updated onto the Engage Victoria website once it was understood to have been omitted. Council would have hoped a recognition of this omission on the Engage Victoria website to assist landowner/developers reviewing the Amendment and additional time provided to review the Amendment and all relevant background documents.



## 4 Affordable and Social Housing

Council respectively requests for a variation in the amount of social and affordable housing stated in the precinct structure plan. It presently states eight percent as a Guideline and Council would like this changed to ten per-cent and as a Requirement, to be in alignment with the Victoria Housing Statement the Decade Ahead 2024-2034. Various Guidelines and Requirements in the precinct structure plan are required to be modified, as specified in Attachment 1, and summarised below:

1. Amend Guideline G36 to be a Requirement and to increase the amount of social and affordable housing to ten per-cent.
2. Amend Requirement R49 to reference social and affordable housing.
3. Amend G34 to reference affordable housing, labour hire accommodation and temporary crisis accommodation.
4. In reference to Table 5 (Housing density and diversity)
  - Include reference to social and affordable housing at a minimum of ten percent that also encourages key worker, labour hire accommodation, and temporary crisis accommodation for all density targets.
  - Amend Table 5 (Balance Area) target typologies to set a minimum target of ten percent for the provision of affordable housing, labour hire accommodation, and temporary crisis accommodation in accordance with the State government's Housing Statement 2023, affordable housing policy, evidence, and guidance.
5. Add the following definitions to the Glossary of Terms
  - Key Worker Housing – Affordable rental housing that is appropriate for people who work within Cardinia Shire Council, who require a physical presence to perform their work, and whose household earns very low, low or moderate incomes. The housing must be allocated and monitored by a Registered Housing Agency.
  - Labour Hire Accommodation – Has the same meaning as Section 5 of the Public Health and Wellbeing (Prescribed Accommodation) Regulations 2020.
  - Temporary Crisis Accommodation – Has the same meaning as Section 5 of the Public Health and Wellbeing (Prescribed Accommodation) Regulations 2020.
6. Amend the following definition to the Glossary of Term
  - Social Housing to read “Has the same meaning as Section 4 of the Housing Act 1983”.
7. In February 2023, a new prescribed accommodation was added to the Public Health and Wellbeing Act which is requested to be referenced in the precinct structure plan going forward. Council requests for a new Guideline to include labour hire accommodation and temporary crisis emergency accommodation to be developed. It is in direct response to the Victoria Housing Statement the Decade Ahead 2024-2034, which cites Officer South Employment precinct structure plan as one of the 21 priority projects to “deliver more than 60,000 homes and 60,000 jobs ... and more jobs closer to home”.

In making this request Cardinia Shire Council considers the public consultation process for the precinct structure plan as a form of negotiation. All proponents are putting forward their preferred intentions in the precinct structure plan and this gives us the opportunity to explore and negotiate the amount of social and affordable housing to be specified in the precinct structure plan. At present Cardinia's Social and Affordable Housing Strategy and Action Plan states eight per-cent is required for social and affordable housing. Council considers a ten per-cent social and affordable housing target a conservative change to ensure we are building homes appropriate and affordable to new households moving into the area which complies with current policy, guidance, evidence and legislation.

## 5 Community Infrastructure

### 5.1 Active Sport Reserve

The land allocated for the Local Sports Reserve SR-01 in the exhibited Officer South Employment PSP has an area of 8.11 hectares. The local sport reserve is irregular in shape and inadequate in size to accommodate the sporting facilities and associated support infrastructure advocated by Council, and generally supported by the VPA's *Officer South Employment PSP Community Infrastructure Assessment*, encompassing:

- 2 senior size AFL/ cricket ovals
- 4 senior size soccer pitches
- 2 cricket ovals
- Cricket practice facility (3 lanes)
- 2-4 netball courts
- Pavilion (1,000sqm)
- Car parking (272 spaces)

Council also notes:

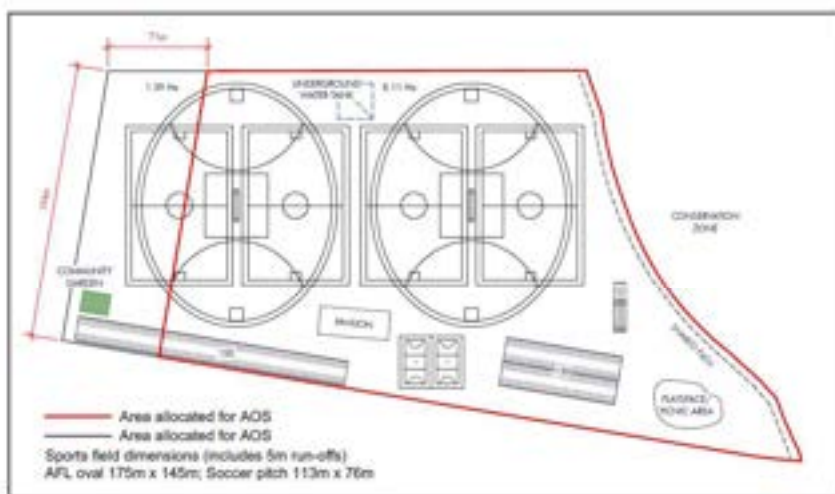
- A one megalitre stormwater harvesting system (large rainwater tank) is required on site.
- An appropriate 19 metre bushfire setback is required adjacent to the Lower Gum Scrub Creek conservation area.
- A shared path is encouraged adjacent to the Lower Gum Scrub Creek conservation area and
- A future community garden is encouraged to be located on the sport reserve.

The shape of the land allocated to the Sports Reserve SR-01 is important and needs to be of an appropriate shape to achieving an optimal design, layout and functionality for the reserve. The present shape of the land is not conducive to accommodating the required field-based sport activities as shown in Figure 1 in bold red. The shape of the reserve along the eastern boundary is tapered in the southeast corner, which creates a narrow wedge that is unable to contribute to the land area required for any of the field-based sport activities. The most efficient land shape for a sports reserve accommodating ovals and rectangular fields is a rectangle shape. The functionality of the Local Sports Reserve SR-01 is compromised by its current shape, which greatly influences land size.

To achieve the optimum and most sustainable layout, an additional 1.39 ha is required to the west to offset the impact of the inefficient shape of the land that is currently allocated to Sport Reserve SR-01. Council respectfully requests Sport Reserve SR-01 is modified and the shape of the land is extended along the western boundary by an estimated 71 metres to create a 9.5-hectare parcel of land, as shown in Figure 1 to accommodate the required sporting facilities and supporting infrastructure. This alternative increases the total area of the Sports Reserve SR-01 from 8.11ha to 9.5 hectares, to comply with Cardinia's Active Cardinia Strategy 2023 and Recreation Reserve Facility Standards Policy 2019 (or as amended).

Council is also keen to understand from the Victorian Planning Authority, the Department of Energy, Environment and Climate Change and the landowner if any land along the Lower Gum Scrub Creek conservation area could be utilised for the sport reserve? Council would welcome further discussion on this matter.

**Figure 1. Active Sport Reserve Land Requirements**



## 5.2 Passive Local Open Space

Council objects to the proposed location of Open Space LP-20 shown on Plan 6 (Open Space and Community Facilities) as being designated as credited open space in the Precinct Structure Plan (PSP) and Supplementary Infrastructure Contributions Plan (ICP), due to its awkward location and accessibility issues. The location of the open space is awkward, located between Thompson Road (6 lane arterial road), a signalised intersection and the electrical transmission easement. Council is concerned the location of the open space does not appropriately respond to Crime Prevention through Environmental Design principles. Council is also concerned the site has limited accessibility which does not encourage people to visit the site or assist Council to appropriately maintain the site. If the land cannot be developed it needs to be demonstrated as encumbered land and not form part of credited open space network.

Council requests the location of all passive local open spaces are reviewed:

- Against what native and non-native trees and vegetation is required to be protected under Plan7 (Native Vegetation Retention and Removal) and revise the location of the local parks to assist the trees or vegetation to be located in the public realm. For example, LP07 in Table 3 identifies the location of the local open space is to retain existing vegetation. There appears to be two trees located nearby to the LP07, but it doesn't appear to protect the trees or vegetation in this location.
- To confirm the local parks are located adjacent to the heritage sites (410 and 425 Officer South Road) proposed to be protected to assist their adaptive re-use.
- To determine what local parks can be co-located with other linear connections or drainage service scheme areas to assist decreasing Councils maintenance and management costs and
- To clarify what opportunities exist for larger local open space parks to assist decreasing Councils future maintenance and management costs.

## 5.3 Level 2 Community Centre

Council cannot support the provision of a multipurpose Level 2 Community Centre in the Officer South Employment PSP, based on the allocation of kindergarten rooms.

Council requests for all kindergarten rooms to be placed on the Government Primary School site, in alignment with the State Government Best Start, Best Life reforms regarding the Victorian School Building Authority building kinders at schools. Council requests for advice from the Victorian Planning Authority, that the Department of Education and Training (DET) will have the capacity for their education facilities to include all kindergarten facilities on their school sites.

Council acknowledges the Community Infrastructure Assessment 2022 completed by ASR proposes a multi-purpose Community Centre to provide:

3. 4 x Kindergarten rooms
4. 2x MCH consulting room
5. Flexible community meeting spaces able to be configured for varying sizes and varying activities (including classroom-based activities)
6. A Neighbourhood House service; and
7. Consulting suites for outreach visiting service to assist the well-being and development of the future community of Officer South Employment PSP.

Council also acknowledges on page 60 of the report, that based on the demand estimates, the need for up to seven (7) kindergarten rooms across the study area to cater for both three and four-year-old sessional kindergarten programs will be required. The report also recommends the remaining sessional kindergarten demand (up to three rooms) should preferably be met by integrating the kindergarten facilities within either the proposed Government Primary School and/or potential non-Government Primary School.

If the Department of Education (DET) commit to the inclusion of all kindergarten facilities on their school site, Council requests for the Level 2 Community Centre to be modified to a Level 1 Community Centre, on the basis all remaining facilities can fit on a Level 1 Facility and still provides for:

1. 2x MCH consulting room

2. Flexible community meeting spaces able to be configured for varying sizes and varying activities (including classroom-based activities)
3. A Neighbourhood House service; and
4. Consulting suites for outreach visiting services.

Council is keen to discuss this matter further with the relevant authorities.

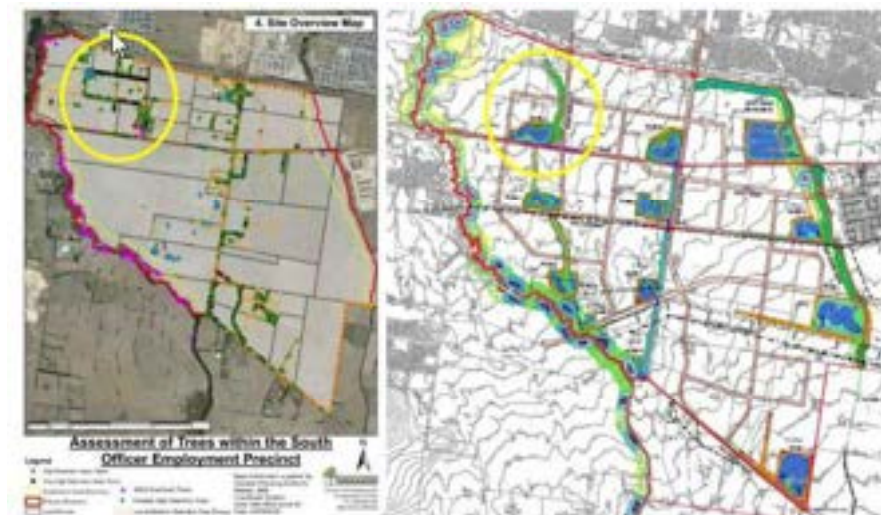
## 6 Draft Drainage Plan (Drainage Service Scheme)

A significant number of comprehensive investigations, reports and modelling have been undertaken by Melbourne Water to develop a Draft Drainage Plan. Regrettably, what is lacking is an overarching Drainage Service Scheme report that consolidates and synthesises the findings from each of the investigations and provides the narrative and evidence on the findings in the precinct structure plan (PSP) and wider catchment. The information provided by Jacobs titled "Officer South DSS Options Assessment Report and associated Options Plans (Sept 2022a)" identified a preferred option (i.e., Option 1F). A "DSS Asset Overview Plan" was prepared by Jacobs in September 2023 which is generally based on Option 1F. However, it is only a single page plan and a number of assets have changed in alignment, size and configuration over the last 12 months since the original options report. Due to a lack of current information to accompany the "DSS Asset Overview Plan" Council notes there are a number of inconsistencies between the various document sources. Consequently, Council has several questions regarding the Draft Drainage Plan and the background reports, (in no hierarchical order).

### 6.1 Ecological and Cultural Heritage Values

#### Trees

The review of the *Officer South DSS Options Assessment Report and associated Options Plans* (Jacobs 2022a), outlines the biodiversity and ecological values across the study area. While the report encourages the protection of various trees, it is unclear to Council if the 16 trees marked as Very High value retention trees and 699 trees marked as High retention value trees in the Preliminary Tree Assessment 2020 (Homewood Consulting Pty Ltd) will be retained based on the alignment of the proposed drainage assets. The location of WLRB A and B is located in an area with significant density of Very High and High retention values trees. Council requests for more advice on what trees can be protected.



#### Ecological values

There is no assessment of the Gum Scrub Creek to Cardinia Road Drain diversion on the ecological or flooding impact of increased flows (0.5m<sup>3</sup>/s-3.5m<sup>3</sup>/s and 3.3GL/yr of future urban developed flow) on Cardinia

Road drain or Toomuc Creek. Council requests for this information to assist learning the proposed diversion is appropriate.

The Drainage Service Scheme reporting is unclear how the proposed re-modelling work impacts on remnant riparian vegetation or where any effort has been made to retain and protect this vegetation?

#### Geomorphic values and erosion sensitivity

No geomorphic values report was supplied with the Drainage Service Scheme information package, and it has not been discussed within the *Officer South DSS Options Assessment Report and associated Options Plans* (Jacobs 2022a). It is unclear based on the Drainage Service Scheme reporting if any geomorphic values assessment has been completed.

#### Erosion sensitivity

Review of the *Sodic Soil Assessment for the Officer South Precinct Structure Plan Area Including Retarding Basin Sites* (Jacobs, 2023) noted widespread occurrence of sodic and dispersive soils within all areas of proposed wetlands and basins, confirming a need for implementing appropriate design, treatment and management options. Can Melbourne Water confirm if the size of the proposed wetlands and basin buffers require to be bigger to respond appropriately to sodic and dispersive soils?

#### Cultural Heritage

Wetlands WLRB E, WLRB E2 and WLRBF1 are shown within the Cultural Heritage area of high sensitivity along Cardinia Creek. Is there a risk that these wetlands will not be able to be constructed in these locations following further CHMP assessments? If this occurs how will this impact the PSP land budget and layout? A CHMP should be completed now to assist decreasing the risk of development uncertainty and location of these wetlands in the PSP, prior to the Amendment being finalised.

The two drainage outfalls to Cardinia Creek will need to pass through areas mapped as high cultural sensitivity along Cardinia Creek. Given the high sensitivity of this area is there a risk that following further CHMP assessments that a drainage outfall will not be supported by the Registered Aboriginal Party (RAP)? A similar situation occurred for an area along the Werribee River where post PSP/DSS the drainage outfall and disturbance were not supported by the Registered Aboriginal Party. This has resulted in significant delays and sub-optimal/compromised Council drainage assets. A CHMP should be completed now to assist decreasing the risk of development uncertainty of these outfalls as part of the development of the PSP, prior to the Amendment being finalised.

There is no discussion within the proposed DSS regarding the drainage reserve immediately south of Handford Lane and west of Stephens Road. It appears that this landform is a remnant waterway, where a large catchment upstream previously flowed through the landscape before being "cut-off" by the construction of the Princes Freeway. The Aboriginal Cultural Heritage Assessment by Archaeology Tardis identified and mapped this remnant waterway as an area of high cultural heritage sensitivity. Given the contributing catchment is now small (less than 20 ha), we assume that its retention as a drainage reserve is primarily for Cultural Heritage Management reasons with overland flow conveyance as a secondary benefit. Can Melbourne Water and the Victorian Planning Authority confirm this assumption. Given its small catchment size will Council be expected to be the responsible asset authority for this reserve in the future?

## **6.2 Flood Modelling Review**

It is understood no flood modelling impact assessment has been completed to measure the effectiveness of the proposed drainage scheme works within the precinct and/or the impact on outside of the precinct. The success of the proposed mitigation measures, including the proposed diversion from the precinct to Cardinia Road Drain in Cardinia Road Employment PSP and the impacts on Cardinia Creek, Toomuc Creek and Gum Scrub Creek systems must be investigated to demonstrate that flow outfalls from the PSP including frequency of flooding, does not compound flooding impacts to downstream landowners outside the precinct. Council considers it paramount these investigations are developed.

It appears no flood mapping has been completed for the fully developed precinct structure plan conditions, as part of the drainage scheme development to date:



- The report notes: The peak flows associated with the preferred option are less than predevelopment peak flows, but TUFLOW modelling of the preferred option will be required to confirm that post development flooding will be equal to or less than predevelopment flooding.
- This flood impact assessment including the proposed diversion to Cardinia Road Drain is critical to understanding the success of mitigation measures (retarding basins/diversions) and impacts on the Toomuc Creek system and effected landholders.

#### 1. Interaction with APA High Pressure Transmission Line

Review of the *Officer South DSS Options Assessment Report and associated Options Plans* (Jacobs 2022a), outlines the proposed crossing strategy with the APA High Pressure Transmission Line, including:

- Stephens Road and Officer South Road Waterway: culvert crossings below waterways. The proposed inverts of these culverts are however unclear in reference to the waterway inverts and whether they form a siphon type arrangement? Council requests more information
- Gum Scrub Creek: 60-metre-wide concrete weir/slab solution (i.e., protective slab) with assumed 1.5 m cover. The impact on ecological or river health objectives is unclear and Council requests more information on this proposal.
- City gate investigation area. Is a weir crossing proposed at the gas main easement? What impact does this have on the PSP and development applications? Council requests for clarity.

### 6.3 Interaction and design of the drainage system, Thompson Road and electrical transmission easement

#### Stephens Road waterway:

Culvert crossings are proposed at the Lecky Road and the gas main easement/unnamed Road. The Scheme is unclear how the outfall for the Stephens Road waterway at its southern end is proposed to cross Thompson Road and outfall to Cardinia Road? Council requests more information.

#### Officer South Road waterway:

- Culvert crossings are proposed at the Lecky Rd (noting culvert alignment do not align with current PSP layout), Gas easement /unnamed Road and Thompsons Road.
- It is unclear how the pedestrian/equestrian trail will access over the Officer South Road waterway in the electrical transmission easement. Council requests for further information. Can a ford crossing be considered?
- No evidence or information on the Officer South Road waterway and interaction with the Officer South Road Interchange, known as Intersection 13 on Plan 12 (Infrastructure and Development Staging) has been provided. Council considers it paramount this information is provided to assist understanding how water will travel from Officer PSP through the interchange to Officer South and confirm the interchange will not be flooded.

#### Lower Gum Scrub Creek:

- No details are provided as to how the proposed constructed waterway will cross Lecky Road or Thompson Road? Council requests for further information.
- At present there is limited pedestrian connection from Officer South PSP to Officer PSP. Council seeks advice if a pedestrian path adjacent to Lower Gum Scrub Creek can connect to Officer PSP via the drainage culverts located under the Princes Freeway? Council seeks Melbourne Water's advice.
- A Green Spine is demonstrated in the precinct along Lecky Road that connects to Cardinia Road Employment PSP via a bridge over Lower Gum Scrub Creek. Lecky Road is proposed to be closed in the future. Council requests for clarity if the existing bridge over Lower Gum Scrub Creek can be utilised as a pedestrian pathway. Council needs to understand if the existing bridge can accommodate the proposed drainage flows, or will a new bridge be required?

#### Cardinia Creek

- No details are provided as to how Cardinia Creek will interact with Thompson Road and Lecky Road. Council requests further information.



- Council seeks clarity if the pedestrian bridge identified as Pedestrian Bridge 01 on Plan 11 (Precinct Infrastructure Plan) of the PSP can it be relocated to assist decreasing its length and costings?

#### **6.4 Staging and sequencing of the scheme**

There are several challenges associated with the staging and sequencing within the proposed scheme and precinct structure plan. Three of the four precinct structure plan drainage outfalls rely on infrastructure being constructed on landholdings that are outside the PSP and Urban Growth Boundary (UGB). The need to procure outfalls outside of the PSP/UGB has the potential to cause extensive delays to future development within the catchment. We therefore strongly recommend that the Victorian Planning Authority and Melbourne Water negotiate and obtain the agreements for outfall works with landowners outside of the PSP as part of the PSP and Amendment planning process.

Assuming that the downstream landowner agreements for the diversion drain can be procured, from a staging perspective it is critical that this diversion pipe infrastructure and WLRBI is delivered first. Based on the downstream volume/flooding concerns no development east of Officer South Road is likely to be able to proceed without these works in place. Therefore, the ability to enforce these works to be completed needs to be considered by Melbourne Water and the Victorian Planning Authority as part of the proposed Staging Plan.

Negotiation with downstream landholders for temporary drainage outfalls for each of the Stephens Road and Officer South Road waterways will be required to help facilitate implementation due to expected waterway depths required.

Council strongly recommends that the Victorian Planning Authority and Melbourne Water negotiate and obtain the agreements for outfall works with landowners as part of the Amendment process to limit the requirements for temporary drainage outfalls. Council is concerned that based on the timing of development many developments in the precinct will require temporary retardation solutions (if the outfalls are not known) that will have potential impact to Council, specifically:

- Charged drainage infrastructure with little to no water quality treatments.
- Flood safety impacts consisting of Council and Melbourne Water landscaping items, shared use path networks and potentially roads being flooded.
- Developers having to depend on outcomes of negotiations with downstream owners to facilitate Stormwater conveyance.
- Lack of outfall and/or outfall capacity restricting area of site that can be developed in staged subdivisions resulting in Statement of Compliance delays.
- Need for Section 173 Agreement requirements on developers to maintain interim assets until ultimate Drainage Service Scheme assets are built downstream (permit dependent).
- Understanding of the Ultimate Drainage Service Scheme and location of agreed outfall works decreases the need for throw away works.

##### Officer South Road outfall

Based on the Jacobs "DSS Asset Overview Plan" the waterway outfall downstream of WLRB1 discharges through land downstream of Banjo Place that is outside of the PSP/Urban Growth Boundary. Further information is required on the proposed outfall to Cardinia Creek.

##### Gum Scrub Creek and Outfall at Electrical Easement

A free draining outfall to service the PSP east of Officer South Road and north of the electricity easement is predicated on the delivery of a diversion pipeline to Cardinia Road Drain, which is in another catchment. The rationale provided in the Jacobs DSS work for Melbourne Water is that the diversion drain is required to protect the downstream landowners along Gum Scrub Creek, who are outside the PSP/Urban Growth Boundary, from increased volumetric runoff loads and inundation caused by additional urban stormwater runoff from the PSP area. However, there is no discussion in the Drainage Service Scheme documentation about the potential impacts on the downstream landowners along the Cardinia Road Drain from the artificial diversion drain volumes. Whilst there are levee systems in place that provide significant capacity along Toomuc Creek downstream of Watsons Road, what about the impact along the 1500 metre stretch of the Cardinia Road drain between this section of Toomuc Creek and the Electricity Easement? To ensure equity

shouldn't the landowners in this reach of Cardinia Road Drain be given the same level of protection/service as the landowners along Gum Scrub Creek?

Council request for advice on what is the impact on the property at 145 Watsons Road, which is outside of the urban growth boundary. The proposed diversion rate will more than double the 4EY (i.e., 3 month) flow in Cardinia Road Drain and increase the 1% AEP flow by about 20%. Does there need to be mitigation works to address the flood and volume impacts (e.g., does the drain/waterway capacity need to be increased through this property by widening or creating levees). What if the landowner refuses to accept the impact from the diverted flows including mitigation works? Does this put servicing and development of the precinct structure plan at risk?

Consideration needs to be given to the timing of the PSP and impact on the property at 465 Cardinia Road. This property is located in a yet to commence PSP which will be a long way behind Officer South Employment PSP. To enable the Lower Gum Scrub diversion to be delivered to enable development to occur in the Officer South Employment PSP, agreement from the landowner to accept the diversion flows will be required. What if the landowner does not accept the construction of the diversion pipe infrastructure and increased flows? Will this significantly delay the ability for development east of Officer South Road to commence?



#### Gum Scrub Creek Outfall at Patterson Road

A free draining outfall from WLRBJ (see Figure 3) will require a drainage pipe to be constructed along Patterson Road. This alignment extends beyond the PSP/urban growth boundary. The invert for this pipe outfall is likely to be about 2.5 metres deep due to pipe and cover requirements. At this depth the pipe invert is likely to be below the bed level of Gum Scrub Creek. What works and landowner approvals are envisaged to provide a free draining outfall? Will the creek bed need to be lowered and "graded out" for a short distance downstream of Patterson Road?



## 6.5 MUSIC modelling

Council requests for clarity on the following discrepancies

- There is a discrepancy in catchment areas between RORB (2477 ha above Princess FWY) and MUSIC (2840 ha above Princess FWY)
- There is a discrepancy in catchment areas between MUSIC (466 ha within Lower GSC DSS) and MUSIC Catchment map provided (439 ha excluding reserves and 500 ha including drainage reserves within Lower GSC DSS)
- The Drainage Service Scheme reporting is unclear a load balance has been completed to understand and ensure wetlands proposed are only sized to service the developable areas?

### Lower GSC DSS Model Comments:

Council requests clarity on the following:

- No high-flow bypass has been set for wetland G, or any other wetlands, which are miss representing the volume of flows incoming to the wetlands.
- The proposed bypass to Toomuc Creek has been included in the model and is capped at 3.4 m<sup>3</sup>/s – This differs to the rate annotated on the scheme plans of 4.5 m<sup>3</sup>/s
- No velocity assessments have been completed to confirm width requirements.

### Officer South DSS Model Comments:

Council requests clarity on the following:

- MUSIC denotes that catchment A2 feeds into wetland A, however the scheme is unclear whether this catchment – existing waterway to the north is bypassed or not.
- No high-flow bypass has been set for any of the wetlands, which would be miss representing the volume of flows incoming to the wetlands.
- No velocity assessments have been completed to confirm width requirements.

## 6.6 Pollutant treatment performance

### Lower GSC DSS Model comments:

Council requests clarity on the following:

- No inundation frequency or residency time analysis appears to have been completed. This will be critical for wetland G in particular due to it being online to a significant upstream catchment.
- Reporting within *Officer South DSS Options Assessment Report and associated Options Plans* (Jacobs 2022) – see extract below, indicates that the Lower GSC DSS fails to meet target pollutant loads for Nitrogen.

- However, no load balance has been provided for the scheme itself (separate to shortfalls from upstream Upper Gum Scrub Creek DSS). This is critical to understand and ensure wetlands proposed and costs attributed to these assets are only servicing the Lower GSC DSS developable areas.

*Initial review/running of the MUSIC model indicates:*

*Wetlands H,I and J provide suitable treatment to meet target water quality parameters*

*Wetland G significantly overtreates that required to meet ctachment G and G1 by an order of magnitude*

Officer South DSS Model Comments:

Council requests clarity on the following:

- No inundation frequency or residency time analysis appears to have been completed. This will be critical for wetland G in particular due to it being online to a significant upstream catchment.

## 6.7 RORB modelling

Council requests clarity on the following:

- Flow routing and catchment delineation for the developed scenario represent that of the proposed drainage scheme. However: Sub catchment areas should generally be within 1/3 of the biggest to smallest. The model attached includes sub catchment areas that up 814 ha and as low as 7 ha.
- Note: RBWL F1 and E2 missing from RORB model
- The proposed flow diversion for Gum Scrub Creek to Cardinia Drain is included in the model. The diversion in the RORB model is set to 5 m<sup>3</sup>/s, which differs from that in MUSIC (3.4 m<sup>3</sup>/s) and that in the scheme plan (4.5 m<sup>3</sup>/s)
- While flow peaks and volumes are well documented for the Stephens Rd, OSR and GSC catchment (see below) there is a lack of analysis for the impact on the greater Cardinia Creek system. How does the retardation of flow peaks from the DSS sub catchments impact peak flows in Cardinia Creek?

## 6.8 Wetland and Waterway design

Council requests clarity on the following:

- In addition to the actual treatment areas for the wetland assets, the drainage reserve footprint needs to provide sufficient space for maintenance access paths, battering, sediment drying zone, high flow bypass and offsets from road reserves/allotments to meet safety in design criteria. The ratio of land required versus treatment area varies depending on the sale of the wetland asset. Generally, the drainage reserve land budget required for medium to large wetland treatment areas (i.e., 1.5-3ha) is about 2.2-2.5 times the actual treatment area. For small wetland treatment areas (i.e., less than 0.5ha) the drainage reserve land budget required is about 3.5 times the actual treatment area. Based on this guide WLRBF, WLRBH and WLRBE2 appear to have a land budget footprint that is undersized. This is reinforced by the preliminary designs on Jacobs "Officer South Employment PSP – DSS Asset Overview Plan (Sep 2023a)" which show some areas where the wetland/sediment basin water's edge is very close to the drainage reserve boundary. Typically, a 15-metre buffer would be required from normal water level to the surrounding road reserve.
- Velocity calculations are missing for each wetland, which will inform proposed wetland widths and likely drainage reserve shape.
- Wetland WLRB E2 is shown on the Jacobs "Officer South Employment PSP – DSS Asset Overview Plan (Sep 2023a)", however the asset is not shown on the PSP Structure Plan.
- The DSS report lacks discussion on how to address groundwater issues within the wetland designs given the background reports indicate that this will be an influencing factor:
  - The depth to water table was 3.3m in the northern two bores.
  - Groundwater salinity in the Officer South region is expected to range between 3,500 – 7,000 mg/L total dissolved solids (TDS)
  - Melbourne Water is considering undertaking further targeted groundwater assessments at retarding basin sites after the preferred servicing option has been identified.

There are multiple waterway widths in the PSP although there is limited information on how the widths were determined. The waterway corridors should be adjusted to ensure that overland flow paths are accessible and that the land budget accounts for the required drainage reserves.

## 6.9 Retarding Basin Configuration

Council requests clarity on the following:

- The proposed retarding basin configurations on the Lower Gum Scrub Creek waterway are unclear, specifically WLRB g and WLRB I. Where are the outlet structures located? How do high flows enter the retarding basin (i.e., side cast spillway)?
- Overall, there is a lack of information on the proposed maintenance provisions and asset details (such as spillways, levels, water levels etc).

## 6.10 Waterway erosion/stability review

Council request clarity on the following:

- The review of the *Officer South Waterway Corridor Hydraulic Assessment - Memo* (Jacobs 2022c), notes that some sodicity testing has been undertaken (WSP 2021) and indicated variable sodicity in the upper 0.5m of the soil profile with consistent strongly sodic to very strongly sodic soils below 1m. Also review of the *Sodic Soil Assessment for the Officer South Precinct Structure Plan Area Including Retarding Basin Sites* (Jacobs, 2023) also noted widespread occurrence of sodic and dispersive soils within all areas of proposed wetlands and basins, confirming a need for implementing appropriate design, treatment and management options. Modelling completed as part of *Officer South Waterway Corridor Hydraulic Assessment (Memo)* (Jacobs 2022c), has been based on the use of PC Convey, which is a simplified assessment based on a single cross section to guide channel sizing. While this suitable for a first cut approach, in line with the recommendation above, 2D flood modelling is required to appropriately test the suitability of channel erosion resistance.
- Sizing of waterways to minimise erosion has been based on the assumption that the “1% AEP shear stress threshold allowable in the low flow channel of the waterway to be 45 N/m<sup>2</sup> (+10% for the 1% AEP = 49.5 N/m<sup>2</sup>), which is appropriate for short native and bunch grasses, this is lower than current guidelines of 80 N/m<sup>2</sup> for long native grasses within the low flow channel. (Jacobs 2022b)” This approach lacks suitable consideration of the founding issues around sodic soils, which is directly addressing the dispersive properties especially around low flow channels where base flow will limit vegetation establishment and result in scouring and incision of the channel. Typically, this includes soil treatment, armouring or capping to ensure long term stability.
- The DSS reporting lacks discussion on how to address sodic soil issues within the wetland designs given the background reports indicate that this will be an influencing factor.

## 6.11 Scheme Design

Council seeks clarity on the following:

- There is no discussion about how the proposed PSP waterway corridor widths were determined, with some being on the lower end of the scale (e.g., along Officer South Road at 40m) and some being at the upper end (e.g., lower reach of Stephens Road at 70m).
- The upstream extent of a waterway reserve needs to commence at a proposed road reserve. It is not feasible and implementable to start a waterway corridor midway through a future industrial area (please see Figure 2 below). If the PSP was a residential land precinct, then the network of local roads not shown on the PSP could facilitate this outcome, whereas in an industrial area this is unlikely to occur. The waterway corridors should be adjusted to ensure that overland flow paths are accessible and that the land budget accounts for the required drainage reserves.

**Figure 2. Scheme Design**



**6.12 Asset allocation review**

Allocation of assets based on contributing catchment area, measured as catchment area plus the drainage reserve area, can be found in Table 1 and Table 2, with the Asset Plan shown in Figure 3.

Council understands that several assets could be Council’s future responsibility and request clarity on what assets will be Councils as it is presently unclear. WLRB C / WLRB C1 and WLRB E / WLRB E1 technically have a catchment area < 60 ha and therefore fall under council responsibility (located offline with a constructed waterway running through centre). However, the retarding basin function of asset WLRB C and E will engage with the wetlands. Thus, retarding basin elements of this asset (potentially including wetlands) may be considered a Melbourne Water asset due to u/s catchment area > 60 ha. Division of maintenance responsibilities for these wetland/retarding basin assets needs to be defined.

**Table 1. Retarding Basin / Wetland Asset allocation**

Asset Name	Reserve area (from GIS)	Contributing Area inc. reserve area (ha)	Asset Owner	Notes
WLRB A	7.3	83.46	Melbourne Water	Top of sub-catchment. Existing waterway located to east - who owns?
WLRB B	9.1	103.73	Melbourne Water	
WLRB C	6.1	30.63	Council/ Melbourne Water	WLRB C and WLRB C1 are located offline with a constructed waterway running through centre of split wetland (C and C1). Note: the retarding basin



Asset Name	Reserve area (from GIS)	Contributing Area inc. reserve area (ha)	Asset Owner	Notes
WLRB C1		11.58	Council/ Melbourne Water	function of asset WLRB C will engage with both wetlands. Thus, retarding basin elements of this asset (potentially including wetlands) are considered a Melbourne Water asset due to u/s catchment area > 60 ha.
WLRB D	5.9	61.27	Melbourne Water	WLRB D offline to constructed waterway located to east.
WLRB E	6.2	32.82	Council/ Melbourne Water	WLRB E and WLRB E1 are located offline with a constructed waterway running through centre of split wetland (E and E1). Note: the retarding basin function of asset WLRB E will engage with both wetlands. Thus, retarding basin elements of this asset (potentially including wetlands) are considered a Melbourne Water asset due to u/s catchment area > 60 ha.
WLRB E1		11.82	Council/ Melbourne Water	
WLRB E2	0.74	8.96	Council	WLRB E2 assumed offline. Proposed drainage scheme is unclear as to what is proposed at the WLRB E or E2 outfall and how these ties into Cardinia Ck
WLRB F	3.9	52.59	Council	WLRB F offline from constructed waterway to east.
WLRB F1	1.6	14.03	Council	WLRB F1 offline from constructed waterway to east.
WLRB G	21.2	29136	Melbourne Water	WLRB G located online to constructed waterway located to the north and east. Site forms part of Lecky Road Retarding Basin and includes catchment area north of FWY entering RB.
WLRB H	6.3	83.95	Melbourne Water	WLRB H offline from constructed waterway to east.
WLRB I	20	140.75	Melbourne Water	WLRB, I appears to be located online to constructed waterway located to east. Proposed drainage scheme is unclear as to whether WLRB I is online, what is proposed at the WLRB I outfall and how these ties into existing Gum Scrub Ck including invert levels.
WLRB J	13.5	202.33	Melbourne Water	Proposed drainage scheme is unclear as to what is proposed at the WLRB J outfall and how these ties into existing drainage outfall.

**Table 2. Waterway asset allocation**

Asset Name	Contributing Area (ha)	Asset Owner	Notes
Stephens Road WW (WLRB A - C)	83.46	Melbourne Water	Proposed constructed waterway linking WLRB A and WLRB C. Note: continued as high flow bypass through WLRB C and forms part of retarding basin function.
Stephens Road WW (WLRB C - E)	114.09	Melbourne Water	Proposed constructed waterway linking WLRB C and WLRB E. Note: continued as high flow bypass through WLRB E and forms part of retarding basin function.

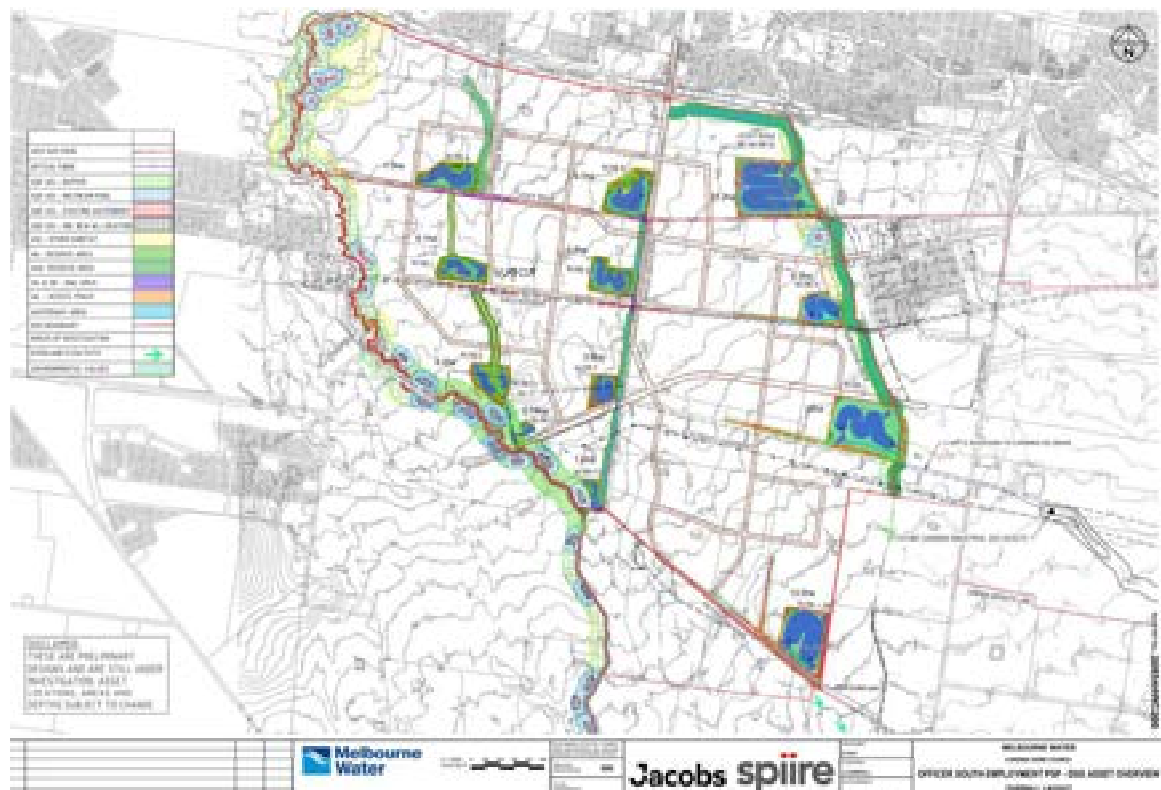
Stephens Road WW Link: WLRB E/E2 – Cardinia Ck	167.69	Melbourne Water	Proposed drainage scheme unclear as to what is proposed at the Stephens Road WW WLRB E or E2 outfall and how these ties into Cardinia Ck
Officer Sth Rd WW (WLRB B - D)	103.73	Melbourne Water	Proposed constructed waterway linking WLRB B and WLRB D. Note: WLRB D offline.
Officer Sth Rd WW (WLRB D - F)	165	Melbourne Water	Proposed constructed waterway linking WLRB D and WLRB F. Note: WLRB F offline.
Officer Sth Rd WW (WLRB F - F1)	217.59	Melbourne Water	Proposed constructed waterway linking WLRB F and WLRB F1. Note: WLRB F offline. Proposed drainage scheme unclear as to what is proposed at the WLRB F1 outfall and how these ties into Cardinia Ck.
WW (WLRB u/s - G)	2840	Melbourne Water	Proposed constructed waterway linking u/s catchment north of Princess Freeway to WLRB G. Note: WLRB G online and forms part of Lecky Rd retarding basin function.
Gum Scrub Ck (WLRB G - H)	2913	Melbourne Water	Proposed constructed waterway replacing Gum Scrub Creek linking WLRB G and WLRB H. Note: WLRB H offline.
Gum Scrub Ck (WLRB H - I)	2997	Melbourne Water	Proposed constructed waterway replacing Gum Scrub Creek linking WLRB H and WLRB I. Proposed drainage scheme is unclear as to whether WLRB I is online.
Gum Scrub Ck (WLRB I - d/s)	3138	Melbourne Water	Proposed drainage scheme is unclear as to how the proposed constructed waterway replacing Gum Scrub Creek ties into existing Gum Scrub Creek
WW (sub area H -WLRB H)	39.14	Council	Proposed constructed waterway linking sub area H and WLRB H.
WW (sub area I -WLRB I)	34.34	Council	Proposed constructed waterway linking sub area I and WLRB I.
WW (sub area J -WLRB J)	81.57	Melbourne Water	Proposed constructed waterway linking sub area J and WLRB J.
WW (sub area J1 -WLRB J)	73.97	Melbourne Water	Proposed constructed waterway linking sub area J1 and WLRB J.
Existing Creek adjacent to sub area A2	44.47	Council	Existing waterway assumed to be under Council as Officer DSS diverts u/s catchment.

**Table 3. Table 1. Waterway asset allocation**

Asset Name	Contributing Area (ha)	Asset Owner	Notes
Stephens Road WW (WLRB A - C)	83.46	Melbourne Water	Proposed constructed waterway linking WLRB A and WLRB C. Note: continued as high flow bypass through WLRB C and forms part of retarding basin function.
Stephens Road WW (WLRB C - E)	114.09	Melbourne Water	Proposed constructed waterway linking WLRB C and WLRB E. Note: continued as high flow bypass through WLRB E and forms part of retarding basin function.
Stephens Road WW Link: WLRB E/E2 – Cardinia Ck	167.69	Melbourne Water	Proposed drainage scheme unclear as to what is proposed at the Stephens Road WW WLRB E or E2 outfall and how these ties into Cardinia Ck
Officer Sth Rd WW (WLRB B - D)	103.73	Melbourne Water	Proposed constructed waterway linking WLRB B and WLRB D. Note: WLRB D offline.

Officer Sth Rd WW (WLRB D - F)	165	Melbourne Water	Proposed constructed waterway linking WLRB D and WLRB F. Note: WLRB F offline.
Officer Sth Rd WW (WLRB F - F1)	217.59	Melbourne Water	Proposed constructed waterway linking WLRB F and WLRB F1. Note: WLRB F offline. Proposed drainage scheme unclear as to what is proposed at the WLRB F1 outfall and how these ties into Cardinia Ck.
WW (WLRB u/s - G)	2840	Melbourne Water	Proposed constructed waterway linking u/s catchment north of Princess Freeway to WLRB G. Note: WLRB G online and forms part of Lecky Rd retarding basin function.
Gum Scrub Ck (WLRB G - H)	2913	Melbourne Water	Proposed constructed waterway replacing Gum Scrub Creek linking WLRB G and WLRB H. Note: WLRB H offline.
Gum Scrub Ck (WLRB H - I)	2997	Melbourne Water	Proposed constructed waterway replacing Gum Scrub Creek linking WLRB H and WLRB I. Proposed drainage scheme is unclear as to whether WLRB I is online.
Gum Scrub Ck (WLRB I - d/s)	3138	Melbourne Water	Proposed drainage scheme is unclear as to how the proposed constructed waterway replacing Gum Scrub Creek ties into existing Gum Scrub Creek
WW (sub area H -WLRB H)	39.14	Council	Proposed constructed waterway linking sub area H and WLRB H.
WW (sub area I -WLRB I)	34.34	Council	Proposed constructed waterway linking sub area I and WLRB I.
WW (sub area J -WLRB J)	81.57	Melbourne Water	Proposed constructed waterway linking sub area J and WLRB J.
WW (sub area J1 -WLRB J)	73.97	Melbourne Water	Proposed constructed waterway linking sub area J1 and WLRB J.
Existing Creek adjacent to sub area A2	44.47	Council	Existing waterway assumed to be under Council as Officer DSS diverts u/s catchment.

**Figure 3. DSS Asset Overview**



**6.13 Landlocked land**

Council observes a parcel of land located to the east of Officer South Road, circled red in Figure 3 is landlocked, based on the alignment of the proposed drainage waterway. Council requests for Melbourne Water and the Victorian Planning Authority to investigate and confirm access to this site can be achieved, prior to the finalisation of the Amendment.

**7 Economic**

Council strongly supports the precinct structure plan’s vision on page 12 and the strategic imperatives demonstrated on page 19 in Figure1 (Sub-precinct Concept Plan) to support the economic and employment growth in Officer South Employment PSP as a State significant Industrial and Regionally Commercial precinct. The PSP via Figure 1 (Sub-precinct Concept Plan) demonstrates a proposed future that will assist Council to seek investment attraction and value add in a diverse range of knowledge-based professional services, manufacturing and service industries, while focusing on circular economies and exemplars in technology and sustainability. To ensure the vision and strategic imperatives as depicted on Figure 1 of the PSP are achieved, Council requests for the following changes in the precinct structure plan or Planning Ordinance:

1. In reference to Figure 1 (Sub-precinct Concept Plan) Council requests
  - a. For the Gin Gin Bean Green Wedge Interface Precinct title to be renamed to Gin Gin Bean Food and Fibre Precinct to decrease confusion with Green Wedge and/or Rural land located outside the urban growth boundary.
  - b. Council acknowledges Thompson Road is a freight road although the opportunity also exists for this road to be a major-east-west link for public transport. Council requests the plan demonstrates this opportunity.
  - c. The size of the sport reserve is demonstrated as 8.5 ha while the ICP demonstrates 8.11 ha. The land size in Figure 1 needs to align with the ICP.

2. The Centre of Excellence (industry training facility) is mentioned on page 17 (Regionally Significant Commercial Area), Guideline G1 and on Figure 1 (Sub-precinct Concept Plan), Council requests the PSP vision is altered to reference the opportunity for an industry training institute (Centre of Excellence). Council also requests the facility is demonstrated on Plan 3 (Placed Based Plan) as a potential Centre of Excellence (Industry Training Facility). This is not dissimilar to the proposed State Government Facility (TBC) demonstrated on Plan 3.
3. In reference to gas on the 4 August 2022 Planning Scheme Amendment VC221 changed the Victoria Planning Provisions (VPP) and all Planning Schemes in Victoria by facilitating all-electric developments to support implementation of Victoria's *Climate Change Strategy 2021 and Gas Substitution Roadmap 2022*. The amendment changed the VPP and all planning schemes by amending clauses that connecting to gas is optional. Council notes commencing 1 January 2024 gas connections to all new dwellings, apartment buildings and residential subdivisions in greenfield and infill sites will be prohibited. Council also acknowledges that gas to employment areas is still optional. Council supports the Victorian Governments aim to transition to renewable energy and request any reference to gas in the precinct structure plan, except for Appendix 8, is modified to assist decreasing confusion between residential and employment land and to assist the precinct moving towards achieving net-zero emissions as per Councils Climate Change Adaptation Strategy 2022-23. Gas will remain optional within the employment land, although changes are requested in three sections of the precinct structure plan to decrease confusion between residential and employment land. Please refer to Table 4 and Attachment 1 for the requested changes with regards to gas.

**Table 4. Proposed changes to precinct structure plan regarding gas**

PSP Page Number	How its referenced in PSP	How it is referenced in existing PSP
13	2.2 PSP Purpose	Third paragraph from top of page  Employment areas are configured to capitalise on the locational attributes that will support industries of the future. Large land parcels and direct access <del>to energy sources gas and high voltage power</del> encourages and supports industries to expand their businesses, and additionally leverage off access to the key freight corridor of Thompsons Road and beyond to the potential future south-east airport
53	R60	Subdivision of land within the PSP must provide for and meet the cost for all local infrastructure, other than that provided for within the Officer South Employment ICP. This includes, but is not limited to: <ul style="list-style-type: none"> <li>All roads not provided by the Officer South Employment ICP</li> <li>Local bus stop infrastructure (where locations have been agreed in writing by Head, Transport for Victoria)</li> <li>Landscaping, including canopy tree planting of all existing and future roads and local streets for a minimum establishment period of 24 months as per the <i>Cardinia Council Landscape Developer Guidelines</i> (or as amended)</li> <li>Intersection works and traffic management measures along arterial roads, connector streets, and local streets</li> <li>Council approved fencing and landscaping (where required) along arterial roads and reserves</li> <li>Pedestrian and bicycle paths and equestrian trails along local arterial roads, connector roads, utilities easements, local streets, waterways and within local parks including bridges, intersections, and barrier crossing points</li> <li>Bicycle parking facilities</li> <li>Electric vehicle charging stations</li> <li>Optic fibre conduit within the road reservation for Smart City initiatives</li> <li>Appropriately scaled lighting (including wildlife friendly lighting) along all roads, major shared bicycle, and pedestrian paths, and traversing public open space</li> <li>Local drainage system, including land and works for water services (i.e. pressure reducing stations) and water sensitive urban design (WSUD) features</li> <li>Construction of culverts for waterway crossings of boulevard connector streets, connector streets and local streets</li> <li>Local street and pedestrian path crossings of waterways or electricity transmission easement unless outlined as the responsibility of another agency in Table 12.</li> <li>Infrastructure as required by utility service providers including water, sewerage, drainage</li> </ul>

		(except where the item is funded through a Development Services Scheme), <del>energy distribution electricity, gas</del> and telecommunications. <ul style="list-style-type: none"> <li>Construction of pedestrian and bicycle paths along waterways and open space</li> </ul>
54	R61	All public open space (where not otherwise provided via the Officer South Employment ICP) must be finished to a standard that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including but not limited to: <ul style="list-style-type: none"> <li>Removal of all existing and disused structures, foundations, pipelines, stockpiles and contaminated soil</li> <li>Basic levelling including the supply and spread of minimum 75 mm topsoil and subsoil if required on the proposed areas of open space to provide a stable free draining surface</li> <li>Clearing of rubbish, weeds, and rocks, levelled, topsoiled, and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise).</li> <li>Provision of water tapping, potable and recycled water connection points</li> <li>Sewer, <del>energy system gas, and electricity connection points</del> must also be provided to land identified s sports reserve and local reserves</li> <li>Planting of trees and shrubs (with drought tolerant species)</li> <li>Adequate protection of existing trees that are to be retained including exclusion zones</li> <li>Vehicular exclusion devices (preferably vegetative or may be fence, bollards, or other suitable method)</li> <li>Maintenance access points</li> <li>Construction of pedestrian and bicycle paths around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest <ul style="list-style-type: none"> <li>Installation of park furniture including barbeques, shelters, tables, local scale playgrounds and other local scale play elements such as half basketball courts and hit-up walls, skate parks with associated amenities, rubbish bins and appropriate paving to support these facilities, consistent with the type of public open space.</li> </ul> </li> </ul>
100	Appendix 8	Minor change to reference gas in employment land

4. In reference to job density, Council is concerned that the Urban Growth Zone (Schedule 7) and the PSP do not adequately ensure that future land use and development within the industrial area will achieve the intended job densities identified in the Economic Assessment completed by SGS Economics for the precinct. The Industrial 1 Zone (IN1Z) is intended to be applied to land within the draft precinct structure plan for land identified as industry. Under Clause 33.03-1 of the Urban Growth Zone (Schedule 7), a permit is not required to use land for 'Industry (other than Materials Recycling and Transfer Station' or 'Warehouse (other than Mail Centre and Shipping Container Storage),' provided that the specified conditions are met. As such, under the draft provisions of the UGZ7, it is not necessary to obtain a permit to use land for any industry or warehouse use. Council considers that the estimated land area requirements of these uses must be considered and balanced against the estimated employment and economic benefits which would be facilitated by that use. As it currently stands, such an assessment is not necessary under the Urban Growth Zone (Schedule 7) for the precinct structure plan.

Council considers that the requirements of the IN1Z as it is applied under the Urban Growth Zone (Schedule 7) should be amended to specify the use of land for 'Warehouse (other than Mail Centre and Shipping Container Storage),' as a 'Section 2 – Permit Required' use within clause 3.0 of the UGZ7 to enable the assessment of any impacts which such a use may have on the capacity of the OSEP to deliver upon its important economic and employment objectives.

In addition, Council considers that the Urban Growth Zone (Schedule 7) and the PSP should require any application to use land for warehousing/logistics to be accompanied by an Economic Impact Assessment, prepared by a suitably qualified professional, which includes the following information:

- A land suitability assessment for the proposed use.
- The expected number of jobs which the proposed use will generate
- Whether the proposed use contributes the achievement of the economic needs and job density of the Officer South Employment Precinct.



- The cumulative impacts of the proposed use in meeting the economic needs of the Officer South Employment Precinct.

Please refer to Attachment 2 for the proposed revised wording in the Urban Growth Zone

5. Council is concerned the town centre is located between two different land holdings and considers the feasibility of development and the operational model of the town centre will be compromised. Council requests the town centre is located on one land holding to facilitate its implementation.

## 8 Heritage

Council requests the below for each of the heritage properties:

### 410 Officer South Road (Heritage Overlay H091)

Council supports H091 being retained and request prior to the Amendment being finalised the trees on site are assessed to determine if any of the trees are of heritage significance. Currently no tree controls apply to H091. The trees that contribute to a place should be identified in the Statement of Significance and be easily identifiable by the future decision makers. Council request that:

- the Statement of Significance is revised in accordance with PPN01, to specify the key elements and trees that contribute to the significance of the place.
- the annotated curtilage map is updated with labels for important trees and supplemented with a list of trees.
- When or if possible, a full site inspection must be carried out to inform the necessary revision of the Statement of Significance. Council was denied site access has been denied from the landowner to complete a heritage review of the site.
- Council also requests any planning application for use or development of the site must provide photographs and GPS locations of the trees on site to determine what is considered to be of significance.

### 425 Officer South Road (Heritage Overlay H092)

Council supports H092 being retained, considering the following:

- The significance of H092 is well justified by the combination of early historical fabric, including the existing mature trees, timber gate (removed from Patterson Road and stored on-site in a shed), and the altered house within the wider context of its setting.
- Retention of H092 will ensure the future development that considers existing historical elements, and that opportunities for in-situ restoration and interpretation are retained. For example, the timber gate should be reinstalled closer to the house or open space located nearby to the house or within the garden setting rather than being relocated elsewhere (i.e., given to the local historical society).
- The trees that contribute to a place should be identified in the Statement of Significance and be easily identifiable by the future decision makers. Council requests the trees identified in Appendix 1 are considered as part of the Statement of Significance.
- Council does not support the original timber gate being relocated to the local historical society and request the element is kept to the context of the site to assist keeping its value. The Berwick Pakenham Historical Society should not be expected to take an object in a poor state as they do not have the capacity to take the gate and rely on grants and donations to restore items.

### 185 Officer South Road

During recent fieldwork, Council has learnt the remnant water trough extant in the milking shed and tin feed room have been damaged since the documentation of the elements in 2020. Due to the low intactness of the milking shed contents, Council requests that the shed including the contents such as the brick and render water trough and tin feed room are photographed and recorded prior to demolition. An appropriate condition in the Urban Growth Zone should specify that before demolition of the remnant water trough and tin feed room occur, the items are photographed and recorded on the HERMES data base.

### 345 Officer South Road, Officer

The significant trees which have been detailed in Appendix 2 have strong retention value. Council requests the trees should be considered for retention in any redevelopment of the area and Plan 7 (Native Vegetation Retention Plan and Removal) in the PSP is updated to reflect these trees.

#### **90 Handford Lane, Officer**

The site is fully assessed as a potentially significant heritage place and documented. A Statement of Significance is prepared to support the planning scheme amendment. The significance of the place is likely to be well justified by the ensemble of remaining early historical evidence, especially the fine mature trees and beehive domed well, but also the concrete base of a former piggery or similar shedding. Review of the BMH recommendations finds this to be sound.

Protection of the place in the Heritage Overlay will ensure that future development respects the existing historical elements, ensures an appropriate context and setting is maintained, and that opportunities for in-situ conservation and interpretation are provided for.

## **9 Integrated Water Management**

Council supports the proposed Spires Integrated Water Management Strategy April 2023. The report distinguishes:

- What can be implemented now as Good Practice and
- What Leading-Edge opportunities could be further progressed to assist as a future opportunity and
- What site specific, precinct and a regional approach have the potential to be explored more.

Council is concerned that unless land is set aside for the Good Practices and Leading-Edge options in the precinct structure plan, it makes it very difficult to instigate and implement these options. Council has been co-operating with both the Victorian Planning Authority, South East Water and Melbourne Water to progress four innovative water servicing strategies as pilot areas in the precinct, as highlighted in a letter sent to the Victorian Planning Authority dated 22 September 2023, as shown in Appendix 3. The letter requests four different water servicing strategies across the precinct to be demonstrated in the precinct structure plan as shown in Figure 4, including:

- Area 1: Residential and mixed use supplied with potable and Class A recycled water.
- Area 2: A small parcel of industrial/commercially zoned land supplied with potable water and harvested rainwater collected via a communal storage system (to be located in the sport reserve or other suitable location) and provided with either potable or Class A recycled water back-up.
- Area 3: A small parcel of industrial/commercially zoned land supplied with potable and Class A recycled water.
- Area 4: Industrial/commercially zoned land supplied with on-lot rainwater tanks and regional tanks for non-potable supply and potable water.

Council requests the precinct structure plan is updated to demonstrate these four water servicing strategies and demonstrates the land required for the success of these innovative water servicing strategies.

Figure 4. Four water servicing strategies.

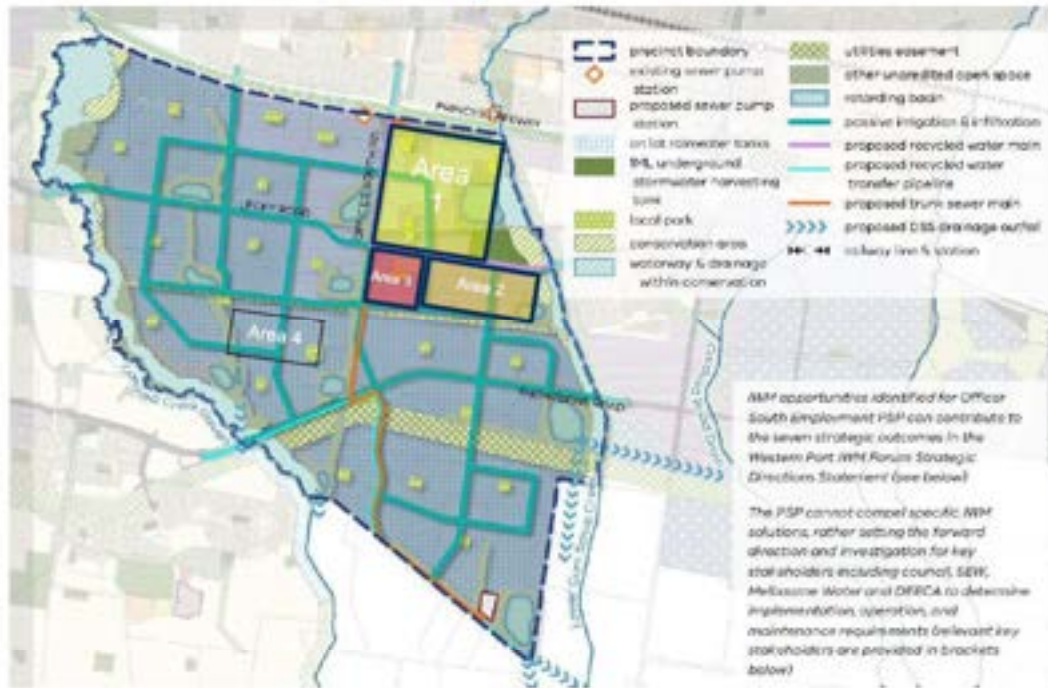


Figure 1 – Plan 9, Integrated Water Management, Officer South Employment Precinct Structure Plan, marked to show IWM trial proposal locations

Council notes on Plan 9 (Integrated Water Management) of the Draft PSP a 1ML stormwater harvesting system (water tank) for the sports reserve is proposed. Council is concerned the sport reserve is an inefficient shape and does not currently have enough land to accommodate the proposed sport reserves, facilities and proposed stormwater harvesting (water tank) system due to the limited size of the sport reserve. Council requests for more land is allocated to Sport Reserve SR-01 to accommodate the future tanks.

## 10 Infrastructure Contributions Plan (Supplementary)

Council requests the following matters to be addressed in the Supplementary Infrastructure Contribution Plan.

### 10.1 Contribution Amount for all ICP's

There is not a consistent and transparent approach to the imposition of how much a local council is expected to contribute (5%, 10% 20% etc) towards an Infrastructure Contribution Plan. If Council's contribution was capped at an amount, this would assist Councils to effectively implement the ICP's more from the start and understand what gap amount is required to be funded through other sources of State Government funding such as grants over a 25-year period. Please refer to Table 3 for the Community and Recreation Funding Shortfall and Cost Recovery experienced in other PSP's. Council is keen to explore this matter further with the Victorian Planning Authority and State Government and seeks advice on the best approach for these discussions to occur.

Table 5. Community and Recreation Funding Shortfall and Cost Recovery

ICP Name	Apportioned Cost to ICP	Levy Revenue	Funding Shortfall	Cost Recovery (%)
Sunbury South and Lancefield Road ICP	\$ 151,764,402	\$ 119,180,106	\$ 32,584,296	78.5%
Minta Farm ICP	\$ 21,771,626	\$ 13,139,426	\$ 8,632,201	60.4%

Donnybrook-Woodstock ICP	\$ 135,749,225	\$ 95,205,053	\$40, 544, 169	70.1%
Mt Atkinson and Tarnait Plans ICP	\$ 57,839,000	\$ 36,754,300	\$ 21,084, 700	63.5%
<b>Average</b>				<b>68.1%</b>

## 10.2 Supplementary ICP Funding Shortfalls

The proposed Supplementary ICP will generate a substantial funding shortfall for Council. The total shortfall for Council is estimated to total 63 million, as described in Table 5. This shortfall is based on the following ways:

- For Community and Recreation items due to the capped Standard Levy amount.
- Costs apportioned to neighbouring precincts with no way of recouping these contributions (at present); and
- Cost differences between the ICP costs and the respective item costed in a neighbouring precinct contributions plan (therefore revenue that can be collected).
- Accuracy of VPA benchmark scope, cost estimates and indexation of costs.

**Table 6. Funding shortfalls**

Item	Reason for Shortfall	Cost of Asset	What's in ICP (Revenue)			Shortfall
		OS ICP	OS ICP	Cost apportioned to CREP	Cost apportioned to Minta Farnm	
All community & Rec	Capped standard levy	\$ 13,141,439	\$ 4,454,117	0	0	\$ 8687,322
All community & Rec	Apportioned to CREP but not in DCP	\$25, 509, 852	0	0	0	\$25, 509, 852
BR-01 (CREP RC-02)	Higher cost than CREP	\$18, 410,734	\$9,205,367	\$1,856,860	0	\$7,348,507
BR-02 (CREP RC-04)	Higher cost than CREP	\$24,451,936	\$12,225,847	\$1,856,860	0	\$10,369,229
PB-01 (MF BR-01)	Higher cost than Minta Farm	\$24,268,238	\$12,134,141	0	\$1039,847	\$11,094,250
PB-02	Apportioned to CREP but not in the DCP	\$3,978,775	\$1,989,388	0	0	\$1,989,388
<b>TOTAL</b>			\$105,782,198	\$38,713,721	\$1,039,847	\$63,009,158

Council does not have sufficient funds or capacity in its long-term financial plan to respond to this shortfall. Cardinia Shire Councils current financial position cannot support an investment of this value. If no action is taken by the Victorian Planning Authority to address this shortfall, the delivery of both community and transport infrastructure items required for the development of the PSP will not progress. Development will stop.

Council is also extremely concerned regarding the proposed Staging Plan. Council is being put in an impossible position, namely that it will be required to administer and manage an ICP, that will not raise nearly enough contribution funds to deliver the community and transport infrastructure items required as part of Stage 1. There is a significant risk that Stage 1 of the Site-Specific Control (Staging Plan) will not progress, which impacts the development and progress of other stages.

Council respectfully requests:

- The VPA investigate ways to mitigate the cost shortfall and risk to Council. The proposed ICP would generate substantial funding shortfalls for Council (in the order of \$63m), warranting investigation of ways to mitigate this cost and risk. Council is greatly concerned that if no changes are made to the ICP, development will be stopped, especially as development is linked to a Staged Plan.
- The VPA or the State Government nominates itself as the Collecting Agency and the Development Agency for the delivery of all community infrastructure in the Officer South Employment PSP area that is required to be delivered by the proposed ICP for the precinct.
- A partnership with Development Victoria (which is a sub-set of the State Government) is developed for a private-public partnership to construct the community centre, to assist decreasing the community infrastructure deficit.
- The VPA or the State Government nominates itself as the Collecting Agency and the Development Agency for the delivery of all transport infrastructure in the Officer South Employment PSP area that is identified to have an apportionment to another PSP, for example, BR-01, BR02, PB-01 and PB-02, as shown in Table 5 and
- Closely review the costs of shared items to identify any opportunity to economise.

### 10.3 Public Land Contribution

#### Land Valuation

Council notes there are no land credit and equalisation values provided as part of the Exhibited ICP. This is a gap which should be addressed.

#### Land Credit and Equalisation

There appears to be an error in the land credit and equalisation rates calculated throughout tables in Section 4.2 of the Exhibited ICP. The error relates to the amount of public purpose transport land provided between residential and employment properties. The overall quantum is consistent with the amount shown in the table, however more of the transport land is within residential land and less is in employment land than shown in the totals. The error is summarised in Table 6 (Review of Transport Public Land)

The ICP land equalisation calculations should be reviewed, and the land credit and equalisation amounts / rates revised if necessary.

**Table 7. Review of Transport Public Land**

	Exhibited ICP amounts	Review Amounts
Total Residential Transport Land	2.38	3.95
Total Employment Transport Land	26.77	25.21
Total	29.15	29.16

#### Table 8 Inner public purpose land

1. Council is concerned how we check the area applied to the land projects to confirm the land required to be acquired is the correct size for the assets to be built. We don't have the information currently available to do this. Council requests this information is provided prior to the Amendment being finalised.
2. Council is confused with some of the information provided. Example IN02 and IN04 are essentially the same intersections, with what appears to be the same land take but have three different land take amounts. Similarly, with IN01 and IN08, they are essentially the exact same intersection, but different land takes.
3. Also looking at the intersection designs and the 'proposed road reserve boundary' there are batters required for the intersections that are located outside the proposed road reserve boundaries (i.e., IN-02). The intersections need to be updated to demonstrate the batters as part of the road reserve.

#### Table 11 Public Purpose land credit and equalisation amounts

Council seeks clarity on why existing road reserves are a part of the land credit and equalisation amounts. Have we interpreted this correctly? Both Officer South Road and Lecky Road West are required to pay ICP

levies. Council will need to discontinue the road, sell the land and then have it incorporated into development, and depending on sequencing of development and when roads are/aren't required this may or may not happen. On the other hand, Lecky Road East is contributing 100% of land, but is not being given any credit as open space as it is not a listed open space area. If we are going to 'charge' land for ICP levies, then we should also be 'crediting' when it is contributing.

#### **Table 16 Summary of Land Use Budget**

1. The Holden Flora and Fauna Reserve does not exist in Officer South Employment PSP. Please remove from Table 16.
2. In reference to Table 11 and 16 it would be useful to have the heading of each table available at the top of each page to assist reading the document

### **10.4 Infrastructure Details**

Council has reviewed the infrastructure list against the Ministerial Direction to consider whether the items meet the requirements for allowable items under the standard and supplementary levy criteria. Council requests advice on the following:

1. None of the culvert items exceed the culvert construction amount (indexed to July 2023), and therefore, these items should be reclassified as Standard Levy items. Council also seeks advice if any of these culverts are being funded through the Melbourne Water Drainage Service Scheme.
2. Plan preparation costs must only fund the costs "incurred in respect of works, services or facilities to be funded from the supplementary levy". Although not fully transparent, it appears as though the total planning costs incurred has been limited and apportioned to reflect on costs incurred related to supplementary levy items. Could the VPA please confirm this is the case? Council also does not support the plan preparation costs being contributed to the Officer South Employment ICP as this adds to the overall debt of the ICP. Council respectfully requests no plan preparation costs are apportioned to the ICP.

### **10.5 Items not funded by the ICP**

#### **Community Infrastructure**

In reference to the Community Infrastructure three kindergarten sessional rooms are presently not funded. The rationale for excluding the additional three rooms and intended funding source needs to be clarified as part of the Precinct Structure Plan and Supplementary Infrastructure Contributions Plan. Please refer to Section 5.3 Level 2 Community Centre for more information.

#### **Transport Infrastructure**

##### Stephen Road Bridge

In reference to Stephen Road Bridge the precinct demonstrates on page 26 Plan 4 (Road network) a connector road via Stephen Road under the Princes Freeway to Officer Precinct Structure Plan. Council notes there is no reference to a Stephen Road bridge in the Officer South Employment Precinct Structure Plan, despite land on the northern side being funded through the Officer DCP (item DI\_RO\_LA38). This means that there is no proposed bridge connection from Officer South PSP via Stephens Road to the Officer precinct to the north. Council requests the PSP demonstrates the Stephen Road bridge on Plan 11 (Precinct Infrastructure Plan) and advises through the Supplementary Infrastructure Contribution Plan the funding status of the bridge.

Council request for the Stephen Road bridge splays in both the Officer South Employment Precinct Structure Plan and Supplementary Infrastructure Contributions Plan are included as part of the public land provision land to ensure the bridge connection can be accommodated in the future. Council does not support applying a Public Acquisition Overlay to the Stephen Road splays.

##### Pedestrian and Equestrian Infrastructure

In reference to the pedestrian and equestrian trails along Cardinia Creek, Lower Gum Scrub Creek and the Electrical Transmission East, Council notes:



- a. Infrastructure crossings to allow accessibility over/under Thompson Road, Lecky Road and the drainage waterway in the electrical transmission easement are missing. Will these form part of the Precinct Structure Plan and Infrastructure Contributions Plan?
- b. Under Section 13.2 Active Travel (including Equestrian trails), a number of bridges equestrian/pedestrian bridges over Cardinia Creek have been excluded from the precinct structure plan. Will these bridges form part of the Precinct Structure Plan and Infrastructure Contributions Plan?
- c. A Green Spine is demonstrated in the precinct along Lecky Road that connects to Cardinia Road Employment PSP via a bridge over Lower Gum Scrub Creek. Lecky Road is proposed to be closed in the future. Council requests for clarity if the existing bridge over Lower Gum Scrub Creek can be utilised as a pedestrian pathway. Council needs to understand if the existing bridge can accommodate the proposed drainage flows, or will a new bridge be required? If a new bridge is required, will it form part of the Precinct Structure Plan and Infrastructure Contributions Plan?

**Grice’s Road in Minta Farm**

In reference to Transport and Grice’s Road. In the Minta Farm Precinct Structure Plan on Page 50 the land and construction of Grice’s Road is apportioned from the Clyde North Development Contributions Plan (DCP). Therefore, there is no apportionment from the Minta Farm Infrastructure Contributions Plans towards Grice’s Road.

TITLE & DESCRIPTION	LEAD AGENCY	COMPONENT INCLUDED IN ICP			TIMING*	APPORTIONMENT	ICP REF	NOTE
		ULTIMATE LAND	INTERIM CONSTRUCTION	ULTIMATE CONSTRUCTION				
Grice’s Road Construction of a 4-lane secondary arterial road (ultimate treatment)	Casey City Council	No	No	No	S-M	-	-	External apportionment 100% to the Clyde North DCP for purchase of land (ultimate treatment, refer to RD03) and construction of a 2-lane road (interim treatment, refer to RD06)

Grice’s Road is shown as secondary arterial 4 lane (34 metres) in the precinct structure plan connecting Casey to the future Officer South Employment Precinct Structure Plan.

In the Clyde North DCP it demonstrates on Plan 4 and Section 1.5.1 Transport that:

- RD03 - 100% purchase of land for Grice’s Road
- RD06 - Construction of a 2-lane road (interim treatment) for Grice’s Road

Please refer to Figure 5 demonstrating Plan 4 from Clyde North Development Contributions Plan below

**Figure 5. Plan 4 from Clyde North Development Contributions Plan**



The land provisions for Grice’s Road to Cardinia Creek has been set aside in the Clyde North DCP as shown in Plan 4. Construction costs for Grice’s Road has also been set aside in the Clyde North DCP, except for a small

section of Grice's Road near Cardinia Creek, that is not highlighted in the DCP to form part of the construction costs. This section of road does not form part of the Clyde North DCP and at present there is an assumption the Department of Transport will be responsible for this section of road to be constructed. Cardinia Council appreciates Officer South Supplementary Contribution Plan does not fund the west side of Cardinia Creek Road construction. Council requests for the Department of Transport to confirm they will be responsible for the construction of this section of road as part of the Cardinia Creek bridge works.

## 10.6 State Infrastructure

The ICP does not propose to fund State infrastructure, however the PSP indicates that the Department of Transport will be responsible for the delivery of the following State transport items:

- Upgrade to the Officer South Road / Princes Freeway interchange.
- Thompsons Road bridge over Cardinia Creek (ultimate).
- Grice's Road bridge over Cardinia Creek (ultimate); and
- Duplication of Officer South Road and Thompsons Road (ultimate).

The ICP funds the interim construction of Officer South Road and Thompson Road, however the interim construction of the Grice's Road and Thompsons Road bridges are not funded by the ICP. To confirm the intention of the Department of Transport to fund and deliver both the interim and ultimate bridges:

- Both the PSP and ICP should include unambiguous reference to this responsibility, and
- The descriptions of the items in both the PSP and ICP should reference both interim and ultimate construction, given that:
  - a. No contributions will be levied by either the Officer South ICP or the adjoining Cardinia Creek South or Minta Farm ICPs; and
  - b. The Cardinia Creek South PSP description of the Thompsons Road bridge as "construction of a Road bridge over Cardinia Creek to Cardinia Shire - interim and ultimate delivery" (p.59) compared with the Officer South PSP description of "Construction of an arterial road bridge (ultimate) over Cardinia Creek into the Cardinia Creek South PSP..." (p.72).

Given that State infrastructure is proposed, the PSP and ICP should interface directly and unambiguously describe which items and standards will be delivered by the State, and when. In particular, BR-04 should be described in both the PSP and ICP as including both interim and ultimate standard construction.

## 10.7 Site specific Control (SCO)

Councils feedback on the Site-Specific Control and relationship with the ICP is available under Section 12.7

Council considers the relationship between the proposed SCO Incorporated Document and the ICP should be set out in the ICP.

## 10.8 Infrastructure Costs

The ICP is supported by a document titled Stantec Concept Designs – September 2023 High Level Indicative Costs (referred to in Councils Review as the 'transport cost document'), which summarises the costs adopted for transport projects included in the ICP. The transport cost document indicates that ICP benchmark costs were adopted as the basis for the transport items, along with the following additional cost allowances:

- Sodic soils (20%, if applied)
- Cut / Fill (10%, if applied)
- Services (variable, up to 171.6%) and
- Other (between 5% and 15%, if applied).

Based on the cost information, Council requests the following:

- a. It appears that no information is available to explain how the costs of the community and recreation items included in the ICP were derived. Council requests for this information. The absence of detail regarding how community and recreation costs have been determined is a gap which should be addressed.
- b. It is not clear how the allowances have been arrived at. For example, although the exhibited material confirms that sodic soils are present in the area, the quantitative basis for the adopted allowances for sodic soils and other allowances is not clear from our review of the exhibited documentation. It is also not clear whether contingency amounts are embedded in the allowances and how this relates to the contingency already included in the base benchmark costs.
- c. It is not clear whether the additional costs associated with batters for Thompsons Road construction have been taken into account?
- d. It is not clear whether the approach to estimates costs is consistent with the ICP Ministerial Direction, which requires that the preparation of cost estimates for infrastructure in an ICP "should have regard to the Benchmark Infrastructure and Costs Guide". This guide references the option to use either:
  - Benchmark costs.
  - Preparation of a hybrid cost with some variations from the benchmark cost (typically through additional line items or scope differences); or
  - Preparation of a bespoke item design and cost.

There is insufficient information available to determine how the cost allowances have been arrived at, and as a result, whether the approach to cost estimation is consistent with the Ministerial Direction. Council requests that further detail is provided which explains the basis for the cost estimates adopted, and that the issues identified above are investigated and addressed prior to finalising the ICP. This is important because the cost estimates inform both the need for and scale of the supplementary levy that is proposed.

Council has engaged an independent consultant to peer review the exhibited costings and the overall transport infrastructure costs prepared by the Victorian Planning Authority in the ICP are considered low by approximately 2.69%. Council also understand the community and recreation cost estimates appear low. Council is keen to discuss this further with relevant agencies and will provide more information at the future Standing Advisory Committee.

## 10.9 Apportionment of Costs

In the Draft ICP, all items are fully apportioned to the Precinct, except for the following items which include apportionment to other PSP areas:

### Transport:

- OS-PB-01: 50% to Minta Farm PSP/ICP
- OS-BR-01: 50% to Cardinia Road Employment PSP/DCP
- OS-BR-02: 50% to Cardinia Road Employment PSP/DCP

### Community and recreation:

- All items: 66% external apportionment to Cardinia Road Employment PSP/DCP.

Council requests for advice on how the external apportionment to Cardinia Road Employment PSP for community infrastructure is derived. The quantitative basis for the community and recreation apportionment cannot be directly verified by reference to the supporting material. Although it is clear that the community assessment considers both the Cardinia Road Employment PSP area and the Officer South residential area in its assessment of infrastructure need, exactly how this translates to a 68% /34% funding split is not clear to Council. Council requests for clarification on this from the Victorian Planning Authority.

The cost estimate for pedestrian bridge item PB-01 of \$24.3m is in order of magnitude higher than the cost estimate for the same item in the adjoining ICP (Minta Farm ICP, item BR-01, cost estimate \$2.1m). This warrants close review and reconciliation.

### **10.10 Works in Kind – Value of Credit and Timing of Reimbursement**

Section 5.10 of the Exhibited ICP includes provisions relating to WIK credits. This section could provide more certainty to both developers and the Collecting / Development Agency. The following points should be considered for inclusion into the provisions:

- The credit value of works provided (unless an alternative approach is agreed with the Collecting Agency) shall equal the final cost of the works identified in the ICP, taking into account the impact of indexation unless otherwise negotiated between the Collecting and Development Agency and the applicant.
- The construction of works must be completed to the satisfaction of the Collecting and Development Agencies. This provides certainty that credits will not be issued until the completed works align with the agreed design and ICP works.

### **10.11 ICP Timeframe**

The Exhibited ICP adopts a timeframe of “25 years after gazettal, or when this ICP is removed from the Cardinia Planning Scheme”. Although this is consistent with other growth area ICPs, the substantial land area and reliance on major access infrastructure could result in a long development horizon. Council requests for a longer timeframe to be considered.

The ICP is not transparent as to what timeframes the S (Short), M (medium) and L (long) timing refers to for infrastructure delivery or which triggers or thresholds will apply to each major item. Can this please be changed?

## **11 Precinct Structure Plan**

Please refer to Attachment 1 excel spreadsheet that provides Councils feedback to the Precinct Structure Plan proposed wording and maps.

## **12 Planning Scheme Ordinance**

### **12.1 Urban Growth Zone (Schedule 7 to Clause 37.07)**

Please refer to Attachment 2 for Councils suggested changes to the Urban Growth Zone.

### **12.2 Rural Conservation Zone (Schedule 3 to Clause 35.06)**

Council requests the following:

1. Amend the Zone Map to apply Schedule 3 to the RCZ along the eastern extent of the amendment area.
2. In reference to the permit requirement for earthworks table (land column). Council recommends amending *Non specified* to All Land which has the effect of requiring a permit to be obtained for both earthworks which change the rate of flow of water or discharge across the boundary and Earthworks which increase discharge of saline groundwater. There is a proportionate change in the ordinance to planning objectives sought to be achieved. It also ensures consistency of the Rural Conservation Zone ordinance within the Cardinia Planning Scheme with respect to permit requirements in Rural Conservation Zone relating to earthworks.
3. The intersection of Officer South Road and Patterson Road the Rural Conservation Zone land extends onto the east side of the road. However, on Plan 3 (Placed Based Plan) of the PSP it identifies the Applied Zone as Industrial. Please update the Rural Conservation Zone and PSP to be consistent.



### 12.3 Special Use Zone (Schedule 8 to Clause 37.01)

Council questions if the Special Use Zone is an appropriate Zone for the electrical transmission easement and if the Urban Growth Zone should be applied instead.

### 12.4 Environmental Significance Overlay (Schedule 7 to Clause 42.01)

Council requests the Overlay references current native vegetation removal regulations. At present the application requirements refer to *How any vegetation removal will be offset (an offset plan), in accordance with Victoria's Native Vegetation Management: A Framework For Action (Department of Natural Resources and Environment 2002)*. Please update to refer to *Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017) (the Guidelines)*.

### 12.5 Public Acquisition Overlay (Schedule 08) Map

Council seeks advice from the Victorian Planning Authority and the Department of Transport if the proposed Public Acquisition Overlay (Schedule 08) Map needs to connect to the existing Officer South Road.

### 12.6 Incorporated Plan Overlay (Schedule 3 to Clause 43.03)

The proposed Incorporated Plan Overlay responds to:

- The Biodiversity Conservation Strategy for Melbourne's Growth Corridor and
- The Cultural Value Investigation Area

1. Council requests clarity regarding Section 3.0 Condition- Environmental Management Plan. The condition states:

*A planning permit to subdivide land, construct a building, or construct or carry out works on or within 50 metres of land shown as a conservation area in the incorporated Officer South Employment Precinct Structure Plan must include the following condition.*

How does this condition connect to the precinct structure plan when discussing works on or within 50 metres of land shown as a conservation area? Council requests clarity. Could a notification area setback of 50 metres along the conservation area in the precinct structure plan be demonstrated and linked to a statement in the Section 3.0 Condition- Environmental Management Plan?

2. Council notes the following statement is included under Section 3.0 Condition – Security of conservation land:

*The owner of the land must, as part of the plan of subdivision (or the first plan of subdivision submitted for registration, in the case of any staged subdivision), create the 'conservation area' as a separate lot or reserve. The boundaries of the lot or reserve on the plan of subdivision are subject to the prior satisfaction of the Secretary to the Department of Energy, Environment and Climate Action as constituted under Part 2 of the Conservation, Forests and Lands Act 1987 (Secretary). The owner must further secure the conservation area, by causing that lot or reserve to be vested, transferred, or protected in perpetuity in one of the following ways:*

- *Prior to a statement of compliance being issued for the plan of subdivision (or, in the case of a staged subdivision, the plan of subdivision or masterplan which implements the first stage of the subdivision), enter into an agreement under section 173 of the Planning and Environment Act 1987 by which the owner agrees to transfer ownership of the conservation area to, or to vest the conservation area in, the Minister responsible for section 5 of the Crown Land (Reserves) Act 1978, the Council or Melbourne Water. The transfer or vesting must either be for no or nominal consideration. The Secretary and the person or body to whom the land is to be transferred or vested must also be a party to the agreement. The terms of the agreement must include that the owner pays the reasonable costs of the other parties to the agreement that were incurred for the preparation, execution, and registration of the agreement. The owner must cause the agreement to be registered prior to lodgement of the plan of subdivision for registration; or*
- *Prior to a statement of compliance being issued for the plan of subdivision (or, in the case of a staged subdivision, the plan of subdivision or masterplan which implements the first stage of the subdivision), enter into an agreement with the Secretary under section 69 of the Conservation, Forests and Lands Act 1987, which provides for the conservation and management of the conservation area by or on behalf of the owner in perpetuity. The terms of the agreement must include that the owner pays the reasonable costs of the Secretary incurred for the preparation, execution, and registration of the agreement. The owner must cause the agreement to be registered prior to lodgement of the plan of subdivision for registration.*

Council requests further information regarding the proposed condition:

1. Does this condition relate to both conservation areas (cultural values investigation area and the biodiversity conservation area)? It is unclear at present with the proposed wording of the condition. Council interprets that this condition includes the cultural values investigation area based on the Land Management Plan condition in the Overlay and the intent of the PSP. Can this condition be revised to make it clearer?
2. Council is concerned the transfer of ownership or vesting of the conservation area is unclear and states it could be the Minister responsible for Section 5 of the *Crown Land (Reserves) Act 1978*, the Council or Melbourne Water. Council objects to being responsible for the future maintenance and management of the conservation area in relation to both the Biodiversity Conservation Area and Cultural Value Investigation Area. Council requests that prior to the Amendment being finalised the transfer of ownership or vesting is resolved to determine which agencies will be responsible for the future maintenance and management of the conservation areas and the Amendment documentation is updated accordingly.

## **12.7 Site Specific Control Overlay (Schedule to Clause 42.12)**

Council notes the Victorian Planning Authority's intention to pilot a staged approach in the development of Officer South Employment Precinct. In principle, Council supports the staged approach, although expresses its concerns regarding the following matters:

1. The proposed staging plan would unduly restrict the development of employment (industrial) land in the precinct if Stage 1 does not develop. Council considers the present wording in the Site-Specific Control is restrictive and provides no flexibility for other stages to commence. Council requests the Site-Specific Control is modified to allow flexibility and to facilitate responding to market conditions.
2. Council is concerned development in Stage 1 will be halted due to the imbalance of money being collected via the Infrastructure Contributions Plan (ICP) and the large amount of money Council is required to outlay for community infrastructure and transport infrastructure (which are both underfunded in the ICP). The cash flow issues for Council to implement the Infrastructure Contributions Plan alongside the proposed staging plan does not appear to have been considered.
3. Council is concerned it will be responsible for the funding and delivery of two bridges (BR-01 and BR-02) across Lower Gum Scrub Creek in Stage 1 and Stage 2. If the bridges are required in advance of the associated ICP levy revenue, this will result in the need for substantial borrowing costs. Council does not have sufficient revenue streams to generate the funding required to meet this shortfall and therefore development in these stages will be halted.
4. The proposed staging plan will unduly restrict the development of the upgrade and extension of Thompsons Road, which is required for the development of the State significant employment (Industrial) land and a regional connection to Casey, Dandenong and Frankston. Council is significantly concerned the staging plan places the development of Thompson Road and Bridge-04 in Stage 4, the last stage. Council requests Thompson Road and Bridge 04 are developed in Stage 2 prior to Bridge 03 in Stage 03, to assist the functional operation of the precincts road network and to assist the economic investment and



creation of jobs when the Southern State Significant Industrial Precinct hits capacity in 2027. Council is significantly concerned demand from the Southern State Significant Industrial Precinct will flow through to other industrial precincts which has various economic and social implications for Cardinia. It is important the economic prosperity of the precinct and region is considered.

5. The requirement for all major infrastructure items to be delivered prior to development in Stage 4 is likely to render the Thompsons Road connection a long-term prospect, which appears to conflict with its strategic importance as part of the future Principal Freight Network and as an alternative to the Princes Freeway.
6. Council is concerned as to when the State infrastructure will be triggered and when the State infrastructure will be delivered. Council is pleased there is an acknowledgement State infrastructure will be delivered as part of the staging plan, although the timescale for the delivery of this infrastructure is unknown. This timing uncertainty is problematic, and Council is concerned it will hold up development. Can this be changed in the Incorporated Document?
7. There appears to be an inconsistency between the PSP and ICP in respect of the timing of IN-13 (Officer South Road Freeway interchange). The interchange is nominated in the ICP as a 'long' term project, however this would be inconsistent with the anticipated development staging and delivery trigger requirements in the Site-Specific Control Incorporated Document which requires IN-13 to be upgraded and delivered prior to the commencement of Stage 2.
8. The transport basis for the adopted triggers and thresholds does not appear to be clearly set out in the supporting material.
9. What quantitative data is the Victorian Planning Authority relying on in the background to substantiate the proposed layout of the staging plan. This information would be useful to review and test.
10. How does the staging plan and alignment of the drainage service scheme work? It is unclear how it can be implemented.
11. The proposed Site-Specific Control Overlay (Schedule 14) Map does not include Stage 1 or 2 as discussed in the Officer South Employment Precinct State Infrastructure Items Incorporated Document September 2023. The Overlay Map and incorporated document should align.
12. The staging plan demonstrated on Plan 12 (Infrastructure and Development Staging) in the PSP does not align with the existing title boundaries of properties in the precinct. Council request this is changed to assist implementing and delivering the stages in a holistic manner.

It is recommended that the above issues are addressed (and changes made to the PSP and ICP) prior to finalising the Amendment to ensure Thompson Road is delivered earlier and that infrastructure can be efficiently delivered by Council and others to support the ongoing development of land in the precinct.

## **12.8 Clause 52.17 Native Vegetation**

Council requests the redrafting of the Ordinance. Currently the Schedule area only applies to land shown as Urban Growth Zone (Schedule 7) on the planning scheme maps. This has the effect of requiring a permit to remove native vegetation in both the Special Use Zone (Schedule 8) and the Rural Conservation Zone (Schedule 3) irrespective if it's identified for permitted removal in the Plan 7 (Native Vegetation Removal and Retention) in the PSP.

## **12.9 Referral of Permit Applications under Clause 66.04**

Council acknowledges as per Schedule 7 of Clause 37.07, two agencies under Clause 66.04 are determining referral authorities. Council notes that under other zones (Example Rural Conservation Zone) and the precinct structure plan Council is recommended to consult with other agencies, example Department of Education, Department of Health, Country Fire Authority, Diocese of Sale Catholic Education, Bunurong Aboriginal Land Council etc. Council would prefer these agencies need to be a referral authority or require a notice of application to assist our statutory planners to clearly process future planning permit applications. Council seeks the Victorian Planning advice on this matter.

No conservation area applies to Schedule 7 of Clause 37.07 (Urban Growth Zone). Adjustments are required to the planning ordinance to clearly identify and refer applications in the Rural Conservation Zone and Incorporated Plan Overlay to the Department of Energy, Environment and Climate Action.

Under the IPO3 the plans need to be in accordance with various other authorities (i.e., DECCA, CFA, Bunurong Land Council) these authorities need to be a referral authority or require a notice of application for each specific type of application. Council seeks the Victorian Planning advice on this matter.

## 13 Transport

### 13.1 Traffic Impact Assessment

A Traffic Impact Assessment (TIA) of the draft precinct structure plan has been completed by Trafficworks on behalf of Council. Please refer to Attachment 5.

The Traffic Impact Assessment was undertaken to:

- Estimate the traffic generation and distribution of the proposed development.
- Assess the background studies undertaken for the proposed development.
- Determine the suitability of the proposed access locations onto the adjacent network with and without the development of State infrastructure.

The assessment:

1. Concludes that the road network proposed will not accommodate the level of development that may be delivered as part of the Officer South Employment Precinct based on the currently proposed land uses.
2. Provides an estimate of the traffic volumes anticipated to be generated by the precinct based on the RTA Guide, of approximately 2.4 times the GHD model volumes.
3. Raises concerns with the inputs/outputs of the GHD strategic model and subsequent implications on the provision of infrastructure.
4. Includes an interim assessment to assist in the delivery of the PSP and inform timeframes for the requirements for State infrastructure to be provided. The interim assessment at the Officer South Road / Princes Freeway interchange revealed:
  - a. Approximately 115-990 vehicle per hour from the PSP area could be accommodated prior to the delivery of State infrastructure, based on a 3-5% growth rate.
  - b. This is equivalent to the development of between 0.57 – 4.95 ha of employment land or 175 – 1,500 dwellings.
  - c. The available capacity at the Officer South Road / Princes Freeway interchange is estimated to be significantly lower than the expected traffic generation of Stage 1. Hence, upgrades to increase traffic capacity to/from the PSP will be required to facilitate development of Stage 1.

It is recommended that:

1. The GHD strategic model:
  - a. Is reviewed and revised to ensure that the traffic generation inputs / outputs are consistent with the proposed land uses within the PSP area.
  - b. The traffic impacts based on the revised strategic model be considered and the proposed PSP infrastructure be modified to reflect the revised outputs.
2. To facilitate initial development within the PSP area:
  - a. The interim cross section of Officer South Road between IN-01 and the freeway interchange be constructed as a four lane, two-way road upfront, to limit redundant works and provide the required capacity for the initial stage of the PSP.
2. To disperse traffic within the PSP:
  - a. A new additional north-south arterial road connection be provided within the PSP area, with consideration given to providing a freeway interchange or a left out onto the Princes Freeway at Stephens Road.
  - b. The PSP road network layout be revised to designate Stephens Road as a higher order road and provide a through connection to Thompsons Road.
3. To facilitate employment development and improve heavy vehicle accessibility within the PSP:
  - a. The PSP staging plan be modified to facilitate development along the Thompsons Road corridor as a higher staging priority than Lecky Road, including both east and west bridge connections (BR-02 and BR04).

### **13.2 Interim Transport Modelling**

It is understood Transport modelling is a tool which provides an indication of the level of demand and traffic generation for existing and the proposed trajectory of the future population, employment and land use interactions. The Victorian Planning Authority are using the Victorian Integrated Transport Model (VITM) tool developed by the Department of Transport to assist the strategic planning of the road transport network and infrastructure, based on the ultimate forecast year of 2050 for the precinct. Council is deeply concerned the development of the precinct does not include any interim transport modelling analytics to assist in guiding the implementation of traffic generation demand and distribution to develop robust transport designs that are safe, sustainable and functional prior to the precinct being fully developed in the year 2050. Without the interim transport modelling, Council staff are doubtful the optimal implementation of the precinct will be achieved. Council requests the precinct structure plan demonstrates interim transport modelling as part of the precinct structure plan.

### **13.3 Thompson Road**

The upgrade and extension of Thompsons Road is required for the development of this precinct and the functional operation of the road network in terms of accessibility / connection of this precinct to Casey, Dandenong, Frankston and the National Employment and Innovation Clusters. It will provide a vital traffic connection that is needed as early infrastructure to unlock access to this precinct, which is important to the economic prosperity of the precinct and region. Please refer to Section 13.1 Trafficworks Traffic Impact Assessment and Attachment 5 that highlights Council concerns if Thompson Road is not developed earlier.

It is unclear to Council the design or interaction of Thompson Road with the Drainage Service Scheme. Council seeks further information to confirm what changes to the PSP are required. The PSP (Appendix 7) shows the proposed cross section of Thompsons Road. The cross section shows an additional 14.5m allowance on both sides of a 'typical' 41m road reserve to accommodate batters sloping from a raised roadway down to the current ground level at either side. The proposed planning scheme amendment includes a Public Acquisition Overlay along the northern edge of the proposed Thompsons Road reserve which is 29m in width. Based on the information available, it is not clear:

4. What the specific justification for the additional road reserve width is.
5. Where, within either the 41m reserve or 70m reserve, the interim road would need to be located, and whether the Public Acquisition Overlay would need to be acted on in order to facilitate the interim road construction.
6. Whether the proposed batters and elevated roadway have been taken into account in the cost estimate for the road; or
7. Whether any additional drainage works are needed within the road reserve compared with a typical arterial road, given the reference in the Background Report to flood mitigation measures.

Council recommends this information must be included in the PSP and amendment information to ensure transparency, and to enable any subsequent scope and cost information to be accurately translated into the Infrastructure Contributions Plan.

### **13.4 Officer South Road interchange**

The upgrade of the Officer South Road interchange to a full diamond interchange with appropriate capacity is required for the development of this precinct. It will provide the initial traffic capacity that is needed as early infrastructure provision to unlock development in this precinct.

It is unclear to Council how the design and interaction of the Officer South Road interchange with the Drainage Service Scheme occurs, specifically the outfall from Officer PSP to Officer South Employment PSP. Council seeks further information to confirm what changes to the PSP are required. Please refer to Section 6.3 for more information on drainage.

### 13.5 Stephens Road Bridge

The precinct demonstrates on page 26 Plan 4 (Road network) a connector road via Stephen Road under the Princes Freeway to Officer Precinct Structure Plan. Council notes there is no reference to a Stephen Road bridge in the Precinct Structure Plan. This means that there is no proposed bridge connection from Officer South PSP via Stephens Road to the Officer precinct to the north. Council requests the PSP demonstrates the Stephen Road bridge on Plan 11 (Precinct Infrastructure Plan) and advises through the Supplementary Infrastructure Contribution Plan the status and funding of the bridge. Council in Section 10 of the Supplementary Infrastructure Contribution Plan have requested for the Stephen Road bridge splays to be included as part of the public land provision land to ensure the bridge connection can be accommodated in the future. Stephens Road could be provided with a half diamond interchange at the Princes Freeway to alleviate the north-south capacity constraints that the precinct currently proposed, however this will need further investigation.

### 13.6 Bus interchange and/or bus hub

Council requests the precinct structure plan demonstrates a bus interchange and/or bus hub near the Officer South Road and Lecky Road intersection.

Council acknowledges on Plan 5 (Public Transport and Active Path Network) a public transport network for bus capable roads is demonstrated. To deliver an exemplary, smart, accessible, and innovative precinct it is important that a bus interchange and/or bus hub is demonstrated in the precinct structure plan to:

1. Facilitate convenient public transport connectivity between employment and residents in the South- East. For an employment precinct, that does not include a train station the precinct, needs to go 'above and beyond' that of a precinct structure plan that is dominated by vehicles.
2. Improve the liveability, sustainability, resilience, amenity and attractiveness of the precinct. It will decrease the isolation of the residents located 1 km from a train station.
3. Facilitate the economic success of the precinct with a time efficient public transport network, both within as well as to and from the precinct to Officer train station and Cardinia Road train station to facilitate attracting and retaining people of all ages and abilities to the precinct.
4. Seamless transition between all modes of active transport to the transport interchange and/or bus hub with amenities (toilets / seating / shade / shelter) and safety (surveillance, lighting, bike racks/cages)

The success of this employment precinct (which is of State significance) it is important to ensure that the precinct promotes sustainable and convenient active transport options, both within as well as to-and-from the precinct.

### 13.7 Traffic calming devices

Council acknowledges the precinct structure plan on page 26 demonstrates the location of all signalised intersections and signalised t-intersections on Plan 4 (Road Network). Council requests a symbol for traffic calming devices (roundabouts etc) is demonstrated on all other connector-connector street intersections on Plan 4 (Road Network), otherwise Council will spend a large amount of time and resourcing negotiating with developers on providing a traffic calming device at these locations.

### 13.8 Active travel (including Equestrian trails)

#### a. Active link from Patterson Road to Electrical Transmission Easement

Council requests an active pedestrian link and/or shared path link is demonstrated on Plan 5 (Public Transport and Active Path Network) from Patterson Road and travels northward along the eastern boundary to the electrical transmission easement to create a walking loop and prevents the Patterson Road pedestrian pathway going nowhere.

#### b. Green Spine

Council requests for clarity if the Green Spine can be utilised for a pedestrian path over Lower Gum Creek into Cardinia Road Employment PSP. Council needs to understand if the existing Lower Gum Scrub Creek bridge can accommodate the proposed drainage flows, or will a new bridge be required?

c. Equestrian/Pedestrian Access

It is unclear to Council how the equestrian and pedestrian network crosses Thompson Road, Lecky Road and Melbourne Water’s drainage waterway in the electrical transmission easement. Council request for more information to determine what is demonstrated in the PSP is achievable at development.

Council has been in contact with Casey City Council to clarify future equestrian/pedestrian trail linkages and connections over Cardinia Creek and we have learnt several bridges are demonstrated/proposed. Council seeks clarity from the Victorian Planning Authority these bridges will be demonstrated in the precinct structure plan?

- a. In Minta Farm PSP reference is made to an equestrian trail on Figure 6 (page 32) and a potential opportunity exists to connect the equestrian trail to the pedestrian bridge as shown in Figure 6 that connects to Officer South Employment PSP (Copy below).
- b. In Clyde North PSP reference is made to the metropolitan shared trail and on Plan 18 (page 64) the trail crosses Cardinia Creek from Officer South Employment to Clyde North PSP and Cardinia staff understand the proposed bridge crossing will be horse capable (Copy below).
- d. In Cardina Creek South PSP reference is made to an indicative equestrian trail as shown in Figure 6 (page 34) that crosses Cardina Creek via a pedestrian/equestrian (indicative) bridge (Copy below). Nonetheless on Plan 8 (page 42) the equestrian trail is shown to cross Cardinia Creek on a pedestrian/equestrian bridge that is identified to be an ICP item on page 54.









### 13.9 Acoustic Assessment

There is no indication of an acoustic assessment required for sensitive uses along the Princes Freeway. A vehicle noise amenity area is requested to be demonstrated on Plan4 (Road Network) of the PSP to assist identifying where an acoustic assessment is triggered.

Council seeks clarity if an acoustic assessment will also be required along the Officer South arterial road adjacent to the residential area. Council notes Officer South Road will ultimately be a six-lane arterial road.

### 13.10 Road interface and Potential Connection outside the precinct

Council understands the PSP requires an appropriate bushfire interface along the eastern boundary of the precinct. Council would prefer a local road that includes a pedestrian path is demonstrated along the eastern boundary of the PSP to respond to the bushfire interface and assist in creating an appropriate urban design interface and response to the rural land (Green Wedge) to the east.

Council requests for a potential road connection is demonstrated on Plan 3 from the Connector Road to outside the precinct as shown in Figure 6, to assist future-proofing any future investigations that considers the expansion of the Urban Growth Boundary.

**Figure 6. Future-proof connection to outside precinct.**



**Legend**

potential connection

## 14 Urban Design Performance Area

Council supports the proposed intent of the residential neighbourhood demonstrated in Plan 10 (Housing Plan) and the requirements of Table 5 (Housing density and diversity), Table 6 (UDPA performance measures) and Appendix 6 (which includes Table 10 and 11) to guide the development of a Concept Masterplan. Council makes the following comments regarding the Urban Design Performance Area for the Victoria Planning Authority's consideration.

### 14.1 Viable Densities – Objectives, Requirements, and Guidelines

Council supports the five Objectives (O22-O26) outlined in the precinct structure plan and consider it sets a solid framework for the delivery of the precinct, covering off on:

- a. diversity of housing types and choice including increased densities (O22)
- b. diverse streetscapes to support density and quality urban design (O23)
- c. highly accessible, functional, and vibrant town centre focussing on the Lecky Road green spine (O24)
- d. accessible network of community hubs (O25)
- e. preparation for impacts of climate change, facilitating sustainable design (O26).

These key elements will be critical in informing the UDPA preparation.

In relation to the place-based requirements, there are only two Requirements (R48 and R49), and Council seeks clarity regarding Requirement R48 and R49 below:

**Requirement R48:**

1. Council considers it needs to make it clear that the Concept Masterplan for the UDPA area has to be prepared for the entire area and cannot be done in stages.
2. Given the present wording, which states, 'prior to the subdivision', does this imply that buildings and works can be permitted prior? This Requirement needs to correlate with the Urban Growth Zone (Schedule 7) requirements and apply to subdivision and development works.
3. The items that the Concept Masterplan needs to address provide a relatively thorough outline of what is required to be considered, although the following items need to be included:
  - a. Identification of public transport networks and integration of any public transport hub to service the area into the overall layout. Public transport integration is critical to the UDPA.
  - b. How the concept masterplan addresses Table 5- Housing density and diversity.
  - c. Minimum requirements to ensure the 'mixed use' areas do provide for a mix of uses, particularly at ground level. Council is concerned it will flip to residential housing

- d. The housing typologies should need to demonstrate how the target densities can be achieved and how social and affordable housing targets can be met.
- e. Subdivision only – buildings and works applications should also need to be assessed against the Concept Master plan.

**Requirement R49:**

1. The requirement refers to ‘minimum’ densities in Table 5, however, Table 5 itself refers to ‘average’ density. Consistency in wording must be achieved.
2. As subdivisions must respond to the Precinct Features plan, Housing Plan, and Table 5, this requirement enforces the minimum density requirements and should provide enough weight to enforce them.
3. At stage buildings and works application (i.e., apartments), once subdivision has occurred, how is this then captured? Section 173 Agreements to achieve minimum yields?
4. It should reference Plan 3: Place-based as well as Plan 2: Precinct Features Plan

**Other**

1. Like an Urban Design Performance Framework, there is no statutory ‘process’ for the development and approval of the Masterplan. It effectively sits outside the planning system and then used to assess applications. There may be a better alternative such as a Development Plan Overlay.
2. The links between the Concept Masterplan and the Urban Growth Zone (Schedule 7) should be strengthened. Council considers there’s a disconnect of the Urban Design Performance Area or the Concept Masterplan in the Urban Growth Zone (Schedule 7). This could be a significant weakness for both Council and applicants.
3. Design guidance for built form is very limited in the requirements and guidelines in Section 3.1 and 3.2 of the precinct structure plan. The focus is on controlling subdivision design. Will the VPA consider a separate employment area design guidelines/ policy to provide some stronger guidance for the employment areas, otherwise there is limited additional assessment criteria for consideration when assessing buildings and works applications against the PSP. This could be connected to the urban design performance area and Appendix 6 information.

## **14.2 Place Based Plan (Plan 3) and the Housing Plan (Plan 10)**

Council requests adjustments are made to Figure 6 (Housing Plan 10) regarding the arrangement of land uses on the Place Based Plan (Plan 3) and the Housing Plan (Plan 10), which in turn impacts other items in the PSP documentation.

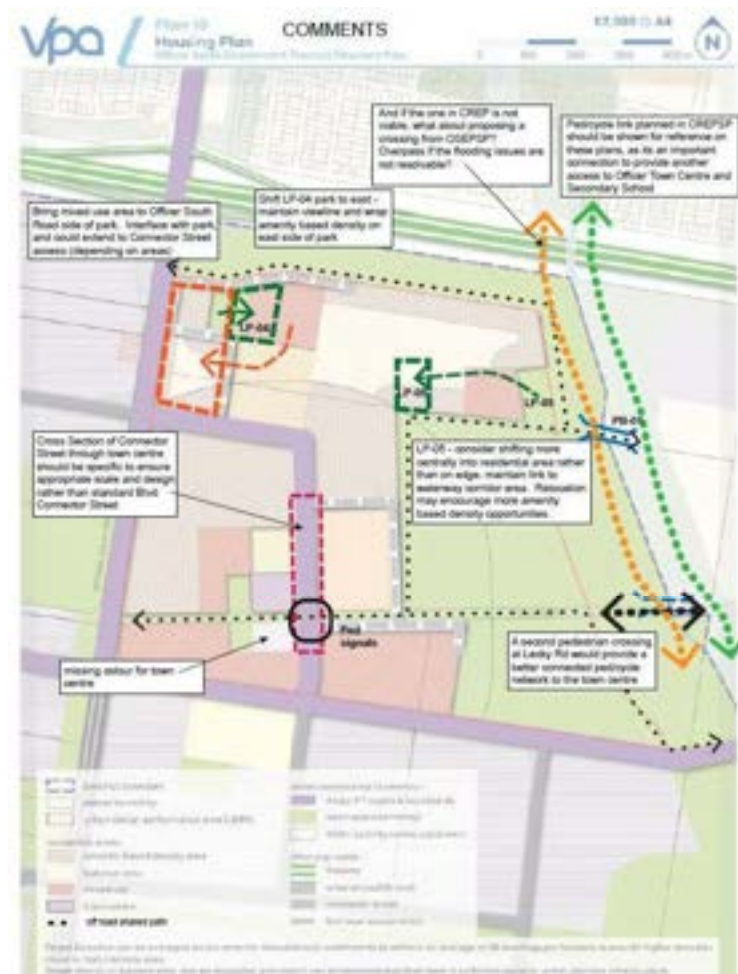
In summary, Council requests Plan 10 (Housing Plan) is revised to demonstrate as shown in Figure 6:

1. Relocating the Mixed-Use land from the area between the non-government school and the freeway provides the opportunity for an interface with Officer South Road that signals entry to the Employment Precinct without a dominance of residential built forms and may provide a more complementary outcome to the development planned on the west side of Officer South Road.
2. Rearranging LP-04 and LP-05 could provide open space more centrally located to the eastern and western sides of the ‘balance area’ housing, whilst still supporting the adjacent green links and non-credited open space.
3. To enhance connectivity and accessibility, a second pedestrian/cycle crossing at the Lecky Road reservation would enhance the green link and connections to Cardinia Road Employment Precinct Structure Plan. The plans should also show and plan for a pedestrian/cycle link under or over the Princes Freeway to make available the critical connection to the major activity centre, secondary school, railway station and other community assets in Officer Precinct Structure Plan. This could be achieved via Lower Gum Scrub Creek
4. Redesign of the Connector Boulevard through the town centre to ensure appropriate scale and design rather than the standard Boulevard Connector Street. Consider inclusion of a variation that is more suited to a Town Centre environment (i.e., Consolidate the pedestrian path and two-way bike path into a paved area and remove the 3m ‘nature strip’. Consider whether a central median is required – and if so, reduce from 6 metres width to say 2.5-3 metre to allow for pedestrian refuge/crossing given the school on the

east side of the street. Please refer Pakenham East Feature Main Street – Local Town centre cross section for design

5. Noting density area/buffers are shown, could the slither of balance area within the northwest corner be removed, as this will create implementation issues in accurately calculating densities (especially if the required is strictly minimum). Please note this issue may be resolved if Councils recommendation to shift the local park is adopted.
6. The relocation of the town centre. At present the town centre is split between two landowners. It would be preferred to locate the town centre on one landholding to assist its future development.

**Figure 7. Plan 10 Modifications to be considered.**



**14.3 Table 5: Housing density and diversity**

Table 5: Housing Density and Diversity acts somewhat as the ‘Housing Table’ as per the requirements of the PSP 2.0 Guidelines. Council respectfully requests for the following matters to be considered:

- Table 5 does not quantify the amount of affordable housing required. Council requests Table 5 includes reference to social and affordable housing and what amount is required for all density targets.
- Amend Table 5 (Balance Area) target typologies to set a minimum target of ten percent for the provision of social and affordable housing and encourage labour hire accommodation, and temporary crisis accommodation in accordance with the State government’s Housing Statement 2023, affordable housing policy, evidence, and guidance.

- Table 5 provides guidance on the type of housing typologies. It would be useful to provide images or further discussion around each typology suggested. These typologies are not included in the glossary and some typologies may be interpreted differently.
- Council request for a variety of amendments/considerations to Table 5 as shown in Figure 8 (Table 5 modifications requested to be considered in bold).

Figure 8. Table 5 modifications requested to be considered in bold.

Catchment	Housing Typology (Council requested changes in bold)	
	Target Density	Target Typologies
<b>Amenity-based Density Area 22.1 NDHA</b>	Average 36 dwellings per ha Target quantity 797 dwellings	<p>To support diverse housing outcomes, the master plan <b>(Reference to Masterplan and Concept Masterplan must be consistent throughout the Table and Requirements)</b> and subsequent subdivision applications must include opportunities for the delivery of at least three different housing typologies. The mix of dwelling typologies should include, but is not limited to:</p> <ul style="list-style-type: none"> <li>• integrated and apartment-style development</li> <li>• multi-unit development for sites near schools and community facilities</li> <li>• attached townhouse-style development</li> <li>• semi-detached/duplex-style development/Small Lot Housing Code product</li> <li>• Low to mid-rise medium density development surrounding the school and amenity areas.</li> </ul> <p>Mixed typology helps break up the density, create view corridors and provide a sensitive interface to the school <b>(this seems out of place and should be deleted)</b>.</p> <p><b>Further Council comments</b></p> <ul style="list-style-type: none"> <li>• <b>Reference to Masterplan and Concept Masterplan must be consistent.</b></li> <li>• <b>Making this a MUST is important to ensure target densities are achieved.</b></li> <li>• <b>Could the amenity-based density go near open space as well? Why add this specifically to multi-unit development?</b></li> <li>• <b><i>Social and affordable housing is not mentioned as a target typology in this area – or is it only to be encouraged in the Mixed Use and Town Centre and Balance area? Council seeks clarity</i></b></li> </ul>
<b>Mixed Use Area 13.7 NDHA</b>	Average 40 dwellings per ha Target quantity 548 dwellings	<p>To support diverse housing outcomes, the master plan <b>(Reference to Masterplan and Concept Masterplan must be consistent throughout the Table and Requirements)</b> and subsequent subdivision applications must include opportunities for at least three different typologies including but not limited to:</p> <ul style="list-style-type: none"> <li>• attached townhouse-style development with small office accommodation</li> <li>• 2–3 storey integrated and apartment style development</li> <li>• walk-up low-rise apartment-style development</li> <li>• shop-top retail low-rise (2–3 storey) residential development with cafes and local produce stores to activate parks.</li> <li>• social and affordable, key worker accommodation near the local town centre and Lecky Road commercial precinct.</li> </ul> <p>Encourage higher rise and density development to face and frame amenity and assist in creating a sense of place with passive surveillance and activity. Opportunity for key destination hubs at parks and schools promote opportunities for key worker accommodation located close to the bus capable road network.</p> <p><b>Further Council comments</b></p> <ul style="list-style-type: none"> <li>• <b>Good guidance provided on where highest density/rise should occur but doesn't refer to minimum height. Should there be a minimum height limit specified?</b></li> <li>• <b><i>Guidance is still focused on 2-3 storey, low rise. To achieve true mixed use and 40 dwellings/NDHA, there will need to be some buildings at more than 3 levels. The way this is currently worded implies that higher than 3 storey is not encouraged. Should this be reconsidered?</i></b></li> </ul>



<p><b>Town Centre Area 1.5 NDHA</b></p>	<p>Average 40 dwellings per ha Target quantity 60 dwellings</p>	<ul style="list-style-type: none"> <li>• 3–5 storey integrated and apartment style development with concealed integrated car parking</li> <li>• Walk-up low-rise apartment style development with concealed integrated car parking</li> <li>• Shop-top retail low-rise (2–3 storey) residential development for sites closer to the local parks</li> <li>• Social and affordable, key worker accommodation located close to the Lecky Rd commercial precinct.</li> </ul> <p>High-density and high-quality development surrounding and within the local town centre to create destination points, aid with scale to create view corridors within the precinct and provide a sensitive interface to the community centre. <b>(this seems out of place and should be deleted).</b></p> <p><b>Further Council comments</b></p> <ul style="list-style-type: none"> <li>• <b>Given small footprint (1.5ha) of the town centre and the target of 60 dwellings, there is only really the option to go above retail uses as shop top or apartments. Requirement for car parking should be mentioned in the PSP for the apartments above the shop tops</b></li> </ul>
<p><b>Balance Area 6.6 NDHA</b></p>	<p>Average 32 dwellings per ha Target quantity 211 dwellings</p>	<p>To support diverse housing outcomes, the master plan <b>(Reference to Masterplan and Concept Masterplan must be consistent throughout the Table and Requirements</b> and subsequent subdivision applications must include opportunities for the delivery of at least two -three <b>(two or three)</b> different housing typologies that promote affordable housing outcomes such as:</p> <ul style="list-style-type: none"> <li>• Semi-detached/duplex-style development/Small Lot Housing Code product</li> <li>• Multi-unit affordable housing development for sites closer to the local parks</li> <li>• Detached traditional-style housing</li> <li>• Low-rise social housing projects</li> <li>• Attached townhouse development.</li> </ul> <p>Low to mid-rise development to help diversify housing choice, create view corridors, and provide the opportunity for density relief. <b>(this seems out of place and should be deleted).</b></p> <p><b>Further Council comments:</b></p> <ul style="list-style-type: none"> <li>• <b>To achieve the desired density, suggest a minimum height.</b></li> <li>• <b>Typologies generally fit with the density proposed, although ‘detached traditional style housing’ would be unlikely to meet the density provision.</b></li> <li>• <b>There is reference to social housing – but not affordable? Why?</b></li> <li>• <b>The typology of the housing should be clearly defined so that the density is achieved and provide a clear guidance to the future development.</b></li> </ul>

**14.4 Table 6 UDPA performance measures**

Council supports the UDPA performance measures to guide the development of a Concept Masterplan. It is noted that the terminology used in Table 6 (‘Required Performance Criteria’ and ‘Benchmark Acceptable Outcomes’) is different again from the Local Town Centre design criteria provided in Appendix 6 (‘Performance Requirements’ and ‘Performance Guidelines’ in Tables 10 and 11). Table 6, given its intent is to guide the preparation of the Concept Master plan in the UDPA, it may be better included in the Appendix, where it is amalgamated with the Local Town Centre Design Criteria into one table that consolidates all of the design criteria for the Concept Master Plan (saving multiple cross referencing for the user of the document). Council requests Table 6 and Appendix 6 (which includes Table 10 and 11 on the local town centre) are amalgamated/ merged. A consolidated and/or separate section in the PSP just on the Urban Design Performance Aea would likely be of great assistance. Council request for a variety of amendments/considerations to Table 6 as shown in Figure 9 (Table 6 modification requested to be considered).

**Figure 9. Table 6 modifications requested to be considered.**

URBAN DESIGN PRIORITY ELEMENTS	PERFORMANCE REQUIREMENTS		Suggested Council Modifications/ Comments
	REQUIRED PERFORMANCE CRITERIA	BENCHMARK ACCEPTABLE OUTCOMES	



<p><b>BUILT FORM</b></p>	<p>Ensure a varied and visually stimulating built environment by introducing diverse <b>housing typologies</b>, building scale and form that supports:</p> <ul style="list-style-type: none"> <li>• diverse <b>accommodation</b> through flexible floor plan layout, and building articulation</li> <li>• gradual transition of scale throughout the precinct</li> <li>• <b>housing</b> affordability</li> </ul> <p>a cohesive planned future character that promotes a sense of community, safety, and inclusion.</p>	<ul style="list-style-type: none"> <li>• The <b>master plan applies at least three variations of built form and/or typology</b> and uses this to promote various sub-precinct characters.</li> <li>• Rear-loaded typology is maximised to promote a safe high pedestrianised environment.</li> <li>• Taller building heights of 4–5 levels are concentrated around, or connect with, the local town centre and commercial zoned areas to create a hub experience within these areas.</li> </ul> <p>Key sites at terminating view lines of key roads, pedestrian routes, and precinct gateways are earmarked for taller built form to signify the important role they play in the centre as wayfinding features.</p> <p><i>Local town centre</i></p> <p>Refer to Appendix 6: Local town centre design criteria</p> <p>The local town centre should use <b>diverse commercial/retail form</b> to promote all-hours activation for a potential 24-hour commercial and industrial precinct. To promote sustainability, the built form should promote adaptability to cater for future growth and incremental change via a staged development approach.</p>	<p>No reference in Criteria to other uses than ‘housing’ and ‘accommodation’ – should refer to other uses given the amount of mixed use intended for the UDPA area.</p> <p>Reference to ‘...at least three variations of built form and/or typology’ across the Concept masterplan area. Is this enough variation? Could this benchmark outcome be misinterpreted?</p> <p>Reference to taller building heights in town centre – refer to earlier comments in reference to Table 5 concerning heights in the Mixed Use Area to support this intent.</p> <p>Should this be referenced in relation to ground floor/street level, as other uses/forms should be supported at upper floors?</p>
<p><b>MOVEMENT &amp; PLACE</b></p>	<p>Create a pedestrian-focused environment that:</p> <ul style="list-style-type: none"> <li>• Connects people to services, community facilities, and destinations of natural and cultural amenity</li> <li>• Provides a safe and cohesive road, public transport, and active transport network</li> <li>• Connects the Officer South Employment community with its local context</li> <li>• Provides various opportunities for pedestrians to linger.</li> </ul>	<ul style="list-style-type: none"> <li>• A clear road hierarchy identifies direct routes to key destinations such as community facilities and high amenity areas.</li> <li>• Public transport connects the precinct with direct access to Officer Train Station via Officer South Road, and connections to Cardinia Road Employment Precinct and Minta Farm via Grice’s/Lecky Road.</li> <li>• Thompsons Road provides a key freight link to key eastern employment areas and the potential future south-east airport.</li> <li>• Road, cycle, and shared path networks create various journeys to designated meeting places and connections such as the Lower Gum Scrub Creek pedestrian bridge.</li> <li>• The landscape treatment of road reserves and the public realm varies to help introduce different precincts and promote character.</li> <li>• Pedestrian movement is prioritised by minimising crossovers and providing a separate fast motorised mobility network.</li> </ul>	<p>Thompson Road is not particularly relevant to the detail of the Concept Master plan</p> <p>And connections to access employment?</p>

		<ul style="list-style-type: none"> <li>Streets and active corridors (green spine) include drinking fountains, public seating and at-ground lighting to paths to encourage lingering and all hours use.</li> </ul> <p><i>Local town centre</i></p> <p>Refer to Appendix 6: Local town centre design criteria.</p> <p>The local town centre should prioritise commuter friendly and conveniently located public transport and last mile transport infrastructure. Coordinated within the centre, appropriate bicycle/scooter parking is provided in highly visible locations and close to pedestrian desire lines and key destinations, paired with public seating for lingering and socialising.</p>	
<b>SUSTAINABILITY &amp; INNOVATION</b>	<p>Create a sustainable and climate resilient neighbourhood by:</p> <ul style="list-style-type: none"> <li>embracing innovation in technology and design</li> <li>Enhancing the environmental values to promote clean energy and a carbon neutral precinct</li> <li>Considering shade and heat island effect</li> <li>Supporting the reduction of travel distances and dependence on private vehicles</li> <li>Creating pedestrian-centric zones to encourage alternative modes of transport</li> </ul>	<ul style="list-style-type: none"> <li>Buildings incorporate passive design and are naturally ventilated.</li> <li>The built form reduces greenhouse gas emissions associated with the occupation and the ongoing use of buildings by considering passive solar orientation, green energy solutions and adaptability and repurpose.</li> <li>Solar energy is used and a microgrid is adopted for the residential precinct, including mandatory electrical only services to homes/buildings and electric vehicle charging stations in key destinations.</li> <li>The development implements use of recycled water.</li> <li>The master plan incorporates water sensitive urban design principles such as stormwater reuse for passive irrigation.</li> <li>Increased tree coverage to large hard covered areas such as car parks decrease the heat island effect.</li> <li>The master plan exceeds 20-minute neighbourhood principles delivering a network of amenities within less than 400 metres.</li> </ul> <p><i>Local town centre</i></p> <p>Refer to Appendix 6: Local town centre design criteria.</p>	All these principles should also cover the local town centre – no need to have a separate set of principles for it.

**14.5 Table 10 Local Town Centre Design Criteria in Appendix 6.**

Council request for a variety of amendments/considerations to Table 10, as shown in Figure 10 (Table 10 modification requested to be considered).

Figure 10. Table 10 modifications requested to be considered

Local town centre element	Performance requirements	Performance guidelines	Council Suggested Modifications/ Comments
<p><b>Key design elements</b></p>	<p>1. Must address all relevant elements of the Urban Design Guidelines of Victoria.</p> <p>2. Must integrate the local town centre core with the surrounding neighbourhoods, public transport, and community facilities.</p> <p>3. A centralised village square to be provided that will act as forecourt to the mixed use and focal point for surrounding retail and residential uses.</p> <p>4. The main streets to be designed to include dense canopy tree provision, outdoor dining and pedestrian activity and on-street parking.</p>	<p>1. Should respond to the surrounding site features, including the waterways, open space areas and other points of interest to create views and connections and the stories of the place.</p> <p>2. <b>Should provide a neighbourhood with a pedestrian and active transport priority, with a focus on creating a resilient and accessible 20-minute neighbourhood.</b></p> <p>3. <b>Mixed-use precincts should provide retail and/or office and commercial at ground level and primarily residential above ground level.</b></p> <p>4. <b>Minimise barriers to pedestrian, bicycle/micro-mobility active transport access to the centre, notably across the north south connector boulevard</b> road and loading and car parking areas.</p> <p>5. Development blocks should be based on a permeable layout to enable flexibility to suit a variety of land uses and allow viable short-term development as well as efficient long-term evolution.</p>	<p>No 2 in Guidelines – This should be a Requirement/must</p> <p>This should be a guideline for the UDPA as a whole, not just the local town centre.</p> <p>A different cross section as suggested in this review would assist in achieving this guideline.</p>
<p><b>Retail core (local town centre)</b></p>	<p>5. Must provide active frontages that address connector streets and boulevard connectors as a main street frontage.</p> <p>6. Must be accessible via the boulevard connector street from Lecky Road and Officer South Road.</p> <p>7. Must provide for the strong integration of the centre with the surrounding residential and education facilities, with a high level of surveillance along the primary streets for pedestrian access to the centre.</p>	<p>6. Should be integrated with the Lecky Rd green spine and utilise the active transport network.</p> <p>7. Separate pedestrian and cyclist paths to be delivered on the green spine, to integrate the local town centre core with the surrounding neighbourhoods, public transport, and community facilities.</p> <p>8. Specialty retail and mixed use to sleeve the anchor retail core and village square.</p> <p>9. Locate buildings which achieve high levels of articulation along the boulevard and connector streets, including (as appropriate) clear glazing and regular entrances, an appropriate range of building material/colour palette themes and architectural design treatments (including opportunities for signage integration into building design).</p> <p>10. Development on the west side of the north-south boulevard connector should provide capacity for ground floor specialist suites (office, medical services, etc) and independent retail and hospitality tenancies. Floor to ceiling heights should allow for adaptive use with minimum of 3.6m on ground</p>	<p>Active frontages to the Lecky Road spine are critical to the town centre and the success of the green spine– Guideline no. 6 should be a requirement.</p> <p>And the green spine through the town centre?</p> <p>Agree, but these should also be located on streets internal to the town centre and mixed-use areas, not exclusively for the Boulevard Connector street</p> <p>Should apply to town centre area and mixed use. This is where integrating Table 6 with these will ensure better coverage of requirements and guidelines for the mixed use as well as local town centre areas.</p>

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### 14.6 Table 11 Local Town Centre Design Principles in Appendix 6.

Council request for amendments/considerations to Table 11, as shown in Figure 11 (Table 11 modification requested to be considered).

Figure 11. Table 11 modifications requested to be considered

Principle	Performance requirements	Council Suggested Modifications/ Comments
Principle 01	<ul style="list-style-type: none"> <li>Streets, public spaces, and car parks should be well lit to Australian standards and with pedestrian-friendly (generally white) light. Lighting should be designed to avoid unnecessary spill to the side or above</li> </ul>	<p>Streets, public spaces, and car parks should be well lit to Australian standards and with pedestrian-friendly (generally white) light. Lighting should be designed to avoid unnecessary spill to the side or above</p> <p>White light creates much more light pollution than warm light, hence warm light is recommended. How do the carparking requirements in this relate back to G4 around tree planting every 6 car spaces?</p>
Principle 03	<ul style="list-style-type: none"> <li>Ensuring buildings are naturally ventilated to reduce the reliance on plant equipment for heating and cooling</li> </ul>	<ul style="list-style-type: none"> <li><b>Ensuring buildings are ventilated to maximise energy efficiency and indoor Environmental Quality</b></li> </ul> <p>Suggested to remove reference to natural ventilation as this may lead to mechanical ventilation not being installed when it will be beneficial for health.</p>

## 15 Conclusion

Council looks forward to collaborating with the Victorian Planning Authority, other agencies, and landowners to achieve the vision of the precinct structure to:

- Provide for Employment and industries of the future.
- Value-add to existing communities.
- Release of key transport and economic links
- Integrate complementary community and open space assets.
- Respond to sustainable environmental and drainage needs.
- Future proof industry ready services and infrastructure

## 16 Appendix

### 16.1 Appendix 1 - 425 Officer South Road (Heritage Overlay H092) trees.



Figure 6.1 Aerial photograph showing identified important trees, all in good health. Note Tree 14 is a young sapling (500 to 50 years old) with high amenity value, and does not contribute to the significance of the place. See Figure 6.2 for details of the trees 1/1-16. (Source: Aerialmap 2023 with 80% stretch)



Figure 6.2 Aerial photograph showing identified important trees around the Officer South Road entrance, all in good health. See Figure 6.1 for details of the trees 1-16. (Source: Aerialmap 2023 with 80% stretch)

**16.2 Appendix 2 - 345 Officer South Road, Officer trees.**



Figure 4.4 Aerial photograph showing identified trees of interest. See Figure 4.5 for details of the tree 18. [Source: Yearmap 2022 with OPL overlay]



### 16.3 Appendix 3 – Letter sent to VPA on Integrated Water Management Innovations 22 September 2023



22 September 2023

Tim Mileham  
 Director Infrastructure, Victorian Planning Authority  
 35 Collins Street  
 Melbourne VIC 3000

Healthy Water.  
 For Life.

WaterEdge  
 101 Wells Street  
 Frankston VIC 3199  
 P.O. Box 2068  
 Seaford VIC 3198  
 Australia  
 ☎ +61 3952 3000  
 southeastwater.com.au

Dear Tim,

**Officer South Employment Precinct: Integrated Water Management strategy**

Thank you for the opportunity to meet on Thursday 3 August 2023, to discuss the Integrated Water Management Strategy for the Officer South Employment Precinct.

This letter is to confirm South East Water and Cardinia Shire Council's intention to explore a range of innovative alternative water servicing strategies for industrial and commercial purposes through the use of pilot areas in the Officer South Employment Precinct.

To reflect this intent, we request that the Precinct Structure Plan indicate four different water servicing strategies across the development, as follows:

- Area 1: Residential and mixed use supplied with potable and Class A recycled water
- Area 2: A small parcel of industrial/commercially zoned land supplied with potable water and harvested rainwater collected via a communal storage system and provided with either potable or Class A recycled water back-up
- Area 3: A small parcel of industrial/commercially zoned land supplied with potable and Class A recycled water
- Area 4: Industrial/commercially zoned land supplied with Regional or on-lot rainwater tanks for non-potable supply and potable water.

The attached document provides further information to describe the proposed water servicing strategies. We look forward to working with the Victorian Planning Authority to realise this vision.

Kind regards

Charlie Littlefair  
 General Manager Liveable Water Solutions  
 South East Water  
 101 Wells Street Frankston  
 VIC 3199

Lili Rosic  
 General Manager Liveable Communities  
 Cardinia Shire Council  
 PO Box 7 Pakenham  
 VIC 3810

**Attachment - Officer South PSP IWM Trials Concepts**

South East Water Corporation  
 ABN 29 048 922 547

## **17 Attachments**

- 17.1 Attachment 1 – Precinct Structure Plan – Council feedback in excel spreadsheet.**
- 17.2 Attachment 2 – Urban Growth Zone – Council feedback with comments and tracked changes.**
- 17.3 Attachment 3 – Trafficworks Traffic Impact Assessment of Precinct (27 November 2023)**



Attachment 3 - Cardinia Shire Council Submission to Public Exhibition of Amendment C274 (Officer South Employment PSP)

PSP Page No	Department	Category	Doc	Clause/Section	Existing Statement	Changes Sought by Submission (in bold)	Explanation/Description of issue. Why is Change required.	Insert link to submission
<b>1. Context</b>								
All	All	All of PSP	PSP	Sub-headings	All Sections of the PSP	Can sub-headings be inserted into the PSP to assist people find a relevant subject item? At present the new Sections of the PSP create uncertainty as to where people will find items.	To assist implementation of the PSP	
8	All	1.5 Precinct Features	PSP	1.5 Precinct Features	Public Acquisition Overlays (PAO) have been applied for the south-eastern freeway interchange ramps and for potential future widening along Thompsons Road. The Flood Overlay (FO) north of Lecky Road at Lower Gum Scrub Creek has been amended to accommodate future infrastructure and updated floodway data, as detailed by the planning ordinances	Public Acquisition Overlays (PAO) have been applied for the south-eastern freeway interchange ramps and for potential future widening along Thompsons Road. The <b>Floodway</b> Overlay (FO) north of Lecky Road at Lower Gum Scrub Creek has been amended to accommodate future infrastructure and updated floodway data, as detailed by the planning ordinances	Grammatical error. Change Flood Overlay to Floodway Overlay	
11	All	Plan 2 Precinct Features	PSP	Plan 2 Precinct Features	Plan 2 Precinct Features	Refer to Tab		
12	All	2.1 PSP Vision	PSP	2.1 PSP Vision	2.1 PSP Vision	There is a lack of graphics to explain what the vision is for the area. It would be helpful to include some small graphics.	To assist the vision being visualised, the insertion of some graphics would assist.	
12	Strategic	2.2 PSP Purpose	PSP	2.2 PSP Purpose	Second paragraph Employment areas are configured to capitalise on the locational attributes that will support industries of the future. Large land parcels and direct access to gas and high voltage power encourages and supports industries to expand their businesses, and additionally leverage off access to the key freight corridor of Thompsons Road and beyond to the potential future south-east airport	Second paragraph Employment areas are configured to capitalise on the locational attributes that will support industries of the future. Large land parcels and direct access to <b>energy sources</b> encourages and supports industries to expand their businesses, and additionally leverage off access to the key freight corridor of Thompsons Road and beyond to the potential future south-east airport	Please refer to Council report submission Section 7 for advice	
<b>3.1 Thriving Local Economies</b>								
Various	Built Form	Section 3.1 and 3.1	PSP	Section 3.1 and 3.1	Section 3.1 and 3.1	Design Guidance in Section 3.1 and 3.2	Design guidance for built form is very limited in the requirements and guidelines in Section 3.1 and 3.2. The focus is on controlling subdivision design. Will the VPA consider a separate employment area design guidelines/ policy to provide some stronger guidance for the employment areas, otherwise there is limited additional assessment criteria for consideration when assessing buildings and works applications against the PSP. This could be connected to the urban design performance area and Appendix 6 information.	
15	Strategic /Statutory	Plan 3 Placed Based Plan	PSP	Plan 3 Placed Based Plan	Plan 3 Placed Based Plan	Refer to Tab	Refer to Tab	
17	Strategic	Regionally Significant Commercial Area	PSP	Regionally Significant Commercial Area	Key industrial opportunities for the precinct include: • <b>E</b> specialised facilities • <b>I</b> ncubated institutional facilities • <b>U</b> rbans services, office, and retail facilities.	Key <b>commercial</b> opportunities for the precinct include: • <b>E</b> specialised facilities • <b>I</b> ncubated institutional facilities • <b>U</b> rbans services, office, and retail facilities.	Require reference to correct land use, being commercial and not industrial.	
19	Strategic	Industrial Sub-Precincts	PSP	Figure 1: Sub Precinct Concept Plan	Figure 1: Sub Precinct Concept Plan	Changes to Figure 1: Sub Precinct Concept Plan	1. Wording refers to 'numerous plant species' – have APA and Ausnet and any other utility companies involved agreed with this? 2. Wording refers to a 'repurposed' green spine but there are no details on what is proposed or how it will be implemented? Council needs an idea of what is proposed here. Can it still be used as a road or shared use space or is vehicle access no longer proposed. It is unclear. The green spine is an existing road reserve and any modification to the roads status or its development will not fall on a developer and instead will be Council's responsibility. Council will not be able to afford to dig up the existing road base, replace it with appropriate soil and landscape the area. Council also understands the existing road is over the top of a significant telecommunications cable and there will be restrictions regarding earthworks and what can be planted in its vicinity. Council is concerned the green spine is an additional cost to fall on Council that does form part of the ICP. Council requests further information on the proposed green spine in terms of what is expected to be developed along the green spine to clarify we can afford to any works in this area? 3. Council request for the Gin Gin Bean Green Wedge Interface Precinct title to be renamed to Gin Gin Bean Food and Fibre Precinct to decrease confusion with Green Wedge and/or Rural land located outside the urban growth boundary. 4. Council acknowledges Thompson Road is a freight road although the opportunity also exists for this road to be a major east-west link for public transport. Council requests the plan demonstrates this opportunity. 5. The size of the sport reserve is demonstrated as 8.5 ha while the ICP demonstrates 8.11 ha. Reference to land size needs to align with the ICP.	
20	Strategic Statutory	Requirement and Guidelines	PSP	R2	Where cafes, restaurants, convenience shops and convenience restaurants are provided in commercial / mixed use areas, they must front open space, conservation areas and waterways, and arterial road or connector street.	<b>Cafes, restaurants, convenience shops and convenience restaurants, where possible, should front:</b> • <b>drainage channels and waterways,</b> • <b>conservation areas, open space or utility reserves and</b> • <b>arterial roads or connector streets</b> <b>to the satisfaction of the responsible authority</b>	1. Council requests this Requirement is a Guideline to assist flexibility for any alternate solution	

20	Strategic	Requirement and Guidelines	PSP	G1	Employment sectors are encouraged in commercial and industrial areas at key locations and sub-precincts, as identified in Figure 1 Sub-precinct Concept Plan. Facilities such as the proposed Centre of Excellence are encouraged in commercial / mixed use areas where the sites have high-amenity and are well serviced with access to transport and community facilities	Employment sectors are encouraged in commercial and industrial areas at key locations and sub-precincts, as identified in Figure 1 Sub-precinct Concept Plan. <b>Facilities such as the proposed industry training institute (Centre of Excellence)</b> are encouraged in commercial / mixed use areas where the sites have high-amenity and are well serviced with access to transport and community facilities	To demonstrate consistent language in reference to the industry training institute (Centre of Excellence) on page 17 (Regionally Significant Commercial Area) and to decrease confusion.
20	Strategic	Requirement and Guidelines	PSP	G2	Job densities and commercial development within the RSCA and local town centre must be generally in accordance with: <ul style="list-style-type: none"> <li>Table 1: Anticipated employment creation in the precinct</li> <li>Table 2: Local town centre composition and delivery guide</li> <li>Table 10: Local town centre performance requirements and guidelines</li> </ul> and demonstrate how it contributes to the achievement of the minimum job density and the local town centre Design Principles in Appendix 6 Local town centre design criteria	1. There is no job density for the industrial employment land. Why not? Can the report be updated? 2. In reference to warehousing and logistic uses in employment land Council requests for a planning control to assist Council review of this type of use.	Please refer to Section 7 of Councils submission report.
22	Landscape	Requirement and Guidelines	PSP	G3	Commercial and industrial premises should achieve a maximum street setback of three metres to promote an active streetscape and public realm. The front setback should be landscaped with canopy trees where practical and vegetation to promote water sensitive urban design and to help reduce the impact of the urban heat island effect.	Commercial and industrial premises should achieve a maximum street setback of <b>(can this distance be changed?)</b> metres to promote an active streetscape and public realm. The front setback should be landscaped with canopy trees where practical and vegetation to promote water sensitive urban design and to help reduce the impact of the urban heat island effect.	The wording in this guideline is inconsistent. The maximum street setback is stated as 3 metres and the front setback should have a canopy tree. A canopy tree is defined in Appendix 9 (Glossary) as having a minimum mature spread of 6.4m in diameter, which therefore is larger than the setback. This guideline will cause conflict and it is requested it is modified because in its present form it does not work.
<b>3.2 Connect People to Jobs and Higher Order Jobs</b>							
21	Economic	Objective	PSP	05	To maximise accessibility of the precinct through the strengthening of links to the Princes Freeway, Thompsons Road and to the surrounding arterial road network opening key gateways to the Dandenong National Employment and Innovation Cluster (NEIC), potential future south-east airport and Port of Hastings	To maximise accessibility of the precinct through the strengthening of links to the Princes Freeway, Thompsons Road and to the surrounding arterial road network and opening key gateways to the <b>National Employment and Innovation Clusters (NEIC), Port of Hastings and potential future south-east airport, to protect the economic prosperity of the precinct and Greater South East Region.</b>	1. Cardinia Shire is located nearby to a number of National Employment and Innovation Clusters (NEIC) for which residents travel to work and/or industries have affiliations with. Council requests reference to the entirety of all NEIC, instead of just Dandenong NEIC 2. The link between accessibility and increasing the economic prosperity of the precinct and the Greater South East Region needs to be recognised
22	Landscape	Requirement and Guidelines	PSP	G4	Car parks should be landscaped with canopy trees (minimum of one tree per six bays) and have adequate pedestrian paths to provide direct, dedicated accessways from parking to building entrances.	Car parks should be landscaped with canopy trees <b>or shaded with built structures that may include solar panels</b> , and have adequate pedestrian paths to provide direct, dedicated accessways from parking to building entrances <b>to the satisfaction of the responsible authority.</b>	1. Council likes the principle/intent of the Guideline although would like reference to the minimum of one tree per six bays removed. Council is concerned with the interpretation of which car park this applies (carparks in commercial/industrial areas, carparks in active open space, carparks at the town centre) and specifying a minimum requirement. Council prefers the Guideline relates to all public and private car parking and demonstrates a linkage to the car parking controls to Clause 52.06 (Car Parking) of the Planning Scheme. 2. Request flexibility for an appropriate urban design response to climate change in association with car parks 3. Car parks can be shaded with built structures also to provide shade.
<b>3.3 Safe, Accessible and Well Connected</b>							
22	Transport	Objective	PSP	010	To create a high amenity, safe, accessible, direct, and comfortable walking and cycling environment that allows residents and employees to be active and travel safely and directly between key destinations, local parks, Lower Gum Scrub and Cardinia Creeks	To create a high amenity, safe, accessible, direct and <b>suitable</b> walking and cycling environment that allows residents and employees to be active and travel safely and directly between key destinations, local parks, Lower Gum Scrub, Cardinia Creeks <b>and adjacent precincts.</b>	1. Request the word comfortable is changed to suitable. Council cannot determine what is a comfortable walking and cycling environment. We can test what is a suitable walking and cycling environment based on CPTED. 2. Request adjacent precincts included as a key destination to assist increasing assessment of accessibility within and to and from the precinct.
22	Transport	Objective	PSP	011	To facilitate innovation and alternatives to fossil fuel through delivery of essential supporting infrastructure, including end of trip facilities, solar energy capture, smart city conduit, ICT infrastructure and electric vehicle charging infrastructure	To facilitate innovation and alternatives to fossil fuel through delivery of essential supporting infrastructure, including end of trip facilities, solar energy capture, smart city conduit, ICT infrastructure and <b>low emission vehicle infrastructure (example electric vehicle charging infrastructure)</b>	1. Reference to low emission vehicle infrastructure required which includes an example, being a electric vehicle charging infrastructure. Technology is rapidly changing and other types of low emission vehicles and charging stations could be available on the market in the future. 2. Consistent language throughout PSP requested
22	Open Space	Requirement and Guidelines	PSP	R8	Key destinations (active and public open space, local town centre, community facilities and commercial centres) must: <ul style="list-style-type: none"> <li>be accessible by active and public transport routes</li> <li>provide active street frontages</li> <li>provide bicycle parking facilities</li> <li>include fast charge charging stations for electric vehicles</li> </ul> to the satisfaction of the responsible authority.	<b>Key destinations (active open space, local town centre, community facilities and commercial centres) must:</b> <ul style="list-style-type: none"> <li>be accessible by active and public transport routes</li> <li>provide active street frontages</li> <li>provide bicycle parking facilities</li> <li><b>include fast charge charging stations for electric vehicles. The responsible authority will facilitate the consideration of fast charge charging stations at other locations, to the satisfaction of the responsible authority.</b></li> </ul>	Council request removal of local open spaces from the requirement as local parks do not have parking facilities included as part of the of open space, given there small size. Council is comfortable to explore charging stations models alongside a local open space although we need to work through the proposed model and preferred location. The proposed wording has been revised to reflect this.

23	Transport	Requirement and Guidelines	PSP	R9	Design of all subdivisions, streets/roads must provide: <ul style="list-style-type: none"> <li>A permeable, direct, and safe street network prioritising walking and cycling</li> <li>Footpaths, at least 1.5 metres wide, on both sides of all streets and roads, except adjacent to community facilities where 1.8 metre footpaths are required to comply with Council's Enhanced Standard Universal Design Standard 2020, or unless otherwise specified by the precinct structure plan and relevant cross section in Appendix 7</li> <li>Shared paths, bicycle paths, and/or alternative transport networks, where identified in the precinct structure plan and relevant cross section in Appendix 7</li> <li>Consistent wayfinding and interpretative signage are created to connect all shared paths, cycle paths while raising awareness of the natural values of the precinct</li> <li>Safe pedestrian crossings of all roads, local streets, intersections, at key desire lines and destinations and on regular intervals appropriate to the function of the road and public transport provision</li> <li>Safe and convenient transition between on- and off-road bicycle networks all to the satisfaction of the coordinating roads authority and the responsible authority</li> <li>Local service road, internal loop road or rear lane to lots fronting arterial roads to the satisfaction of the coordinating road authority</li> </ul>	Design of all subdivisions, streets/roads must provide: <ul style="list-style-type: none"> <li>Permeable, direct, and safe street network facilitating prioritising walking and cycling</li> <li>Footpaths, at least 1.5 metres wide, on both sides of all streets and roads, except adjacent to community facilities where 1.8 metre footpaths are required to comply with Council's Enhanced Standard Universal Design Standard 2020, or unless otherwise specified by the precinct structure plan and relevant cross section in Appendix 7A.</li> <li>Shared-use paths, cycle paths and/or alternative transport networks, where identified in the precinct structure plan and relevant cross section in Appendix 7</li> <li>Consistent wayfinding and interpretative signage is created along key shared paths, cycle paths while raising awareness of the natural values of the precinct</li> <li>Safe pedestrian crossings points of all roads, local streets, intersections, at key desire lines and destinations and on regular intervals appropriate to the function of the road and public transport provision</li> <li>Safe and convenient transition between on- and off-road bicycle networks all to the satisfaction of the coordinating roads authority and the responsible authority</li> <li>Local service road, internal loop road or rear lane to lots fronting arterial roads to the satisfaction of the coordinating road authority.</li> <li>Convenient access to local and regional points of interest and destinations for effective integration with neighbouring properties, parkland, and sports reserves</li> <li>Direct and convenient access to public transport services for walking, cycling and other forms of active transport.</li> </ul> <p><b>to the satisfaction of the responsible authority</b></p>	<ol style="list-style-type: none"> <li>Request reference to on road bicycle lanes is removed as the PSP provides cycle paths that are not on-road</li> <li>Request wayfinding is created along key shared paths and not all paths as this is an expense and ongoing cost issue for Council's maintenance and management, if it was placed on all paths.</li> <li>Safe pedestrian crossing points needs to be defined instead of safe pedestrian crossings</li> <li>Council requests for the Victorian Planning Authority advice regarding the width of existing pedestrian paths at 1.5 metres wide in the precinct structure plan. Council understands the Victorian Government has adopted a whole of government State Universal Design policy in 2022, which requires the consideration of Universal Design for accessibility. Can the Victorian Planning Authority please advise if the pedestrian pathways demonstrated at 1.5m are required to be widened to comply with the State Government policy? If yes, will all road cross-sections be widened to demonstrate this change?</li> </ol>
23	Transport	Requirement and Guidelines	PSP	R10	If roundabouts are to be used at arterial intersections, safe pedestrian and cyclist connections are to be provided with appropriately located pedestrian operated signals.	If roundabouts are to be used at <b>major</b> intersections, safe pedestrian and cyclist connections are to be provided with appropriately located pedestrian <b>crossing (i.e. pedestrian operated signals) to the satisfaction of the coordinating road authority.</b>	Consistent language and to reference other options
23	Transport	Requirement and Guidelines	PSP	R11	All signalised intersections must be designed having regard to the Guidance for Planning Road Networks in Growth Areas November 2015 and be to the satisfaction of the Department of Transport and Planning (DTP).	All signalised intersections must be designed <b>to the satisfaction of the coordinating road authority</b> and the Department of Transport and Planning (DTP).	The Guidance for Planning Road Networks in Growth Areas November 2015 is a draft guideline and has not been adopted by the Department of Transport and Planning. The guideline is not in accordance with current Department of Transport and Planning design standards. Council cannot utilise a draft document that conflicts with current adopted Department of Transport and Planning standards. Council requires the requirement is changed to refer to the current coordinating road authority design standards to reduce conflict at concept and functional design detail.
24	Drainage	Requirement and Guidelines	PSP	R13	Public pedestrian, equestrian paths, local roads and infrastructure must be located outside conservation drainage and waterway areas unless shown on Plan 5 Public Transport and Active Paths Network and Plan 13 Utilities Plan. If waterway and conservation crossings are required, they must be planned (and co-located where applicable) to maintain the waterway gully form, drainage function and minimise disturbance to native vegetation and habitat for Growing Grass Frog, Australian Grayling and Dwarf Galaxias habitat and to the satisfaction of Melbourne Water, Department of Transport and Planning (DTP), Department of Energy, Environment and Climate Action (DEECA) and the responsible authority. Future waterway crossings cannot fill in or block the waterway gully form	Public pedestrian, equestrian paths, local roads and infrastructure must be located outside conservation <b>areas along Cardinia Creek and Gum Scrub Creek</b> unless shown on Plan 5 Public Transport and Active Paths Network and Plan 13 Utilities Plan. <b>If a conservation crossings is required, they must be planned</b> (and co-located where applicable) to maintain the waterway gully form, drainage function and minimise disturbance to native vegetation and habitat for Growing Grass Frog, Australian Grayling and Dwarf Galaxias habitat and to the satisfaction of Melbourne Water, Department of Transport and Planning (DTP), Department of Energy, Environment and Climate Action (DEECA) and the responsible authority. Future waterway crossings cannot fill in or block the waterway gully form	This condition appears to require all shared use paths to be located outside all waterway/drainage reserves. It is a standard Council and Melbourne Water requirement to have Shared Use Paths at the Q100 line of all wetland/drainage areas (i.e. both sides of creeks and drainage basins) that delineates the area between what Melbourne Water and what Council maintain, but also provides a path network for residents and maintenance access for Council and Melbourne Water. The present wording of the Requirement appears to prevent this from happening. Council understands if this is a Requirement for Cardinia Creek and Lower Gum Scrub Creek, but it shouldn't be for 'all' drainage and waterway areas.
24	Transport	Requirement and Guidelines	PSP	R14	Commercial, industrial and retail premises at-grade parking, including loading and storage areas are to be provided at either the side or rear of the building, with direct pedestrian paths connecting off-street car parks to the primary entrances of buildings	Commercial, industrial and retail premises at-grade parking, including loading and storage areas are to be provided at either the side or rear of the building, with direct pedestrian <b>links</b> connecting off-street car parks to the primary entrances of buildings <b>to the satisfaction of the responsible authority</b>	Request this is not a requirement and instead a Guideline as car parking, specifically for Industrial estates needs flexibility, as its not always preferred to be located to the side or rear of buildings dependant on the size of the lots
24	Transport and Environment	Requirement and Guidelines	PSP	G7	Location and design of walkways or pedestrian and cycle paths in addition to those described through the standard cross sections should consider the need for appropriate lighting and passive surveillance	Location and design of walkways or pedestrian and cycle paths in addition to those described through the standard cross sections should consider the need for appropriate lighting and passive surveillance, <b>that considers wildlife sensitive lighting principles</b>	Wildlife sensitive lighting principles need to be considered



24	Development Infrastructure (Drainage)	Requirement and Guidelines	PSP	G8	In addition to waterway crossings shown on Plan 11: Precinct Infrastructure, development proponents should provide waterway crossings at intervals no greater than 400 metres or corresponding with all perpendicular through roads or pedestrian and cycle paths. This does not include waterway crossings within the BCS conservation area	Delete	<ol style="list-style-type: none"> <li>Council requests the precinct structure plan demonstrates the location of pedestrian/equestrian crossings over waterways that are located in appropriate locations to assist the connectivity of the precinct. Council also requests this Guideline is deleted if the PSP demonstrates the location of all pedestrian/equestrian bridges required over Cardinia Creek and Gum Scrub Creek.</li> <li>Council is concerned that a pedestrian/equestrian crossing may not be practical every 400m due to accessibility barriers to other precincts. This matter should be dealt with at the PSP stage instead of a Guideline for Council to resolve at implementation. Council is also concerned that due to the costs to develop the pedestrian/equestrian bridges every 400 metres over Cardinia Creek and Gum Scrub Creek it is unlikely to be delivered. Council requests the PSP is updated to demonstrate the location of appropriate pedestrian/equestrian bridges that aligns with the precincts in Casey City Council and Cardinia Shire.</li> <li>Council has been in contact with Casey City Council and we have learnt the following:                     <ol style="list-style-type: none"> <li>In Mintia Farm PSP reference is made to an equestrian trail on Figure 6 (page 32) and a potential opportunity exists to connect the equestrian trail to the pedestrian bridge as shown in Figure 6 that connects to Officer South Employment PSP.</li> <li>In Clyde North PSP reference is made to the metropolitan shared trail and on Plan 18 (page 64) the trail crosses Cardinia Creek from Officer South Employment to Clyde North PSP</li> <li>In Cardinia Creek South PSP reference is made to an indicative equestrian trail as shown in Figure 6 (page 34) that crosses Cardinia Creek via a pedestrian/equestrian (indicative) bridge. Nonetheless on Plan 8 (page 42) the equestrian trail is shown to cross Cardinia Creek on a pedestrian/equestrian bridge that is identified to be an ICP item on page 54</li> </ol> </li> <li>While in Cardinia we have learnt                     <ol style="list-style-type: none"> <li>The Cardinia Road Employment PSP reference is made on Plan 9 (Housing) page 59 a pedestrian bridge is demonstrated along the electrical transmission easement.</li> </ol> </li> <li>Council also requests that if there are any gaps in providing a pedestrian/equestrian bridge between the precincts a indicative bridge is demonstrated</li> </ol>
24	Transport	Requirement and Guidelines	PSP	G9	Cul-de-sac should be avoided unless a shared access way to an adjacent road or cul-de-sac is provided. Where cul-de-sac cannot be avoided, they should not negatively impact walkability and utilise green links throughout the precinct	Cul-de-sacs should be avoided. Where Cul-de-sacs cannot be avoided, they should not negatively impact pedestrian walkability and cycle connections and provides an appropriate response to Crime Prevention through Environmental Design.	<ol style="list-style-type: none"> <li>Remove reference to the green link as there is no definition in the PSP or Planning Scheme of a green link and its future interpretation will cause implementation confusion.</li> <li>Remove reference to accessway as Council does not support having an accessway between two cul-de-sacs. It is a poor urban design outcome.</li> <li>Insert reference to Crime Prevention through Environmental Design to assist increasing the safety of the precinct.</li> </ol>
24	Transport	Requirement and Guidelines	PSP	G11	Direct off-road active network paths should be delivered between key destination points such as: <ul style="list-style-type: none"> <li>the local town centre including the commercial precinct or local employment areas, local parks, active open space and school destinations</li> <li>access to surrounding precincts, including the Officer Train Station and Town Centre regional destinations.</li> </ul> These active network paths may be located along desired internal pedestrian corridors outside the road reserve where not shown on Plan 5: Public Transport and Active Path Networks.	Direct off-road active network paths should be delivered between key destination points such as: <ul style="list-style-type: none"> <li>the local town centre including the commercial precinct or local employment areas, local parks, active open space and school destinations</li> <li>Access to surrounding precincts and regional destinations, including the Officer Train Station and Town Centre and <b>Cardinia Road Employment Town Centre</b></li> </ul> These active network paths may be located along desired internal pedestrian corridors outside the road reserve where not shown on Plan 5: Public Transport and Active Path Networks <b>to the satisfaction of the responsible authority</b>	<ol style="list-style-type: none"> <li>Need to reference Cardinia Road Employment Town Centre. Its one of the closest town centres to the precinct from a walkability perspective</li> <li>If a off-road active network is to differ as to what is demonstrated in Plan 5 (Public Transport and Active Path Network) it needs to be to the satisfaction of the responsible authority, otherwise it will be difficult to enforce</li> </ol>
24-25	Transport	Requirement and Guidelines	PSP	G12	A variety of connector roads and local access street cross sections should be utilised in subdivision layouts, as per Appendix 7, to create differentiation, placemaking and neighbourhood character. Alternative cross sections should ensure that: <ul style="list-style-type: none"> <li>Minimum required carriageway dimensions are maintained to ensure safe and efficient operation of emergency vehicles on all streets, as well as low line buses on connector streets</li> <li>The performance characteristics of standard cross sections as they relate to pedestrian and cycle use are maintained</li> <li>Relevant minimum road reserve widths for the type of street are maintained</li> <li>Appropriate on-street carparking is provided to the satisfaction of the responsible authority.</li> </ul>	A variety of connector roads and local access street cross sections should be utilised in subdivision layouts, as per Appendix 7, to create differentiation, placemaking and neighbourhood character. Alternative cross sections should ensure that: <ul style="list-style-type: none"> <li>Minimum required carriageway dimensions are maintained to ensure safe and efficient operation of emergency vehicles on all streets, as well as low line buses on connector streets</li> <li>The performance characteristics of standard cross sections as they relate to pedestrian and cycle use are maintained</li> <li>Relevant minimum road reserve widths for the type of street are maintained</li> <li>Appropriate on-street carparking is provided and</li> <li><b>Facilitate the protection of existing trees identified to be protected on Plan 7 (Native Vegetation Retention and Removal) and can accommodate the 30% tree canopy</b> to the satisfaction of the responsible authority.</li> </ul>	Need information on cross-section and tree requirements.
25	Transport	Requirement and Guidelines	PSP	New Guideline	New Guideline	Slip lanes should be avoided in areas of high pedestrian activity and only be provided at any other intersection between connector roads and arterial roads where they are necessitated by high traffic volumes, to the satisfaction of the coordinating road authority.	<ol style="list-style-type: none"> <li>The PSP must provides guidance on slip lanes</li> </ol>
26	Transport	Plan 4 Road Network	PSP	Plan 4 Road Network	Plan 4 Road Network	Refer to Tab	Refer to Tab
27	Transport	Plan 5 Public Transport and Active Path Network	PSP	Plan 5 Public Transport and Active Path Network	Plan 5 Public Transport and Active Path Network	Refer to Tab	Refer to Tab
<b>3.4 High Quality Public Realm</b>							

28	High Quality Public Realm	High Quality Public Realm	PSP	High Quality Public Realm	Placed Based Requirements and Guideline Headings	The following sub-headings in the High-Quality Public Realm Section would assist the use and implementation of the PSP: <ul style="list-style-type: none"> <li>-Open space</li> <li>-Flora and fauna</li> <li>-Bushfire Hazards</li> <li>-WOM</li> <li>-ESD</li> <li>-Aboriginal and Post Contract Heritage</li> <li>-Eged</li> </ul>	At present it is unclear what does a high quality public realm represent. To assist all readers of the PSP it would be useful to have subheadings of themes/topics to assist its implementation.	
28	Heritage	Objective	PSP	014	To support the protection and conservation of cultural heritage and traditional owner values	To support the protection and conservation of cultural heritage and traditional owner values <b>and post contact heritage values</b>	There is no acknowledgement of post contact heritage as an objective. Need to acknowledge both	
28	Open Space	Objective	PSP	015	To create integrated and linked networks of open space and facilities that provide equitable access for residents and workers for sport and recreation, leisure, environmental and cultural benefits and visual amenity along waterways, gas and electrical easements, streets, parks, and public spaces.	<b>To deliver</b> an integrated and linked network of open space that <b>provides equitable access for residents and workers to amenities and facilities for sport and recreation, environmental, cultural and visual amenity along natural and constructed waterways, gas and electrical easements, streets, parks and public spaces, in alignment with Cardinia Shire Councils Open Space Strategy</b>	Revised wording to make the objective clearer and to align with Cardinia Shire Council Open Space Strategy	
28	Environment	Objective	PSP	016	To facilitate safe, resilient, water sensitive, environmentally sustainable urban environments that respond to climate change and other hazards.	To facilitate safe, resilient, water sensitive, environmentally sustainable urban <b>development and urban forestry</b> that responds to climate change and other hazards.	Recognition of urban forestry to comply with the hallmark of meeting the 30% tree coverage required	
28	Environment	Objective	PSP	017	To protect and enhance areas of biodiversity and native vegetation value (local, state, nationally significant) including the bio links and BCS conservation areas along Cardinia Creek and Lower Gum Scrub Creek	To protect and enhance areas of biodiversity and native vegetation value (local, state, nationally significant) <b>including the BCS conservation areas along Cardinia Creek and Lower Gum Scrub Creek and the existing biolink along Patterson Road and future biolink along the electrical transmission easement</b>	Patterson Road has been identified as an existing bio link while the electrical transmission easement is identified as a future biolink as per Councils Bio link Plan adopted by Council in December 2021. The precinct structure plan needs to recognise these important biolinks and comply with Councils Biolink Strategy.	
28	Environment	Objective	PSP	019	To create a sustainable urban landscape focused on achieving carbon neutrality by reducing greenhouse gas emissions, which enhances the existing biodiversity, cultural heritage, drainage, and landscape values within the precinct and mitigates urban heat island effect.	<b>To create a sustainable urban landscape focused on achieving zero carbon emissions</b> , which enhances the existing biodiversity, cultural heritage, drainage, and landscape values within the precinct and mitigates urban heat island effect.	Consistent language	
28	Economic	Objective	PSP	021	To foster Workplace Integrated Social Enterprises (WISE) and community initiatives which provide a reliable and affordable source of fresh produce to people experiencing household food insecurity.	No change to wording but the location of this objective is better suited to Section 3.2 (Connect People to Jobs and Higher Order Jobs)		
28	Open Space	Requirement and Guidelines	PSP	R15	Subdivision applications must deliver an open space network that must: <ul style="list-style-type: none"> <li>• Respond to the Cardinia Shire Council Developer Landscape Guidelines Policy 2017 (or as amended)</li> <li>• Consider the Cardinia Shire Council Recreation Reserve Facility Standards Policy 2019 (or as amended)</li> <li>• Include a range of open space shapes and typologies</li> <li>• Maximise the amenity and value of service to open space through the provision of paths, trails, and other recreational elements</li> <li>• Respond to the values of any adjoining open space, waterways, trees, and Aboriginal and post-contact heritage</li> <li>• Provide flexible recreational opportunities that allow for urban agriculture uses required by the community</li> <li>• Provide space allocation for future energy infrastructure to the satisfaction of the responsible authority</li> </ul>	<b>All subdivision and development applications must deliver an open space network that:</b> <ul style="list-style-type: none"> <li>• Responds to the <b>Cardinia Shire Council Open Space Strategy 2023</b> and Developer Landscape Guidelines Policy 2017 (or as amended)</li> <li>• Considers the <b>Cardinia Shire Council Active Cardinia Strategy 2023</b> and the <b>Cardinia Shire Council Recreation Reserve Facility Standards Policy 2019</b> (or as amended)</li> <li>• <b>Considers the Cardinia Shire Council Biolink Plan 2023-33 (or as amended)</b></li> <li>• Include a range of open space shapes, typologies and <b>classifications</b></li> <li>• Maximise the amenity and value of service to open space through the provision of paths, trails, and other recreational elements</li> <li>• Respond to the values of any adjoining open space, waterways, trees, and Aboriginal and post-contact heritage</li> <li>• <b>Provides infrastructure that can allow for community driven urban agriculture uses, using Food Sensitive Planning.</b></li> <li>• Provide space allocation for future energy infrastructure <b>without reducing the overall open space land provision to the satisfaction of the responsible authority</b></li> </ul>	1. Council has two new open space strategies adopted by Council in 2023. Please update this requirement to reference these policies. 2. The Biolink is an adopted strategic policy document of Council. It provides the guiding principles for the design and establishment of environment corridors throughout Cardinia Shire. These 'biolink corridors' are recognised by Council as critical for addressing the impacts of habitat fragmentation and more intensive land use. The plan provides a transparent framework to help direct investment in conservation management and builds an understanding of how to enable species to move throughout the landscape efficiently and effectively. The plan was finalised in December 2021 and was prepared with a comprehensive methodology and scientific analysis of data and involvement of industry leading technical professionals. It was also supported by a thorough community consultation process. Please update this requirement to reference this policy 3. Its important that this requirement also responds to the location, design and development of all open space. Subdivision alone does not provide this outcome. 4. Council staff support future energy infrastructure being placed in open space but not at the risk of it reducing the open space and this needs to be made clear in the requirement. 5. Council requests this requirement is modified or a new requirement is developed that states the delivery of open space must be in accordance with the ICP. The way an ICP is set up, means that we cannot change the size of open space delivered per ICP property. So it can't just be a planning outcome as to where parks are located, but has to be property specific also due to the ICP	

29	Open Space	Requirement and Guidelines	PSP	R16	<p>Trees and vegetation in streets, civic places and the passive open space network must be provided in accordance with the Cardinia Shire Council Developer Landscape Guidelines 2017 (or as amended), and must:</p> <ul style="list-style-type: none"> <li>comprise a mix of native flowering and non-flowering species and include either native, indigenous, and exotic species and any other species as appropriate to the location and design and local conditions. Edible planting (e.g. fruits, nuts, herbs and bush foods) are encouraged</li> <li>be larger species to facilitate continuous canopy cover</li> <li>be planted in modified and improved soil to support tree establishment</li> <li>be appropriately sized to nature strips, nearby utilities, and buildings.</li> </ul>	<p>Trees and vegetation in streets, civic places and the passive open space network must be provided in accordance with the Cardinia Shire Council Developer Landscape Guidelines 2017 (or as amended), and must:</p> <ul style="list-style-type: none"> <li>comprise a mix of flowering and non-flowering species and include either native, indigenous, and exotic species as appropriate to the location and design and local conditions. Edible planting (e.g. fruits, nuts, herbs and bush foods) are encouraged in open space areas (not within streetscapes)</li> <li>larger species to facilitate continuous canopy cover where appropriately sized nature strips are provided to reduce urban heat island effect, improve amenity for pedestrians, creating shaded paths of travel</li> <li>planted in modified and improved soil to support tree establishment</li> <li>appropriately sized to nature strips, nearby utilities, and buildings.</li> </ul>	<ol style="list-style-type: none"> <li>Edible plantings are encouraged in open space areas not within streetscapes.</li> <li>Having the word native at the start conflicts with the words indigenous and exotic further on in the sentence. Native, indigenous and exotic are the only types of species so 'any other' species does not provide any benefit. Word requested to be deleted.</li> <li>Larger tree species need to be located in appropriately sized nature strips otherwise Council will struggle to implement this Requirement</li> <li>Canopy cover is important to assist in increasing amenity and a respond to climate change. Council requests this is emphasised.</li> </ol>
29	Landscape	Requirement and Guidelines	PSP	R17	<p>Applications to subdivide land within the PSP area must be accompanied by a Landscape Plan which illustrates and quantifies canopy tree coverage within the public realm and open space to an average of 30 per cent (excluding areas dedicated to biodiversity or native vegetation conservation). The plan must specify:</p> <ul style="list-style-type: none"> <li>Edible tree species for the relevant area</li> <li>Irrigation arrangement of trees during the establishment and subsequent phases</li> </ul> <p>to achieve this target at maturity and during the summer months.</p>	<p>Applications to subdivide land within the PSP area must be accompanied by a Landscape Masterplan which illustrates and quantifies canopy tree coverage within the public realm and open space to an average of 30 per cent (excluding areas dedicated to biodiversity or native vegetation conservation). The landscape masterplan must also meet the standard requirements as outlined in Cardinia Shire Councils Developer Landscape Guidelines including specifying suitable tree species for the entire subdivision parcel with the aim of meeting the 30% canopy cover target. The plan must specify passive irrigation arrangement of trees during the establishment and subsequent phases to achieve this target at maturity and during the summer months to the satisfaction of the responsible authority</p>	<p>Council staff request:</p> <ol style="list-style-type: none"> <li>Requirement is updated. Most planning applications come with a Landscape Master Plan, and it is very high level. There is no way you can quantify canopy cover until the engineering and service detail is complete and full cross sections etc. are known. Council staff do not support something on top of a Landscape Master Plan as we don't have the resources to review more.</li> <li>Should this just be worded to state that the LMP shows the 30 per cent canopy cover on top of standard LMP requirements?</li> <li>Cardinia does not actively irrigate trees and open spaces. So we would only be considering passive irrigation of street trees or via the IWM functions</li> </ol>
29	Open Space	Requirement and Guidelines	PSP	R18	<p>Development must provide for a minimum 19 metre perimeter road bushfire interface at the conservation area boundary, drainage reserves, constructed waterways, easements and the southern and south-east boundary adjoining the Green Wedge. The bushfire interface area may incorporate paths, open space, and drainage infrastructure. Where a setback from a bushfire hazard area is required by Plan 8: Bushfire Hazard Areas, vegetation within the setback must be managed as follows, unless otherwise agreed by the responsible authority and relevant fire authority:</p> <ul style="list-style-type: none"> <li>Grass must be short cropped and maintained during the declared fire danger period</li> <li>All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period</li> <li>Shrubs must not be located under the canopy of trees</li> <li>Individual and clumps of shrubs must not exceed five square metres in area and must be separated by at least five metres</li> <li>The canopy of trees must be separated by at least two metres at maturity</li> <li>There must be a clearance of at least two metres between the lowest tree branches and ground level</li> <li>Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building</li> <li>Plants greater than 10 centimetres in height must not be placed within three metres of a window or glass feature of the building.</li> </ul> <p>Consultation is required with Department of Energy,</p>	<p>Development must provide for a minimum 19 metre perimeter road bushfire interface at the conservation area boundary, drainage reserves, constructed waterways, easements and the southern and south-east boundary adjoining the Green Wedge. The bushfire interface area may incorporate paths, open space, and drainage infrastructure. Where a setback from a bushfire hazard area is required by Plan 8: Bushfire Hazard Areas, vegetation within the setback must be managed as follows, unless otherwise agreed by the responsible authority and relevant fire authority:</p> <ul style="list-style-type: none"> <li>Grass must be short cropped and maintained during the declared fire danger period</li> <li>All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period</li> <li>Shrubs must not be located under the canopy of trees</li> <li>Individual and clumps of shrubs must not exceed five square metres in area and must be separated by at least five metres</li> <li>The canopy of trees must be separated by at least two metres at maturity</li> <li>There must be a clearance of at least two metres between the lowest tree branches and ground level</li> <li>Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building</li> <li>Plants greater than 10 centimetres in height must not be placed within three metres of a window or glass feature of the building.</li> </ul> <p>Consultation is required with Department of Energy, Environment and Climate Action Melbourne Strategic Assessment (DEECA MSA), Country Fire Authority (CFA) and council to confirm the conservation area planting and bushfire risk implications prior to undertaking a development application.</p>	<ol style="list-style-type: none"> <li>The first sentence is unclear. Council understands what 19 metres from a conservation area boundary means but we do not understand what the reference to easements and constructed waterways means. Is it intended to refer to the boundaries of those places? If yes, the statement needs to be clearer.</li> <li>The second sentence is unclear and Council requests it is redrafted to make it clearer what area in the PSP this condition applies and what can/cannot occur in the setback.</li> <li>The third sentence regarding vegetation within the bushfire setback and all the dot point requirements. Who is to take on this obligation? Council does not agree to take on this obligation and requests the statement is revised.</li> <li>In reference to Dot Point 5. At what point does the canopy of trees need to be separated by at least two metres. It is unclear if its meant to be at planting or at maturity? Council suggests the condition states at maturity.</li> <li>In reference to Dot Point 6. A 2m clearance is impossible in the early years of tree growth. Trees are generally planted at 2m tall or less, and then can only be clear trunk pruned by 1/3 each time. To get to a 2m clearance, they need to be 6m tall. So this requirement needs to be considered at a point in time after planting, Council suggests the wording is modified.</li> <li>In reference to Dot Point 8 Council cannot manage or enforce this at the PSP stage. If there is an interface between public and private land, this has to be managed on a building by building basis under the fire regulations related to be building permit. It is not a Requirement that can be managed by a PSP, especially for many developments Council won't be issuing the permit for the building. Council suggest the wording is modified.</li> <li>Should this application requirement be in the Urban Growth Zone and be a development and subdivision requirement?</li> <li>Please amend both the PSP and corresponding ordinance to provide for a interface treatment, design principles, cross sections and application requirements for areas of land at urban development and green wedge interface. An Appropriate interface would also respond and provide further guidance to objective R18 bushfire threat from the Green wedge area.</li> </ol>
29	Open Space	Requirement and Guidelines	PSP	R19	<p>Where a local park illustrated on Plan 6 spans multiple parcels, the first development proponent to lodge a permit application for land containing the park must prepare a master plan for the entire park. Consultation with all relevant landowners must be undertaken as part of the master plan preparation</p>	<p>Where a local park spans across multiple properties, the first development proponent to lodge a permit application for land containing the local park must prepare a master plan for the entire park. Consultation with all relevant landowners must be sought as part of the master plan preparation.</p>	<ol style="list-style-type: none"> <li>Council consider this needs to be requirement in the Urban Growth Zone and linked to a landscape masterplan.</li> <li>Council statutory planners are concerned that consultation with relevant landowners is exempt and will not occur. What if a landowner does not want to participate? Council requests the wording to be redrafted.</li> </ol>

30	Aboriginal heritage	Requirement and Guidelines	PSP	R22	Signage or opportunities for cultural celebration and interpretation must be explored and must be integrated into the public realm, utilised along equestrian trails and walking paths at conservation areas to support and contribute to the knowledge and understanding of the local Aboriginal Cultural Heritage of the Bunurong people	Signage or opportunities for cultural celebration and interpretation must be explored and integrated <b>along equestrian trails and walking paths in the conservation areas (Rural Conservation Zone) or adjacent to the conservation areas to support and contribute to the knowledge and understanding of the local Aboriginal Cultural Heritage of the Bunurong people</b>	1. Council request revised wording to identify this statement relates to land in or adjacent to the conservation area and not all public realms 2. Is this linked to subdivision and/or development planning permit applications or is it an expectation of Council in collaboration with the Bunurong Land Council to implement? It is unclear at present. Council seeks clarity.	
30	Aboriginal heritage	Requirement and Guidelines	PSP	R23	A mandatory Cultural Heritage Management Plan is required to be undertaken prior to development occurring within the cultural value investigation area as identified in Plan 3. Interface outcomes with culturally sensitive sites must be delivered in conjunction with the Cultural Heritage Management Plan and in consultation with the BLCAC	A mandatory Cultural Heritage Management Plan is required to be undertaken prior to development occurring within the cultural value investigation area as identified in Plan 3. Interface outcomes with culturally sensitive sites must be delivered in conjunction with the Cultural Heritage Management Plan and in consultation with the Bunurong Land Council Aboriginal Corporation.	1. Council requests for clarity on this requirement. Doesn't the Aboriginal Heritage Act deal with the circumstances where a CHMP is required. If so, is the drafting of this Requirement consistent with the Act? 2. Council seeks to understand why this applies only to development and not subdivision also? 2. What are the expectation of Council's statutory planners? Once a mandatory Cultural Heritage Management Plan (CHMP) has been developed, is the requirement suggesting the statutory planners forward the CHMP to the Bunurong Land Council as a recommending referral authority to respond to interface outcomes? Or is it expected while the CHMP is being developed, consultation with the Bunurong Land Council occurs to respond to the interface outcomes. It is unclear at present and Council requests the wording is revised. Please note, the Bunurong Land Council Aboriginal Corporation are not a referral agency under Clause 66.06 (Referral and Notice Provisions) of the Cardinia Planning Scheme.	
30	Aboriginal heritage	Requirement and Guidelines	PSP	R24	Naming opportunities for, neighbourhoods, roads, streets, parks, wetlands or conservation zones, passive or active open spaces and community or local town centres must be given To Traditional Owners, represented by BLCAC.	Naming opportunities for neighbourhoods, roads, streets, parks, wetlands or conservation zones, passive or active open spaces and community or local town centres <b>should</b> be given To Traditional Owners, represented by the <b>Bunurong Land Council Aboriginal Corporation.</b>	1. Council respectively requests this requirement is changed to a guideline. 2. Council staff must follow Council's Place Naming Policy and the Local Government Act rules and regulations that specify the process and consultation required when naming a geographic feature or road. Council will seek to collaborate with the Bunurong Land Council Aboriginal Corporation to understand how the process can be improved, acknowledging not all naming applications can be forwarded to the Bunurong Land Council, due to Council's resourcing and monetary constraints to refer all naming opportunities to the Bunurong Land Council for review. 3. Do other options exist. For example Council staff consider it would be great if the Cultural Heritage Management Plan specified this to be undertaken, to assist Council reviewing developer proposals that have already gone through the Bunurong Land Council Aboriginal Corporation for approval. If there is support for this, Council requests the following Requirement is inserted into the PSP: Proponents undertaking development of land identified as an area of Aboriginal cultural heritage sensitivity identified on Plan 2 - Precinct Features, may liaise with the Bunurong Land Council Aboriginal Corporation to ascertain whether heritage interpretation is appropriate in these identified locations, and how the heritage site(s) could be incorporated into the design of the subdivision.	
30	Aboriginal heritage	Requirement and Guidelines	PSP	R25	Reinstatement of creeks, waterways, water bodies, other water features must be undertaken with indigenous species, with species selection undertaken in consultation with BLCAC	<b>A landscape plan must be forwarded to Melbourne Water, the Bunurong Land Council Aboriginal Corporation and the responsible authority for the reinstatement of creeks, waterways and water bodies demonstrating indigenous species.</b>	1. Does the Bunurong Aboriginal Land Council want to be consulted on all waterbodies and drainage or is it predominately Cardinia Creek and Gum Scrub Creek? Council seeks clarity 2. Council supports consulting with Bunurong Aboriginal Land Council but the implementation has not been discussed or resolved between the relevant parties to confirm this Requirement is achievable. Council would like the opportunity to discuss with Melbourne Water and Bunurong Aboriginal Land Council to confirm what is appropriate moving forward, which may influence this Requirement. 3. Council does have initial concerns regarding implementation of the Requirement. Reinstatement of creeks and waterways is usually managed by Melbourne Water and Council, and as part of a subdivision or development applications these parties provide approval and sign off. How do we manage 'consultation' with Bunurong Aboriginal Land Council if they are not identified as responsible authority or receive notification of a planning permit application under the Planning Scheme? Council seeks clarity. Also what is the process if there is a difference of opinion between the parties regarding the reinstatement of creeks and waterways? What is the process we should follow? Council seeks clarity.	
30	Flora and Fauna	Requirement and Guidelines	PSP	R27	All conservation areas identified in Plan 7 must be retained in accordance with relevant legislation.	Delete	This requirement is a duplication of other legislation and does not provide any controls as to what is expected of a landowner. Is it requested this requirement is deleted	
30	Flora and Fauna Open Space	Requirement and Guidelines	PSP	R28	Existing high, very high and potential high value trees as per Plan 2 and Plan 7 must be retained within public open space, including road reserves, biolink and the public realm where possible. Open space designs must include measures to support and increase biodiversity values, such as the planting of indigenous plants, water features or nesting boxes.	Existing high, very high and potential high value trees as per Plan 2 and Plan 7 must be retained <b>and incorporated into the public realm during the subdivision design, that includes road reserves, biolink and public open spaces where possible.</b>	Need to link this requirement to the subdivision design stage, otherwise it will be very difficult for the statutory planners to implement.	

30	Drainage	Requirement and Guidelines	PSP	R29	Stormwater runoff from the development must meet the performance objectives of the Commonwealth Scientific and Industrial Research Organisation Best Practice Environmental Management Guidelines for Urban Stormwater (or as amended) prior to discharge to receiving waterways and as outlined in Plan 9: Integrated Water Management, unless otherwise approved by Melbourne Water and the responsible authority.  Proposals that exceed the performance objectives are highly encouraged and can be considered, all to the satisfaction of South East Water, Melbourne Water, and the responsible authority.	No change to wording	1. The alignment of the Urban Growth Zone and this Requirement is requested to be aligned. At present the Urban Growth Zone states subdivision while development is covered in Requirement R29 Does the Urban Growth Zone need to state both or the Requirement states both subdivision and development? 2. Melbourne Water need to be a referral authority for all application types where an application seeks an alternate stormwater solution 3. Melbourne Water and South East Water need to be a referral authority for all application types that exceed the performance objectives
30	IWM	Requirement and Guidelines	PSP	R30	Planning permits must require the preparation of an IWM Plan which clearly identifies how development will contribute towards: <ul style="list-style-type: none"> <li>Outcomes applicable to the development identified in the DEECA Western Port Strategic Directions Statement (September 2018) and Western Port IWM Catchment Scale Plan (September 2022)</li> <li>Outcomes applicable to the development identified in the Officer South Employment Precinct Integrated Water Management Strategy (Spire, April 2022)</li> <li>Protection of downstream waterways via stormwater volume reduction and infiltration targets applicable to the development outlined in Melbourne Water's Healthy Waterway Strategy (2018)</li> <li>Potable water reduction targets applicable to the development outlined in the Greater Melbourne Urban Water and System Strategy</li> <li>Waterways and integrated water management outcomes which enable land to be used for multiple recreation and environmental purposes</li> <li>Supply and use of recycled water for residential and public realm purposes, and if agreed by South East Water, for industrial and commercial land to the satisfaction of South East Water, Melbourne Water, and the responsible authority.</li> </ul>	<b>Applications to develop land within the PSP area must be accompanied by an appropriate</b> integrated Water Management Plan which clearly identifies how development will contribute towards <b>Plan 9 (Integrated Water Management):</b> <ul style="list-style-type: none"> <li>Outcomes applicable to the development identified in the DEECA Western Port Strategic Directions Statement (September 2018) and Western Port IWM Catchment Scale Plan (September 2022)</li> <li>Outcomes applicable to the development identified in the Officer South Employment Precinct Integrated Water Management Strategy (Spire, April 2022)</li> <li>Detection of downstream waterways via stormwater volume reduction and infiltration targets applicable to the development outlined in Melbourne Water's Healthy Waterway Strategy (2018)</li> <li>Table water reduction targets applicable to the development outlined in the Greater Melbourne Urban Water and System Strategy</li> <li>Waterways and integrated water management outcomes which enable land to be used for multiple recreation and environmental purposes</li> <li>Supply and use of recycled water for residential and public realm purposes, and if agreed by South East Water, for industrial and commercial land to the satisfaction of South East Water, Melbourne Water, and the responsible authority.</li> </ul>	1. Council is concerned this Requirement is a permit condition to be stated on a planning permit, prior to the applicant submitting relevant information to the relevant agency for consideration, as part of a planning permit application review. These conditions may alter the layout of the development application. Council would prefer to receive this information upfront to assist reviewing a planning permit application for development, otherwise once the permit is issued there is a risk and potential implication the development will require amended plans if it cannot comply with the planning permit condition. Council requests for revised wording to clearly determine when this information is required. 2. The alignment of the Urban Growth Zone and this Requirement needs to be better aligned. Is this for all planning applications i.e. use, development and subdivision? The Urban Growth Zone presently states a condition for subdivision.
31	Development Infrastructure (Drainage)	Requirement and Guidelines	PSP	R33	For development draining into Lower Gum Scrub Creek, development proposals must also demonstrate the management of stormwater flow volume, via the delivery of the diversion system as part of the ultimate assets of Melbourne Water's Development Services Schemes and/or via a stormwater harvesting/reuse, to the satisfaction of Melbourne Water and the responsible authority.	For development draining into Lower Gum Scrub Creek, development proposals must also demonstrate the management of stormwater flow volume, via the delivery of the diversion system as part of the ultimate assets of Melbourne Water's Development Services Schemes and/or via a stormwater harvesting/reuse <b>in accordance with Plan 9</b> , to the satisfaction of Melbourne Water and the responsible authority.	Link to Plan 9 to provide context of the location of the diversion system and stormwater harvesting systems
31	Development Infrastructure	Requirement and Guidelines	PSP	R35	Potential management methods to avoid or mitigate the risk of erosion of sodic and/or dispersive soils may include but are not limited to: <ul style="list-style-type: none"> <li>Widening the buffer distances between the core riparian zone and the outside vegetated buffers that allows sufficient tolerances for channel migration</li> <li>Diversion of water away from sodic and/or dispersive materials</li> <li>Minimising potential convergence and/or ponding of surface flows</li> <li>Compacting to reduce pore spaces and minimise water movement through material</li> <li>Physical and chemical soil ameliorants</li> <li>Maintenance of topsoil across undisturbed land, preferably with grasses to provide surface soil stability and root anchorage</li> <li>Minimising the amount of time land is exposed (e.g. by staging development)</li> <li>Ensuring that culverts and drains excavated into dispersive subsoils are capped with non-dispersive topsoil, gypsum stabilised and vegetated.</li> </ul>	<b>Where sodic and or dispersive soils are found the management methods to avoid or mitigate the risk of erosion of sodic and/or dispersive soils</b> may include but are not limited to: <ul style="list-style-type: none"> <li>Widening the buffer distances between the core riparian zone and the outside vegetated buffers that allows sufficient tolerances for channel migration</li> <li>Diversion of water away from sodic and/or dispersive materials</li> <li>Minimising potential convergence and/or ponding of surface flows</li> <li>Compacting to reduce pore spaces and minimise water movement through material</li> <li>Physical and chemical soil ameliorants</li> <li>Maintenance of topsoil across undisturbed land, preferably with grasses to provide surface soil stability and root anchorage</li> <li>Minimising the amount of time land is exposed (e.g. by staging development)</li> <li>Ensuring that culverts and drains excavated into dispersive subsoils are capped with non-dispersive topsoil, gypsum stabilised and vegetated.</li> </ul>	Under Section 3.0 of the Urban Growth Zone a Sodic and Dispersive Soil Management Plan is required. It stipulates that an application to subdivide land or construct or carry out bulk earthworks must be accompanied by a sodic and dispersive soil management plan. The management methods to avoid or mitigate the risk of erosion of sodic and/or dispersive soils will be developed as part of the sodic and soil dispersive soil management plan. Based on this, Council requests Requirement R35 is modified to a Guideline or its deleted as it appears to be a duplicate of a condition in the Urban Growth Zone. 2. If the Requirement is modified to a Guideline Council is concerned that the wording is not enforceable and request the wording is modified to assist identifying what management practises could be implemented to respond to sodic and dispersive soils.
32	Environment	Requirement and Guidelines	PSP	R36, R40-R42 and R44	R36, R40-R42 and R44	Referral Requirements	1. DEECA are only a referral authority for applications that seek to subdivide land containing conservation areas. 2. DEECA needs to be a referral authority for applications where works are proposed adjacent/abutting the conservation areas to assist compliance with the conservation area and notification setback of 50 metres specified in the Rural Conservation Zone.

31	Development Infrastructure	Requirement and Guidelines	PSP	R38	Public lighting must be designed and baffled to prevent light spill and glare within and adjacent to the BCS conservation area, unless otherwise agreed by the DEECA.	Public lighting must be <b>designed to the lowest AS/NZS 1158 lighting category that can be reasonably applied, use the warmest colour temperature possible (≤3000K)</b> and be baffled to prevent light spill and glare generally and specifically within and adjacent to the BCS conservation area, unless otherwise agreed by the DEECA. Public lighting should comply as far as possible with the National Light Pollution Guidelines and have upward waste light of 0%.	To respond to wildlife sensitive lighting principles
32	Environment	Requirement and Guidelines	PSP	R42	The conservation area boundary must be fenced to exclude vehicles to the satisfaction of DEECA, allowing for pedestrian and maintenance access where required.	The conservation area boundary must be fenced to exclude vehicles, allowing for pedestrian and maintenance access where required <b>to the satisfaction of DEECA and the responsible authority</b>	1. It is acknowledged that DEECA will be responsible for signing-off on the fencing along the conservation boundary. Nonetheless, there will be circumstances when Melbourne Water and/or Council during the review of a planning permit adjacent to the conservation reserve will require potential access via the conservation area and the fencing outcome will need both DEECA, Melbourne Water and Council collaboration. Preference would be to add additional wording to include other responsible authorities in the referral. 2. Need to confirm these agencies are referral agencies under the Planning Scheme
32	Drainage	Requirement and Guidelines	PSP	R44	The final layout and design of constructed wetlands, retarding basins, and stormwater quality treatment infrastructure adjacent to BCS conservation areas must consider: • the potential to supply treated stormwater for Growling Grass Frog wetlands • hydraulic and hydrological requirements to ensure habitat protection and ecological requirements of Dwarf Galaxias and Australian Grayling within Cardinia Creek to the satisfaction of Melbourne Water and the Secretary DEECA.	The final layout and design of constructed wetlands, retarding basins, and stormwater quality treatment infrastructure adjacent to BCS conservation areas must consider: • the potential to supply treated stormwater for Growling Grass Frog wetlands • hydraulic and hydrological requirements to ensure habitat protection and ecological requirements of Dwarf Galaxias and Australian Grayling within Cardinia Creek to the satisfaction of Melbourne Water, <b>Responsible Authority (Council)</b> and the Secretary DEECA.	1. Council requests the Requirement also includes Council as a responsible authority. Council needs to be cautious where the land is reduced by other authorities, based on the recent VCAT decision around the implementation of ICP/DCPs.
32	Heritage	Requirement and Guidelines	PSP	R45	Subdivision and development surrounding or relating to site HO_92 at 425 Officer South Road must ensure the 'original gate' from the Patterson era located in the property, identified in Plate 4 shown on page 33 of the Officer South Employment PSP - Post-contact Heritage Assessment (BHM 2022) is transferred to the Berwick Pakenham Historical Society and restored.	1. Council prefers the key matters that must be dealt with as part of the conservation management plan are stipulated under Section 4 of the Urban Growth Zone. 2. If the Urban Growth Zone is not updated the following wording is requested as part of Requirement 45: - <b>Subdivision and development surrounding or relating to site HO_92 at 425 Officer South Road must ensure the 'original gate' from the Patterson era located in the property, identified in Plate 4 shown on page 33 of the Officer South Employment PSP - Post-contact Heritage Assessment (BHM 2022) is restored and transferred to the heritage curtilage or open space/public reserve located adjacent to the heritage curtilage.</b>	1. Council requests the Conservation Management Plan conditions are stipulated under the Urban Growth Zone Section 4 to reduce duplication and assist making it clear the requirements of the Conservation Management Plan. The conservation management plan must: - Not reduce the extent of the garden area surrounding the house as it is presently defined within the Heritage Overlay statement of significance. - Individually assess the trees within the heritage curtilage to confirm cultural significance, health, safety and what trees can be removed. Trees identified to be removed must be photographed and their locations recorded. - The landowner restores the gate and places the gate on the heritage site. 2. Council objects to the gate being transferred to the historical society and requests the gate and its value is kept on the heritage site. Council prefers the original gate is restored by the landowner/developer and is relocated to the heritage site or adjacent open space. 3. The Berwick Pakenham Historical Society does not have the capacity to take the gate and rely on grants and donations for restoration of items.
32	Bushfire	Requirement and Guidelines	PSP	R47	Development must consider locating service lanes or roads separating the Princes Freeway and development within the precinct to mitigate bushfire hazard	Development <b>adjacent to the low threat vegetation on Plan 8 (Bushfire Hazard Areas)</b> should consider locating service lanes or roads between the Princes Freeway and development to mitigate bushfire hazard <b>to the satisfaction of the responsible authority</b>	1. Council request this Requirement is a Guideline based on Section 3 of the Urban Growth Zone requiring a Bushfire Management Plan adjacent to a Bushfire Hazard shown in Plan 8. 2. Council notes on Plan 8 (Bushfire Hazard) that no indicative 19 m setback from a potential grassland is demonstrated on Plan 8 and therefore a design response appears to not be warranted. Council seeks clarity
32	Landscape	Requirement and Guidelines	PSP	G13	Where a canopy tree cannot be provided because of local climate and soil conditions, a suitable species may be selected which closest achieves this diameter. The requirement for a minimum 30% canopy tree coverage within the public realm should still be met	Delete	Council considers this guideline is confusing and request it is deleted, as it is covered in Requirement R16 and R17. The reason for a canopy tree not being able to be provided will not be due to local climate and soil conditions but due to the lack of space provided by development.
32	Open Space	Requirement and Guidelines	PSP	G15	A consistent suite of lighting and furniture should be used across residential neighbourhoods and employment areas, appropriate to the type and role of public space, to the satisfaction of the responsible authority		



32	Open Space	Requirement and Guidelines	PSP	G16	Where developed, linear parks should be located and designed to: <ul style="list-style-type: none"> <li>Enhance the wider walking and cycling network</li> <li>Connect and integrate key neighbourhood destinations and landscape features</li> <li>Support residential and employment neighbourhood legibility and sense of place</li> <li>Enhance the diversity of open space environments and access to urban agriculture</li> <li>Provide active frontages</li> </ul> Avoid vehicle crossings to the satisfaction of the responsible authority.	<b>Subdivision and development of linear parks should be located and designed to:</b> <ul style="list-style-type: none"> <li>Enhance the wider walking and cycling network to support active transport</li> <li>Connect and integrate key neighbourhood destinations and landscape features</li> <li>Support residential and employment neighbourhood legibility and sense of place</li> <li>Enhance the diversity of open space environments and access to urban agriculture</li> <li>Provide active frontages</li> <li>Avoid vehicle crossings</li> </ul> <b>Respond to Crime Prevention through Environmental Design to the satisfaction of the responsible authority.</b>	1. Council requests the subdivision and development is included in the context to assist the statutory planners when reviewing a linear park. 2. Council is concerned that linear parks can be narrow, unsafe and inaccessible. Council request the Guideline is updated to refer to Crime Prevention through Environmental Design to assist Council achieving great design outcomes.
33	Landscape	Requirement and Guidelines	PSP	G17	Where possible, salvaged rocks should be incorporated into the design of waterways, retaining structures, fences, and other landscape features.	Where possible, salvaged rocks should be incorporated into the design of waterways, retaining structures, fences, and other landscape features <b>to the satisfaction of the responsible authority</b>	1. Council needs this Guideline to be linked to a responsible authority, otherwise how can it be enforced?
33	Heritage	Requirement and Guidelines	PSP	G23	Prior to demolition the contents of the dairy at 185 Officer South Road should be recorded in detail and provided to the Berwick-Pakenham Historical Society along with the contents of the dairy; namely the intact brick and render water trough and the tin feed room which relate to early twentieth century farming practices.	<b>Prior to demolition of the dairy shed at 185 Officer South Road, the contents of the dairy, namely the intact brick and water trough and tin in the feed room identified in the Benchmark Heritage Management Post Contact Heritage Assessment must be photographed and a data sheet submitted to the Victorian Heritage data base to the satisfaction of the responsible authority.</b>	1. Council requests the condition is a Requirement instead of a Guideline. 2. Council appointed GLM to peer review Benchmarks Heritage Assessment. GLM identified during fieldwork that the remnant water trough extant in the milking shed and tin feed room have been damaged since the documentation of the elements in 2020. Due to the low intactness of the milking shed contents, it is recommended the contents are recorded and demolished and not transferred to the Berwick Pakenham Historical Society.
33	Environment	Requirement and Guidelines	PSP	G24	Existing vegetation and trees should be retained, protected, and enhanced to provide habitat and movement corridors for local fauna. Where existing vegetation exists along a street, roads may be realigned or reserve widths may be varied to ensure that the provision of footpaths, utility services, and drainage does not compromise the long-term health of the vegetation, to the satisfaction of the responsible authority.	Existing vegetation and trees should be retained, protected, and enhanced to provide habitat and movement corridors for local fauna. Where existing vegetation <b>and trees</b> exists along a street, roads may be realigned or reserve widths may be varied to ensure that the provision of footpaths, utility services, and drainage does not compromise the long-term health of the vegetation, to the satisfaction of the responsible authority.	There is no recognition of trees along a street. Request the word tree is included to assist the alignment of protecting trees in a road reserve.
33	Aboriginal heritage	Requirement and Guidelines	PSP	G26	Where a Cultural Heritage Management Plan is required, this should provide recommendations for the ongoing management and maintenance of creeks, wetlands and water features. Any such ongoing management and maintenance requirements should be considered to be included as an appropriately worded condition on a relevant planning permit. Where possible management and maintenance requirements should be consistent for the length of the cultural value investigation area.	Where a Cultural Heritage Management Plan is required, this should provide recommendations for the ongoing management and maintenance of creeks, wetlands and water features. Any such ongoing management and maintenance requirements should be considered to be included as an appropriately worded condition on a relevant planning permit. Where possible management and maintenance requirements should be consistent for the length of the cultural value investigation area.	This Guideline is somewhat confusing and Council requests clarity on the intent and agency responsibilities.
33	Aboriginal heritage	Requirement and Guidelines	PSP	G27	Voluntary CHMPs should be undertaken in the following locations if a high impact activity, as listed in Division 5 of the Aboriginal Heritage Regulations 2018, is undertaken: <ul style="list-style-type: none"> <li>Elm immediately adjacent to anabranches of Cardinia Creek.</li> <li>Elm on prominent sandy rises located near a waterway.</li> </ul>	Voluntary CHMPs should be undertaken in the following locations if a high impact activity, as listed in Division 5 of the Aboriginal Heritage Regulations 2018, is undertaken: <ul style="list-style-type: none"> <li>Elm immediately adjacent to anabranches of Cardinia Creek.</li> <li>Elm on prominent sandy rises located near a waterway.</li> </ul> <b>As demonstrated in the Aboriginal Cultural Heritage Impact Assessment by Archaeology Tardis, May 2021</b>	Council requests reference is made to the background report to assist linking reference to the location where voluntary CHMPs are encouraged.
34	Urban Agriculture	Requirement and Guidelines	PSP	G30	The design and layout of public open space within commercial and residential areas, community facilities, transmission easements and sporting reserves should consider space for growing, harvesting, distributing, and consuming food where appropriate. This should be achieved using Flood Sensitive Planning and Urban Design initiatives such as urban farming, raised garden beds, car space gardens, rooftop gardens and community gardens that utilise rainwater or recycled water as negotiated with South East Water.	The design and layout of public open <b>spaces</b> within commercial and residential areas, community facilities, <b>schools</b> , transmission easements and sporting reserves should consider space for growing, harvesting, distributing, and consuming food where appropriate. This should be achieved using <b>Food Sensitive Planning and Urban Design Principles</b> and initiatives such as urban farming, raised garden beds, car space gardens, rooftop gardens and community gardens that utilise rainwater or recycled water as negotiated with South East Water <b>and to the satisfaction of the responsible authority</b>	1. Minor update requested to refer to spaces instead of space 2. Minor update requested to refer to Food and not Flood 3. Request reference to Food Sensitive Planning and Urban Design Principles and initiatives to assist its implementation. 4. Include to the satisfaction of the responsible authority. 5. South East Water should be a referral authority or be provided notice of an application where they propose to utilise recycled water

34	Integrated Water Management	Requirement and Guidelines	PSP	G31	Applications should consider a range of IWM options as indicated in Plan 9: Integrated Water Management. Potential IWM options may include but are not limited to: <ul style="list-style-type: none"> <li>• Rainwater tanks on all industrial, commercial, and residential lots</li> <li>• Passive irrigation of trees in the public realm, include all streets and public open space</li> <li>• Local stormwater harvesting systems to service the watering needs of future open spaces</li> <li>• Regional scale rainwater tanks collecting roof water from all industrial, commercial and residential lots to be reticulated back within the precinct</li> <li>• Supplying stormwater of the right quality to existing and future Growing Grass Frog wetlands</li> <li>• Use of Melbourne Water stormwater management assets to provide green corridors and community amenity</li> <li>• Identifying designs to maximise opportunities for infiltration</li> <li>• Regional scale stormwater harvesting systems to service the watering needs of the precinct and beyond.</li> </ul>	Applications must consider a range of IWM options as indicated in Plan 9: Integrated Water Management and outcomes identified in the <b>Officer South Employment Precinct Integrated Water Management Strategy (Spire, April 2022)</b> and may include but not limited to: <ul style="list-style-type: none"> <li>• Rainwater tanks on all industrial, commercial, and residential lots</li> <li>• Passive irrigation of trees in the public realm, include all streets and public open space</li> <li>• Protection of downstream waterways via stormwater volume reduction and infiltration targets applicable to the development outlined in Melbourne Water’s Healthy Waterway Strategy (2018)</li> <li>• Potable water reduction targets applicable to the development outlined in the Greater Melbourne Urban Water and System Strategy</li> <li>• Local stormwater harvesting systems to service the watering needs of future open spaces</li> <li>• Regional scale rainwater tanks collecting roof water from all industrial, commercial and residential lots to be reticulated back within the precinct</li> <li>• Supplying stormwater of the right quality to existing and future Growing Grass Frog wetlands</li> <li>• Use of Melbourne Water stormwater management assets to provide green corridors and community amenity</li> <li>• Identifying designs to maximise opportunities for infiltration</li> <li>• Regional scale stormwater harvesting systems to service the watering needs of the precinct and beyond</li> </ul>	1. Update to refer to Background Report and it needs to refer to options supported by Melbourne Water, South East Water and Council as the preferred method moving forward. 2. Can it be incorporated in R30 and Plan 9 Integrated Water Management	
34	Integrated Water Management and Drainage Service Scheme	Requirement and Guidelines	PSP	New Requirement	New Requirement	Any industrial activity that poses a risk of pollutant release into waterways, must have appropriate alarm and retention systems in place to control this risk. All construction activity must appropriately control sediment and other pollutants to prevent release into waterways.	Does the EPA and Melbourne Water have requirements for potential pollutant release?	
34	Open Space	Table 3 Credited Open Space Delivery	PSP	Table 3 Credited Open Space Delivery	Table 3 Credited Open Space Delivery	Council request the following changes: 1. The location of the local open spaces is reviewed against what native and non-native trees and vegetation is required to be protected under Plan 7 and revise the location of the local parks to assist the trees or vegetation being located in the public realm. For example LPO7 in Table 3 identifies the location of the open space is to retain existing vegetation. There appears to be two trees are nearby to the LPO7 but it doesn't appear to protect the trees or vegetation in this location	There are a large number of small parks (less than 1ha) this limits the ability to encourage and support different options for physical activity	
36	Bushfire	Table 4 Bushfire Hazard vegetation management and setback requirements	PSP	Table 4 Bushfire Hazard vegetation management and setback requirements	Table 4	Link the table to a Requirements or Guideline, or delete the table. Its strategic intent is unclear at the moment.	1. There is no reference to this Table in R18, R36, R43, R47 or R66. It doesn't link to any Requirements or Guideline in the PSP and therefore the strategic intent of Table 4 is lost. It needs to be linked to a Requirement or deleted. 2. Council staff also acknowledge that a Bushfire Management Plan is required for subdivisions in the Urban Growth Zone. What about development? It would be good for the Urban Growth Zone referenced development also	
37	Open Space	Plan 6 Open Space and Community Facilities	PSP	Plan 6 Open Space and Community Facilities	Plan 6 Open Space and Community Facilities	Refer to Tab and Section 5 of Council submission	Refer to Tab and Section 5 of Council submission	
38	Environment	Plan 7 Native Vegetation Retention and Removal	PSP	Plan 7 Native Vegetation Retention and Removal	Plan 7 Native Vegetation Retention and Removal	Refer to Tab	Refer to Tab	
40	Integrated Water Management	Plan 9 - Integrated Water Management	PSP	Plan 9 - Integrated Water Management	Plan 9 - Integrated Water Management	Refer to Tab and Section 9 of Council submission	Refer to Tab and Section 9 of Council submission	
<b>3.5 Viable Densities</b>								
41	Housing	Objective	PSP	O24	To deliver a highly accessible, functional, and vibrant local town centre that encourages social interaction, focuses on activating the Lecky Road green spine with high quality architecture and active street frontages, and creates a strong sense of place.	To deliver a highly accessible, functional, and vibrant local town centre that encourages social interaction, focuses on activating the Lecky Road with high quality architecture and active street frontages, and creates a strong sense of place.	The strategic intent of the green spine is unclear and reference to its intent should either be clearly explained and/or its reference is removed.	

41	Housing	Requirement and Guidelines	PSP	R48	<p>Prior to the subdivision of any land located wholly or partly in the UDPA on Plan 3 a Concept Master plan for the Urban Design Performance Area shown in Plan 10 must be submitted for approval by the responsible authority. The Concept Master plan must address the following:</p> <ul style="list-style-type: none"> <li>Develop a series of urban design principles to guide the outcomes for the UDPA precinct in accordance with the PSP.</li> <li>Reflect consideration of the performance outcomes outlined by Table 6 UDPA Performance Measures.</li> <li>Preliminary staging and indicative development timing.</li> <li>Include a high-level concept layout that provides a clear indication of: <ul style="list-style-type: none"> <li>placemaking elements, character precincts and destinations, including a hierarchy of public spaces to provide social interaction and local events</li> <li>designated key sites/locations for higher quality product that signifies key destinations and nodes such as key intersections that mark a sense of place</li> <li>designated key sites/locations for higher quality product that signifies key destinations and nodes such as key intersections that mark a sense of place</li> <li>key views and connectivity to the active sports park and conservation area including the pedestrian bridge to Cardinia Road Employment Precinct community</li> <li>appropriate land uses and their integration of community facilities and services</li> <li>medium density providing connections and active interfaces with adjacent streets, open space, and waterways</li> <li>safe and effective internal vehicle and pedestrian</li> </ul> </li> </ul>	<p>Prior to the subdivision <b>and use or development</b> of any land located wholly or partly in the UDPA on Plan 3 a Concept Master plan for the Urban Design Performance Area shown in Plan 10 must be submitted for approval by the responsible authority. The Concept Master plan must address the following:</p> <ul style="list-style-type: none"> <li>Develop a series of urban design principles to guide the outcomes for the UDPA precinct in accordance with the PSP.</li> <li>Reflect consideration of the performance outcomes outlined by Table 6 UDPA Performance Measures.</li> <li>Preliminary staging and indicative development timing.</li> <li>Include a high-level concept layout that provides a clear indication of: <ul style="list-style-type: none"> <li>placemaking elements, character precincts and destinations, including a hierarchy of public spaces to provide social interaction and local events</li> <li>designated key sites/locations for higher quality product that signifies key destinations and nodes such as key intersections that mark a sense of place</li> <li>key views and connectivity to the active sports park and conservation area including the pedestrian bridge to Cardinia Road Employment Precinct community</li> <li>appropriate land uses and their integration of community facilities and services</li> <li>medium density providing connections and active interfaces with adjacent streets, open space, and waterways</li> <li>safe and effective internal vehicle and pedestrian circulation, including dedicated pedestrian thoroughfares and car parking solutions</li> <li>indicative treatments for interfaces with non-residential land uses</li> <li>a high-level street, cycle and shared path network that promotes</li> </ul> </li> </ul>	<p>1. Further direction / clarification is required regarding: what is a 'high-level preliminary proposal'? what constitutes 'to be explore'? Other wording in this requirement is more direct, such as 'develop a series of...', 'measures to prioritise ...'.</p>
42	Housing	Requirement and Guidelines	PSP	R49	<p>Subdivisions must respond to Plan 2 and Plan 10 with minimum densities and typologies per catchment as stated in Table 5, to provide a diverse neighbourhood character with a range of lot sizes and dwelling types in appropriate locations throughout the residential area</p>	<p><b>Subdivisions and development for residential purposes must:</b></p> <ol style="list-style-type: none"> <li>Respond to Plan 2 and Plan 10 with minimum densities and typologies per catchment as stated in Table 5, to provide a diverse neighbourhood character with a range of lot sizes and dwelling types in appropriate locations throughout the residential area.</li> <li>Provide a minimum ten per cent of affordable and social housing within the Urban Design Performance Area, as defined by the Planning and Environment Act 1987, in accordance with the Housing Statement 2023, affordable and social housing policy, evidence and guidance.</li> </ol>	<p>Revise Requirement to provide ten per cent of social and affordable housing to align with the Victoria Housing Statement the Decade Ahead 2024-2034 and which complies with current policy, guidance, evidence and legislation.</p>
42	Housing	Requirement and Guidelines	PSP	G34	<p>Specialised housing forms, such as lifestyle communities, retirement living, or aged care should</p> <ul style="list-style-type: none"> <li>respond to and integrate with adjoining development, avoiding inactive interfaces and blank facades to the public street network</li> <li>be located within a walkable catchment area shown on Plan 10</li> <li>be accessible by public transport and shared path networks</li> <li>not present a barrier to movement through the surrounding road, public transport, pedestrian and active transport movement network</li> <li>incorporate back up power solutions to improve safety for vulnerable residents during power outages</li> </ul>	<p>Specialised housing forms, such as lifestyle communities, retirement living, aged care, <b>affordable housing, labour hire accommodation and temporary crisis accommodation should</b></p> <ul style="list-style-type: none"> <li>respond to and integrate with adjoining development, avoiding inactive interfaces and blank facades to the public street network</li> <li>be located within a walkable catchment area shown on Plan 10</li> <li>be accessible by public transport and shared path networks</li> <li>not present a barrier to movement through the surrounding road, public transport, pedestrian and active transport movement network</li> <li>incorporate back up power solutions to improve safety for vulnerable residents during power outages <b>and</b></li> <li><b>Provide high quality permanent fixed dwellings (not movable dwellings) that comply with the housing requirements of the National Construction Code.</b></li> </ul>	<ol style="list-style-type: none"> <li>Some lifestyle communities build their dwellings in such a way they are considered caravans and are exempt from meeting the basic thermal performance (NatHERs requirements) of the National Construction Code. It is important that we don't provide poorly constructed caravan type housing for retirement living, compromising general thermal comfort and making residents extremely vulnerable to extreme heat events. Developers are currently able to construct homes and classify them as movable, movable dwellings are however exempt from building regulations including the need to meet a 6-star energy rating. This has seen the development of retirement villages/lifestyle communities in Cardinia Shire with substandard outcomes. This places the health of the elderly at risk, as these homes provide lower thermal protection than standard dwellings and also increases the costs to heat these dwellings. This is not acceptable and therefore there is a need to specify that all dwellings in retirement villages must meet a 6-star energy rating requirement. At present there is a loophole in the current regulations that is leading to an unacceptable outcome, that Cardinia is trying to address to protect the community.</li> <li>It is requested the guideline is amended to include reference to provide high quality permanent fixed dwellings (not movable dwellings) that comply with the housing requirements of the National Construction Code.</li> <li>It is requested this guideline is amended to include reference to affordable housing, labour hire accommodation and temporary crisis accommodation to align with current policy, guidance and legislation.</li> </ol>
43	Housing	Requirement and Guidelines	PSP	New Guideline	<p>New Guideline requested</p>	<p>An application for subdivision of land into residential lots or development of land for residential or mixed-use purposes should provide ten per cent minimum of all housing with the Urban Design Performance Area labour hire accommodation and temporary crisis accommodation, as defined in the Public Health and Wellbeing (Prescribed Accommodation) Regulations 2020, in accordance with labour hire policy, evidence, and guidance.</p>	<p>In February 2023, a new prescribed accommodation was added to the Public Health and Wellbeing Act which is requested to be referenced in the precinct structure plan going forward. Council requests for a new Guideline to include labour hire accommodation and temporary crisis emergency accommodation to be developed. It is in direct response to the Victoria Housing Statement the Decade Ahead 2024-2034, which cites Officer South Employment precinct structure plan as one of the 21 priority projects to "deliver more than 60,000 homes and 60,000 jobs ... and more jobs closer to home"</p>

43	Housing	Requirement and Guidelines	PSP	G36	An application for subdivision of land into residential lots or development of land for residential or mixed-use purposes should provide eight per cent minimum of all housing within the UDPA affordable and social housing as defined by the Planning and Environment Act 1987, in accordance with affordable and social housing policy, evidence and guidance	Requirement and not a Guideline An application for subdivision of land into residential lots or development of land for residential or mixed-use purposes should provide <b>at least ten per cent</b> minimum of all housing within the UDPA affordable and social housing, as defined by the Planning and Environment Act 1987, in accordance with affordable and social housing policy, evidence and guidance	1. Council requests for this Guideline to be amended to a Requirement. This provision as a Guideline (in another PSP) has been considered by the Victorian Civil Administrative Tribunal and been found to be ineffective. For example 960 Blueways Development Pty Ltd v Whittlesea City Council. 2. Please refer to Council submission report for more information.	Please refer to Council's report submission Section 4
43	Transport	Requirement and Guidelines	PSP	G37	Subdivision should provide for a local street separating development from DSS assets, sporting reserves and local parks. Where subdivision does not propose a local street separating development, design and layout options should demonstrate: • lots directly fronting open space and landscape value areas should be set back at least 4.5 metres • lots directly fronting open space should allow for vehicular access via a rear laneway • <b>a four metre wide access way should be provided as the primary point of access from a footpath or shared path with a minimum width of 1.5 metres along the lot frontage</b> • subdivision design should avoid side or rear fence treatments fronting open space and DSS assets • subdivision design should maximise opportunities for informal passive surveillance • subdivision design should not limit the use of adjacent open space. All to the satisfaction of the responsible authority and where adjacent to a waterway to the satisfaction of the responsible authority and Melbourne Water	The bold text is confusing and Council request it is changed.	Language is confusing as to what is meant in bold. Is this intended to be a paper road type of solution? This differs to what is in the Pakenham east PSP (and in that PSP it is a Requirement not a Guideline).  In Pakenham East it is a Requirement that states: 1. Where a street frontage to the open space network (including waterway reserve, open space or utilities easement functioning as open space), is not provided lots must: - directly front the open space and allow for vehicular access via a rear laneway - allow for a primary point of access from the footpath of a minimum width of 1.5 metres along the frontage of the lot, to the satisfaction of the responsible authority	
43	Employment	Requirement and Guidelines	PSP	G38	Home-based businesses are encouraged in residential and mixed-use areas at key locations to maximise the use of high-visibility locations and protect the amenity and integrity of core residential areas. They are encouraged in residential areas where sites front onto arterial roads and overlook open space corridors	No change to wording	In the Appted Zone Council cannot regulate or influence a home based businesses as the use is as a of right use. Council appreciates the Guideline is to encourage home based businesses but its not a statutory permit condition Council can use. Council encourages the PSP Vision and Figure 1 (Sub-precinct concept plan) is updated to make reference to the home based business instead.	
44	UDPA	Table 5: Housing density and diversity	PSP	Table 5: Housing density and diversity	Table 5: Housing density and diversity	Please refer to Council report submission Section 14	Please refer to Council report submission Section 14	
45	UDPA	Table 6: UDPA performance measures	PSP	Table 6: UDPA performance measures	Table 6: UDPA performance measures	Please refer to Council report submission Section 14	Please refer to Council report submission Section 14	
49	UDPA	Plan 10 Housing Plan	PSP	Plan 10 Housing Plan	Plan 10 Housing Plan	Please refer to Council report submission Section 14	Please refer to Council report submission Section 14	
<b>3.6 Services and Destinations</b>								
50	Employment	Objective	PSP	O30	To encourage investment and support education and training opportunities for technical industries within the local town centre where closely located by the commercial land uses.	To encourage investment and support education and training opportunities for technical industries within the local town centre <b>or mixed use area</b> where closely located by the commercial land uses.	On Figure 1 (Sub-precinct Concept Plan) it demonstrates the location of a potential Centre of Excellence, that is located in a Mixed Use area. This Guideline and Figure 1 do not align. To decrease confusion the Guideline is required to be updated	
50	Community	Requirement and Guidelines	PSP	G40	Subdivision and development should facilitate integration of schools, sports reserves, and community facilities where they are co-located and promote: • Integration with neighbouring facilities to maximise efficiencies through the sharing of car parking and other complementary infrastructure • Out-of-hours use, street activation and permeability • Safe and convenient pedestrian and cyclist access.	Subdivision and development should facilitate schools, sports reserves, and <b>community facilities and promote</b> : • Integration with neighbouring facilities to maximise efficiencies through the sharing complementary infrastructure. • Out-of-hours use, street activation and permeability • Safe and convenient pedestrian and cyclist access.	Delete the word co-located as the proposed facilities are not co-located	
50	Community	Requirement and Guidelines	PSP	G45	The indicative configuration of community facility and sports field as illustrated in Plan 8 may be altered to the satisfaction of the relevant responsible authorities.	Delete	It is a repeat of Guideline G49	
51	Community	Requirement and Guidelines	PSP	G49	The indicative layout of community facilities and open space as illustrated in Plan 3 and Plan 6 may be altered to the satisfaction of the relevant responsible authorities. Where the alterations may impact a proposed government school site, the Department of Education should be consulted by the responsible authority to ensure that the changes are also to the satisfaction of that department.	The <b>lot layout and location of the community facility</b> and open space as illustrated in Plan 3 and Plan 6 may be altered to the satisfaction of the relevant responsible authorities. Where the alterations may impact a proposed government school site, the Department of Education should be consulted by the responsible authority to ensure that the changes are also to the satisfaction of that department.	Combine with G45 and insert lot layout and location to assist making it clear what can be considered in being changed	

3.7 Infrastructure Coordination							
50	Community	Requirement and Guidelines	PSP	R51	Any lot created for a proposed government school site must be designed and serviced to the satisfaction of Department of Education	No change to wording	The Department of Education needs to be a referral authority or require notice of applications that create a lot for a government school site.
50	Community	Requirement and Guidelines	PSP	R52	Any lot created for a proposed state government facility must be designed and serviced to the satisfaction of Department of Health as identified in Plan 3 Place-based Plan.	No change to wording	1. The Department of Health needs to be a referral authority or require notice of applications that a lot for the state government facility. 2.
50	Community	Requirement and Guidelines	PSP	G43	The land identified as a proposed state government facility may be used for an alternative purpose such as a local pop-up park, which is generally in accordance with the PSP and consistent with the provision of the applied zone, until such time the Department of Health requires the land. Any use must be consistent with the priorities of the Victorian Public Health and Well-being Plan. When the land is required by the Department of Health, the land must be finished to a standard that satisfies the requirements of the Department of Health prior to the transfer of the land back to the Department of Health	No change to wording	A conditions requiring a Section 173 Agreement between the Department of Health and the landowner needs to be included in Clause 4 of Schedule 7 of the UGZ for applications that seek to use land identified for a State Government Facility for an alternate purpose
51	Community	Requirement and Guidelines	PSP	G44	Where the responsible authority is satisfied that land shown as a potential non government school site is unlikely to be used for a non government school, the land may be used for an alternative purpose which is generally in accordance with the PSP and consistent with the provisions of the applied zone. The development/subdivision of the PSP must be 80 per cent complete and the responsible authority must be in receipt of a letter from the proposed education provider stating that the land is no longer required. The responsible authority must verify the need for the potential school with the education provider by referring to the Background Report and Community Infrastructure Assessment of the subject PSP area. Further guidance on this can be found in the VPA's 'Non-government School Planning Guidance Note'.	No change to wording	The Diocese of Sale Catholic Education should be listed in Clause 66.06 and notice provided to confirm that the school site is no longer required
51	Community	Requirement and Guidelines	PSP	G49	The indicative layout of community facilities and open space as illustrated in Plan 3 and Plan 6 may be altered to the satisfaction of the relevant responsible authorities. Where the alterations may impact a proposed government school site, the Department of Education should be consulted by the responsible authority to ensure that the changes are also to the satisfaction of that department	The indicative layout of community facilities and open space as illustrated in <b>Plan 7</b> may be altered to the satisfaction of the relevant responsible authorities. Where the alterations may impact a proposed government school site, the Department of Education should be consulted by the responsible authority to ensure that the changes are also to the satisfaction of that department	1. Is there to be an indicative layout of the community facilities and sport reserve in the PSP? Plan 3 and Plan 6 do not demonstrate an indicative layout of these sites. 2. The Department of Education needs to be a referral authority or notice should be given to them where applications impact or alter the location of the proposed government school site
52	Development Infrastructure	Requirement and Guidelines	PSP	R53	All above ground electricity cables (excluding substations and cables with a voltage of 66kv or greater) must be placed underground where feasible, including above ground cables as part of the upgrade of existing roads or subdivision works	<b>All existing above ground electricity cables (excluding substations and cables with a voltage of 66kv or greater) not shown in Plan 4 and Plan 13 must be placed underground including above ground cables as part of the upgrade of existing road or subdivision works to the satisfaction of the responsible authority</b>	1. Council is concerned with the wording 'where feasible' as this implies that if it costs the developer too much, they don't have to do it. Please revise the Requirement and include a statement to the satisfaction of the responsible authority. 2. This should be included as an application requirement under Clause 4 of Schedule 7 of the Urban Growth Zone.
52	Development Infrastructure	Requirement and Guidelines	PSP	R54	Above ground utilities (such as electricity substations, kiosk, and sewer pumps) must be identified at the subdivision design stage to ensure effective integration with the surrounding neighbourhood, to minimise amenity impacts and be designed to the satisfaction of the relevant authority. Where that infrastructure is intended to be in public open space, the land required to accommodate that infrastructure will not be counted as contributing to public open space requirements specified and will be additional to the areas designated in Table 3.	Above ground utilities (such as electricity substations, kiosk, and sewer pumps) must be identified at the subdivision design stage to ensure effective integration with the surrounding neighbourhood, to minimise amenity impacts and be designed to the satisfaction of the relevant authority. <b>Subject to the responsible authority approval</b> , infrastructure intended to be in public open space, the land required to accommodate that infrastructure will not be counted as a contribution to public open space requirements specified and will be additional to the areas designated in Table 3.	Council needs this Requirement to be stronger to assist pushing back if we do not agree to place the infrastructure in open space.
52	Development Infrastructure	Requirement and Guidelines	PSP	R56	Utilities and other infrastructure must avoid traversing areas for conservation identified in Plan 7	Delete as it is a repeat of R65	Delete as it is a repeat of R65
52	Staging	Requirement and Guidelines	PSP	R57	For development abutting Officer South Road arterial road, staging must prioritise the delivery of the road and drainage infrastructure, to the satisfaction of the responsible authority. Delivery of the arterial road must prioritise construction to property boundaries where an inter-parcel connection is intended or indicated by Plan 12, in accordance with the staging requirements of the permit.	See explanation	1. The alignment of this Requirement, the Site-Specific Control Overlay, the Incorporated Document, the Urban Growth Zone and the Infrastructure Contributions Plan needs to be consistent. 2. Need to ensure that this is consistent with the staging pattern identified in the incorporated document. 3. Please refer to Council submission

52	Staging	Requirement and Guidelines	PSP	R58	<p>Development staging must be generally in accordance with Plan 12 (Infrastructure and Staging Plan) and Table 7 (PIP) and must provide for the timely provision and delivery of the following infrastructure to the satisfaction of the responsible authority:</p> <ul style="list-style-type: none"> <li>• Connection to any arterial road network and seek to co-ordinate the delivery of these roads in conjunction with the timing of the arterial road connections located external to the precinct</li> <li>• Connector streets and connector street bridges</li> <li>• Street connections between properties, constructed to the property boundary</li> <li>• On- and off-road pedestrian and bicycle network paths</li> </ul> <p>Safe pedestrian path/s (crushed rock or alternative interim provision where deemed appropriate) from any existing pedestrian network/s to proposed connections to facilitate connectivity to services, transport, community infrastructure and adjoining communities</p> <ul style="list-style-type: none"> <li>• Drainage infrastructure</li> <li>• Essential infrastructure</li> <li>• Land for community infrastructure, sports fields, local open space including urban agriculture</li> </ul>	See explanation	<ol style="list-style-type: none"> <li>1. The alignment of this Requirement, the Site-Specific Control Overlay, the Incorporated Document, the Urban Growth Zone and the Infrastructure Contributions Plan needs to be consistent,</li> <li>2. Need to ensure that this is consistent with the staging pattern identified in the incorporated document.</li> <li>3. Please refer to Council submission</li> </ol>	
53	Staging	Requirement and Guidelines	PSP	R59	<p>Staging of development must be determined by the development proposals on land within the precinct and the availability of infrastructure services, see reference to Plan 12. Development applications must demonstrate how the development will:</p> <ul style="list-style-type: none"> <li>• Integrate with adjoining developments, including the timely provision of roads and connections</li> <li>• Provide for the delivery of community facilities, open space, and amenity to new residents to the satisfaction of the responsible authority</li> <li>• Provide sealed road access to each new allotment</li> <li>• Provide safe pedestrian access to existing pedestrian networks</li> <li>• Deliver any necessary trunk service extensions, including confirmation of the agreed approach and timing by the relevant service provider to the satisfaction of the responsible authority</li> <li>• Avoid and minimise impacts to conservation areas with regard to the location of essential and other services to the satisfaction of the responsible authority</li> </ul>	Refer to explanation	<ol style="list-style-type: none"> <li>1. The alignment of this Requirement, the Site-Specific Control Overlay, the Incorporated Document, the Urban Growth Zone and the Infrastructure Contributions Plan needs to be consistent.</li> <li>2. Need to ensure that this is consistent with the staging pattern identified in the incorporated document.</li> <li>3. The first sentence is unclear and Council is not sure what its requiring.</li> <li>4. How is this different to R58.</li> <li>5. Please refer to Council submission</li> </ol>	



53	Development Infrastructure	Requirement and Guidelines	PSP	R60	<p>Subdivision of land within the PSP must provide for and meet the cost for all local infrastructure, other than that provided for within the Officer South Employment ICP. This includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>All roads not provided by the Officer South Employment ICP</li> <li>Local bus stop infrastructure (where locations have been agreed in writing by Head, Transport for Victoria)</li> <li>Landscaping, including canopy tree planting of all existing and future roads and local streets for a minimum establishment period of 24 months as per the Cardinia Council Landscape Developer Guidelines (or as amended)</li> <li>Intersection works and traffic management measures along arterial roads, connector streets, and local streets</li> <li>Council approved fencing and landscaping (where required) along arterial roads and reserves</li> <li>Pedestrian and bicycle paths and equestrian trails along local arterial roads, connector roads, utilities easements, local streets, waterways and within local parks including bridges, intersections, and barrier crossing points</li> <li>Bicycle parking facilities</li> <li>Electric vehicle charging stations</li> <li>Optic fibre conduit within the road reservation for Smart City initiatives</li> <li>Appropriately scaled lighting (including wildlife friendly lighting) along all roads, major shared bicycle, and pedestrian paths, and traversing public open space</li> <li>Local drainage system, including land and works for</li> </ul>	<p><b>The use, development and subdivision of land</b> within the PSP must provide for and meet the cost for all local infrastructure, other than that provided for within the Officer South Employment ICP. This includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>All roads not provided by the Officer South Employment ICP</li> <li>Local bus stop infrastructure (where locations have been agreed in writing by Head, Transport for Victoria)</li> <li>Landscaping, including canopy tree planting of all existing and future roads and local streets for a minimum establishment period of 24 months as per the Cardinia Council Landscape Developer Guidelines (or as amended)</li> <li>Intersection works and traffic management measures along arterial roads, connector streets, and local streets</li> <li>Council approved fencing and landscaping (where required) along arterial roads and reserves</li> <li><b>Pedestrian, shared paths, two-way bicycle paths</b> and equestrian trails along local arterial roads, connector roads, utilities easements, local streets, waterways and within local parks including bridges, intersections, and barrier crossing points.</li> <li><b>The provision of drinking water stations spread across the active path network.</b></li> <li>Bicycle parking <b>and maintenance facilities</b></li> <li>Electric vehicle <b>fast</b> charging stations</li> <li>Optic fibre conduit within the road reservation for Smart City initiatives</li> <li>Appropriately scaled lighting (including wildlife friendly lighting) along all roads, major shared bicycle, and pedestrian paths, and traversing public open space</li> <li>Local drainage system, including land and works for water services (i.e. pressure reducing stations) and water sensitive urban design</li> </ul>	<ol style="list-style-type: none"> <li>Consistent language must be used throughout the PSP regarding pedestrian, shared paths and two-way bicycle paths. Request Requirement is modified to reflect this.</li> <li>The provision of drinking water stations need to be provided along the active path network to assist the wellbeing and health of the community.</li> <li>Many bike paths now have a bike workshop area with basic tools to assist cyclists with any minor mechanical or similar issues. Request Bicycle parking and maintenance facilities are provided to assist the well-being and health of the community.</li> <li>Councils current policy is for public local parks not to be lit. This may change in the future and we need caution that when we have a policy we can integrate it with this PSP.</li> <li>Council requests 'traversing public open space' is removed</li> <li>Council request reference to gas is modified as per our Submission Report in Section 7.</li> </ol>
53	Open Space	Requirement and Guidelines	PSP	R61	<p>All public open space (where not otherwise provided via the Officer South Employment ICP) must be finished to a standard that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including but not limited to:</p> <ul style="list-style-type: none"> <li>Removal of all existing and disused structures, foundations, pipelines, stockpiles and contaminated soil</li> <li>Basic levelling including the supply and spread of minimum 75 mm topsoil and subsoil if required on the proposed areas of open space to provide a stable free draining surface</li> <li>Clearing of rubbish, weeds, and rocks, levelled, topsoiled, and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise)</li> <li>Provision of water tapping, potable and recycled water connection points</li> <li>Sewer, gas, and electricity connection points must also be provided to land identified as sports reserve and local reserves</li> <li>Planting of trees and shrubs (with drought tolerant species)</li> <li>Adequate protection of existing trees that are to be retained including exclusion zones</li> <li>Vehicular exclusion devices (preferably vegetative or may be fence, bollards, or other suitable method)</li> <li>Maintenance access points</li> <li>Construction of pedestrian and bicycle paths around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest</li> </ul>	<p><b>All public open space that is proposed to be transfer to Council, must be finished to a standard</b> that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including but not limited to:</p> <ul style="list-style-type: none"> <li>Removal of all existing and disused structures, foundations, pipelines, stockpiles and contaminated soil</li> <li>Basic levelling including the supply and spread of minimum 75 mm topsoil and subsoil if required on the proposed areas of open space to provide a stable free draining surface</li> <li>Clearing of rubbish, weeds, and rocks, levelled, topsoiled, and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise)</li> <li>Provision of water tapping, potable and recycled water connection points</li> <li>Sewer, <b>energy system connection points</b> must also be provided to land identified as sports reserve and local reserves</li> <li>Planting of trees and shrubs (with drought tolerant species) <b>that meets or exceeds the 30% canopy cover target</b></li> <li>Adequate protection of existing trees that are to be retained including exclusion zones</li> <li>Vehicular exclusion devices (preferably vegetative or may be fence, bollards, or other suitable method)</li> <li>Maintenance access points</li> <li>Construction of pedestrian and bicycle paths around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest</li> <li>Installation of park furniture including barbecues, shelters, tables, local scale playgrounds and other local scale play elements such as half basketball courts and hit-up walls, skate parks with associated amenities, rubbish bins and appropriate paving to support these</li> </ul>	<p>Council request</p> <ol style="list-style-type: none"> <li>Removal of the brackets and description of the ICP to assist decreasing confusion on the responsibilities of both ICP open space and all other open space proposed to be transferred to Council</li> <li>Additional wording to respond to 30% tree canopy requirements</li> <li>Modification to gas reference. Please refer Council submission report Section 7.</li> </ol>
54	Transport	Requirement and Guidelines	PSP	R62	<p>Where an inter-parcel connection is intended or indicated in the PSP, streets must be constructed to property boundaries at the relevant stage of development required or approved by the responsible authority. Provision should be made for temporary vehicle turning until the inter-parcel connection is delivered.</p>	<p>The wording is not requested to be changed. The Requirement is requested to be relocated to Section 3.3 Safe, Accessible and Well Connected of the PSP.</p>	<p>To assist the implementation of the PSP and to know the exact location of all transport matters regarding inter-parcel connections, it is requested this Requirement R62 is located in Section 3.3 Safe, Accessible and Well Connected instead. The Requirement has less to do with infrastructure coordination and more to do with a well connected transport network.</p>
54	Transport	Requirement and Guidelines	PSP	R63	<p>Other than perpendicular road crossings of the gas transmission pipeline easement, no road or carriageway easements are to be relocated on gas pipeline easements unless to the satisfaction of the pipeline owner and operator</p>	<p>No change to wording</p>	<p>The notice requirements in Clause 66.06 need to be expanded to include notice of an application which seeks to create a carriageway easement over a gas transmission pipeline</p> <p>Note: Trigger in 66.01 for subdivision</p>

54	Development Infrastructure	Requirement and Guidelines	PSP	R65	Utilities must be placed outside of conservation areas and waterway corridors identified in Plan 3. Where services cannot avoid crossing or being located within a conservation area or waterway corridor, they must be located to avoid disturbance to existing waterway values, native vegetation, significant landform features, heritage sites and habitats to the satisfaction of DEECA, Melbourne Water, BLCAC and the responsibility authority or consolidate utilities into dedicated service corridors.	Utilities must be placed <b>outside of conservation areas, waterway corridors and areas identified as existing or future bioinks in Plan 3, Plan 7 and Plan 9</b> . Where services cannot avoid crossing or being located within a conservation area or waterway corridor, <b>they must consolidate utilities into dedicated service corridors</b> and located to avoid disturbance to existing waterway values, native vegetation, significant landform features, heritage sites and habitats to the satisfaction of DEECA, Melbourne Water, <b>Bunurong Land Council Aboriginal Corporation</b> and the responsibility authority.	1. Combine with R54 2. Include reference to the Plans in the PSP that refers to the conservation areas, waterway corridors and bioinks 3. Need to make DEECA, Melbourne Water a determining referral agency in the Planning Scheme. There is a disconnect at the moment. 4. The Bunurong Land Council Aboriginal Corporation is not a determining referral authority under the Cardinia Planning Scheme. Will they receive notice of planning applications. Council seeks clarity how this will be enforced?
55	Bushfire	Requirement and Guidelines	PSP	R66	Subdivision layout and design must ensure that no construction standard will result in a rating of higher than BAL - 12.5. This can be achieved through applying setbacks consistent with those outlined in Plan 8.	No change to wording but the location of this Requirement is better suited to Section 3.4 High Quality Public Realm	1. Is this better placed under Section 3.4 High Quality Public Realm?
55	Staging	Requirement and Guidelines	PSP	R67	Development staging must provide for the delivery of ultimate waterway and drainage infrastructure, including stormwater quality treatment, and consider opportunities for early establishment of waterways to the satisfaction of Melbourne Water and the responsible authority. Where it cannot be demonstrated to the satisfaction of Melbourne Water that this is not possible, staged development proposals must demonstrate how any interim solution adequately manages flow rates and flow volume, treats stormwater generated from the development and how this will enable delivery of an ultimate drainage solution, to the satisfaction of Melbourne Water and the responsible authority. Development construction staging and interim solutions must avoid or mitigate the risk of soil erosion and water and waterway degradation from sodic and/or dispersive soils	Development staging must provide for the delivery of ultimate waterway and drainage infrastructure, including stormwater quality treatment, and consider opportunities for early establishment of waterways to the satisfaction of Melbourne Water and the responsible authority. Where it <b>cannot</b> be demonstrated to the satisfaction of Melbourne Water that this is <b>not possible</b> , staged development proposals must demonstrate how any interim solution adequately manages flow rates and flow volume, treats stormwater generated from the development and how this will enable delivery of an ultimate drainage solution, to the satisfaction of Melbourne Water and the responsible authority. Development construction staging and interim solutions must avoid or mitigate the risk of soil erosion and water and waterway degradation from sodic and/or dispersive soils	1. Council requests Requirement R67 is modified to remove the double negative highlighted in bold. At present the double negative does not make sense. Options for revision include..... Where it cannot be demonstrated to the satisfaction of MW that this is possible or where it can be demonstrated to the satisfaction of MW that this is not possible. 2. Clause 66.04 and/or 66.06 need to be updated so South East Water require notice of any application which creates a lot for the proposed sewer pump station
55	Development Infrastructure	Requirement and Guidelines	PSP	R68	Where there are no alternative options other than passing through BCS Conservation Areas, subdivisional development must consolidate utilities into dedicated service corridors	Delete	Delete as it appears to be a repeat of R65
55	Environment	Requirement and Guidelines	PSP	G53	Development and subdivision should aim for carbon neutrality and implement opportunities for local renewable energy generation technology and infrastructure	Development and subdivision should aim for <b>zero carbon emissions</b> and implement opportunities for local renewable energy generation technology and infrastructure	1. Council is aiming for zero carbon emissions which is different to carbon neutrality.
55	Environment	Requirement and Guidelines	PSP	G54	The delivery of underground services should be coordinated, located, and bundled (using common trenching) to maintain the cross-section widths of paths and nature strips as shown in the PSP and to facilitate trees and other planting within road reserve	The delivery of underground services should be coordinated, located, and bundled (using common trenching) to maintain the cross-section widths of paths and nature strips as shown in the PSP and to facilitate trees and other planting within road reserve <b>to the satisfaction of the responsible authority.</b>	Most service authorities do not allow bundling/common trenching for their services therefore this guideline is redundant. Otherwise, at the very least its needs approval from the affected service authorities
55	Development Infrastructure	Requirement and Guidelines	PSP	G57	Trunk services should be placed along general alignments as advised by the relevant servicing authorities.	Delete and combine with G58	Delete and combine with G58
55	Development Infrastructure	Requirement and Guidelines	PSP	G58	Design and location of underground services should be guided by requirements as per Appendix 8.	<b>The design and location of underground services and trunk services should be placed along general alignments guided by Plan 13 (Utilities) to the satisfaction of the responsible authority</b>	Combine G57 and G58
55	Transport	Requirement and Guidelines	PSP	G59	Minimise the number of utility and road crossings, including local roads, over the high transmission gas pipeline easement within the precinct to align with Plan 3 and Figure 8.	The wording is not requested to be changed. The Requirement is requested to be relocated to Section 3.3 Safe, Accessible and Well Connected of the PSP.	1. To assist the implementation of the PSP and to know the exact location of all transport matters regarding road crossings, it is requested this Requirement R62 is located in Section 3.3 Safe, Accessible and Well Connected instead. The Requirement has less to do with infrastructure coordination and more to do with a well connected transport network. 2. It also partially duplicates G63. Can it be merged?

55	Transport	Requirement and Guidelines	PSP	G61	Staging of development should be determined largely by the development proposals on land within the precinct and the availability of infrastructure services, see reference to Plan 12. Development applications should demonstrate how the development will: <ul style="list-style-type: none"> <li>integrate with adjoining developments, including the timely provision of roads and path connections, to a practical extent</li> <li>provide for the early delivery of community facilities, open space, and amenity to new residents to the satisfaction of the responsible authority</li> <li>provide sealed road access to each new allotment</li> <li>deliver any necessary trunk service extensions, including confirmation of the agreed approach and timing by the relevant service provider</li> <li>avoid and minimise impacts to conservation areas with regard to the location of essential and other services.</li> </ul>	No change to wording, although clarity sought in explanation	1. Is this Guideline repetitive of earlier Requirement R58 and R59. Can you please confirm
55	Transport	Requirement and Guidelines	PSP	G62	Infrastructure projects identified in Plan 11 should be delivered as per the timing priority identified in the timing column of Appendix 4. Note: Project delivery timing outlined in Appendix 4 is indicative and subject to periodic review by the relevant responsible authority	The infrastructure projects identified in Plan 11 should be delivered as per the timing priority identified in the timing column of <b>Table 7</b> . Note: Project delivery timing outlined in <b>Table 7 of Appendix 4</b> is indicative and subject to periodic review by the relevant responsible authority	Revised wording to make the intent clearer.
56	Development Infrastructure	Requirement and Guidelines	PSP	G64, G65 and G66		The language used to describe the high-pressure gas pipeline/gas easement/gas distribution asset needs to be consistent within the PSP document	Should the reference to title boundaries be from easement consistent with the condition in Clause 4 of Schedule 7 of the UGZ
56	Development Infrastructure	Requirement and Guidelines	PSP	G63	Any utility infrastructure running adjacent to or crossing a high-pressure gas transmission pipeline should cross at 90 degrees unless approved otherwise by the responsible authority and be engineered to protect the integrity of the asset to the satisfaction of the responsible authority and gas pipeline owner/operator.	Consider combining R63 and G63	Consider combining R63, G59 and G63
56	Development Infrastructure	Requirement and Guidelines	PSP	G66	For all landscaping, paths and public furniture/exercise equipment proposed within a gas easement, a landscape plan must be submitted to the responsible authority in consultation with the service owner/operator demonstrating species, their location and who will be responsible for the ongoing management of landscaping within the easement.	For all landscaping, paths and public furniture/exercise equipment proposed within a gas easement, <b>a landscape plan must be submitted to the responsible authority and the service owner/operator</b> demonstrating species, their location and who will be responsible for the ongoing management of landscaping within the easement.	Council requests 1. This needs to be to the satisfaction of the service owner/operator and Council, not 'in consultation' with the service owner/operator. 'In consultation' has no meaning or statutory weight. 2. It also requested this Guideline is modified to a Requirement. Everything within these easement must be to the satisfaction of the responsible authority and the service authority
56	Development Infrastructure	Requirement and Guidelines	PSP	G67	Sports fields, community facilities, local parks and playgrounds should be delivered as early as possible within the residential neighbourhood and may be delivered in stages	Sports fields, community facilities, local parks and playgrounds should be delivered as early as possible within the residential neighbourhood.	Council request the removal of the words 'may be delivered in stages'. Council does not allow staged delivery of these items. The only time we would allow staged delivery is if it spanned more than one property and then it would be in line with R19.
56	Environment	Requirement and Guidelines	PSP	G68	Development should consider Environmentally Sustainable Development principles, such as the inclusion of, but not limited to: <ul style="list-style-type: none"> <li>material re-use and recycling (use of materials with reduced embodied energy)</li> <li>electrical self-generation, car charge schemes, smart grids, and battery storage</li> <li>use of tools such as Built Environment Sustainability Scorecard (BESS) &amp; Sustainable Subdivisions Framework</li> <li>measures that reduce the urban heat island effect</li> <li>waste management initiatives</li> <li>development should facilitate the reduction of environmental impacts and resource use through:              o public realm design and connectivity.</li> <li>o facilitation of alternative energy generation systems</li> <li>o access to public and integrated active transport networks</li> </ul>	Development should consider Environmentally Sustainable Development principles, such as the inclusion of, but not limited to: <ul style="list-style-type: none"> <li>Material re-use and recycling (use of materials with reduced embodied energy)</li> <li>Electrical self-generation, <b>fast</b> car charge schemes, smart grids, and battery storage</li> <li>Use of tools such as Built Environment Sustainability Scorecard (BESS), Sustainable Subdivisions Framework and <b>Green Star Buildings</b>.</li> <li>Measures that reduce the urban heat island effect</li> <li>Waste management initiatives</li> <li>Development should facilitate the reduction of environmental impacts and resource use through:              o Public realm design and connectivity.</li> <li>o Facilitation of alternative energy generation systems</li> <li>o Access to public and integrated active transport networks.</li> </ul>	1. Council requests this Guideline is a Requirement to: - Be in alignment with VC216 and ensures the 'climate resilient measures' are consistent with State Policy and the state government ESD Roadmap - Council has received authorisation from the Minister for Planning to facilitate an ESD policy being inserted into the Gardinia Planning Scheme. The ESD policy should be adopted by the time Amendment goes to a Standing Advisory Committee. 2. The document interchangeably uses fast car charge or rapid car charge. Council request consistent language and use fast charge
56	Transport	Requirement and Guidelines	PSP	G69	Road design, line markings, traffic signs and other road infrastructure should, where practical, meet best practice standards for autonomous vehicles including shuttle services	Road design, line markings, traffic signs and other road infrastructure should, where practical, <b>meet Australian Standards and Austroads Guidelines</b> for autonomous vehicles including shuttle services	1. Reference to Australian standards required 2. Is this better placed under Section 3.3 Safe, Accessible and Well Connected
60	Development Infrastructure	Appendix 1	PSP	Plan 13 Utilities	Plan 13 Utilities	Refer to Tab	Refer to Tab

61	Development Infrastructure	Appendix 2	PSP	Figure 3 - Conservation Concept Lower Gum Scrub Creek Part 2	Figure 3 - Conservation Concept Lower Gum Scrub Creek Part 2	Changes requested	Council requests the following updates 1. The SUP connection appears to terminate north of the drainage basin, it needs to connect into Thompsons Rd here and be provided into CREP. Current plans only show bike and road connections 2. The equestrian and pedestrian access across Gum Scrub Creek at the transmission easement has not been demonstrated. How will this be provided?
65	Development Infrastructure	Appendix 2	PSP	Figure 6 - Conservation Concept (Cardinia Creek) Part 3	Figure 6 - Conservation Concept (Cardinia Creek) Part 3	Changes requested	Council seek advice on the following: 1. How do horses as part of the equestrian trail cross over Thompsons Road. Council seeks advice 2. Can we move LP22 shown on property ID44 into property ID45 so that it encompasses the largest red river gums in the south west corner of Patterson Road and opposite Banjo Place? Due to the way the ICP has been developed, once the ICP is fixed the local parks cannot move properties, so Council needs to request this to move to property 45 now not only to enable better placement of this park to protect trees but also to assist the ICP development and implementation.
67	Development Infrastructure	Appendix 3	PSP	Figure 8 - Gas Easement Concept	Figure 8 - Gas Easement Concept	Changes requested	Council request: 1. Please modify Note 3 regarding shared path to assist Council enforcing its implementation. Council request modified wording to state the following... The shared path is to be mostly located on top of the pipeline and must meander to achieve good design outcomes. 2. Please modify Note 4 to add as per the APA guidelines for development 3. The provided APA landscape guideline figure is a misleading and doesn't correspond with the area being shown or provided. Needs to have a requirement or note on this plan that designs need to be approved by the RA and APA/Gas authority. 4. Clarity on the referenced 'to legislated future buffer area' needs to be clarified.
68	Precinct Infrastructure	Appendix 4	PSP	Table 7 Precinct Infrastructure	Table 7 Precinct Infrastructure	Changes requested	Council requests 1. The timing of S, M, L. The context for this 'timing' needs to be described at the commencement of the table. Is there a year value that can be attributed to S, M and L otherwise its very general and unclear. This also links back to G62. In previous PSP S = Short (0-5 years), M = Medium (5-10 years) and L = Long (10 years and beyond). 2. All culverts in Table 7 the lead agency needs to be determined based on the outcome of the drainage service scheme and Melbourne Water and Council responsibilities. This needs to be investigated more. 3. Clarification is sought in regards to the some wording under 'Description' within this table. Particularly 'Provision of land for local park' and 'Purchase of land and construction of proposed works'. These being describe differently appear to indicate a different requirement to acquire the land or the approach taken. 4. Council has various concerns with the apportionment of the infrastructure items to other ICP/DCPs in adjacent PSPs. Please refer to Council's submission under Section 10 for Council concerns.
76	Land Use Budget	Appendix 5	PSP	Plan 14 Land Use Budget	Plan 14 Land Use Budget	Changes requested	1. R3 is labelled as redundant road reserve but throughout the rest of the PSP document it is labelled as green spine. We need to integrate green spine wording here 2. We also need to (somehow) check the areas required for all of the road and intersections to ensure they are correct. Can the VPA provide Council with the public purpose land set aside for all roads and intersections to allow Council to test the information to confirm the area matches what is to be delivered and matches the ICP
78	Specific Land Use Budget	Appendix 5	PSP	Table 9 Property Specific land use budget	Table 9 Property Specific land use budget	Changes requested	OS-R1 and OS-R2 both have a net developable area. Given these are existing roads, owned by Council, how do Council decommission these roads, and then sell them onto developers to develop them. Really weird that they have a NDA and are therefore 'collecting' money in the ICP
82	Local Town Centre Design Criteria	Appendix 6	PSP	Table 10 Local Town Centre performance requirements and guidelines	Please refer to Council submission under Section 14	Please refer to Council submission under Section 14	Please refer to Council submission under Section 14
86	Local Town Centre Design Criteria	Appendix 6	PSP	Table 11 Local Town Centre design principles	Please refer to Council submission under Section 14	Please refer to Council submission under Section 14	Please refer to Council submission under Section 14
		Appendix 7	PSP	Standard cross-sections & functional layout plans	Standard cross-sections & functional layout plans	Refer to Tab	Refer to Tab
100	Underground Services	Appendix 8	PSP	Design and location of underground services	The Engineering Design and Construction Manual for Subdivision in Growth Areas (April 2011) outline placement of services for a typical residential street environment. This approach is appropriate for the majority of the 'standard' road cross sections outlined in Appendix C: Street cross sections, containing grassed nature strips, footpaths and road pavements.	1. The Engineering Design and Construction Manual for Subdivision in Growth Areas (2019) outline placement of services for a typical residential street environment. This approach is appropriate for the majority of the 'standard' road cross sections outlined in Appendix C: Street cross sections, containing grassed nature strips, footpaths and road pavements. 2. Please refer to Tab for Table 12 requested changes	1. Please change to refer to correct Engineering Design and Construction Manual for Subdivision in Growth Areas 2. Council request changes to gas reference. Please refer to Council submission report Section 7. 3. Council request for changes to Table 12. This information is available in the tab

102	Glossary	Appendix 9	PSP	Glossary	Canopy Trees definition A tree which has a potential canopy of foliage larger than 6.4m in diameter at maturity in the summer months	Request advice	1. Council seeks clarity on the definition of canopy trees and where this has come from and how it has been determined. Trees are NEVER referenced as having a 6.4m diameter at maturity - it would be 6m or 7m, not 6.4m.
102	Glossary	Appendix 9	PSP	Glossary	Social Housing definition A type of rental housing that is provided and/or managed by the government or by a not-for-profit organisation. Social housing is an overarching term that covers both public housing and community housing	Social Housing definition <b>Has the same meaning as Section 4 of the Housing Act 1983 and is a type of rental housing that is provided and/or managed by the government or by a not-for-profit organisation. Social housing is an overarching term that covers both public housing and community housing</b>	To be in alignment with the Housing Act
102	Glossary	Appendix 9	PSP	Glossary	Request for additional definitions to be included in the Glossary	Council request the following definitions are included in the Glossary: 1. Key Worker Housing - Affordable rental housing that is appropriate for people who work within Cardinia Shire Council, who require a physical presence to perform their work, and whose household earns very low, low or moderate incomes. The housing must be allocated and monitored by a Registered Housing Agency. 2. Labour Hire Accommodation - Has the same meaning as Section 5 of the Public Health and Wellbeing (Prescribed Accommodation) Regulations 2020. 3. Temporary Crisis Accommodation - Has the same meaning as Section 5 of the Public Health and Wellbeing (Prescribed Accommodation) Regulations 2020	1. To provide guidance on the definition of other types of accommodation 2. In February 2023, a new prescribed accommodation was added to the Public Health and Wellbeing Act which is requested to be referenced in the precinct structure plan going forward. Council requests for a new Guideline to include labour hire accommodation and temporary crisis emergency accommodation to be developed. It is in direct response to the Victoria Housing Statement the Decade Ahead 2024-2034, which cites Officer South Employment precinct structure plan as one of the 21 priority projects

**Council requested changes to Table 12 in Red**

The Engineering Design and Construction Manual for Subdivision in Growth Areas (December 2019) outline placement of services for a typical residential street environment. This approach is appropriate for most of the 'standard' road cross sections outlined in Appendix 7 – Standard road cross sections & functional layout plans, containing grassed nature strips, footpaths and road pavements.

Non-standard road cross sections

To achieve greater diversity of streetscape outcomes in Melbourne's growth areas, which enhances character and amenity of these new urban areas, non-standard road cross sections are required. Non-standard road cross sections will also be necessary to address local needs, such as fully sealed verges for high pedestrian traffic areas in town centres and opposite schools. This PSP contains suggested non-standard 'variation' road cross sections, however other non-standard outcomes are encouraged. For non-standard road cross sections where service placement guidance outlined in Figure 003 and 004 in the Engineering Design and Construction Manual for Subdivision in Growth Areas (December 2019) is not applicable, the following service placement guidelines will apply, if being installed.

General principles for service placement:

- Place gas and water on one side of road, electricity on the opposite side
- Place water supply on the high side of road
- Place services that need connection to adjacent properties closer to these properties
- Place trunk services further away from adjacent properties
- Place services that relate to the road carriageway (e.g. drainage, street light electricity supply) closer to the road carriageway

	Under pedestrian pavement			Under kerb	Under road pavement	Within allotments	Notes
	Under pedestrian pavement	Under nature strips	Directly under trees <i>(are these all confirmed otherwise Council request it is changed to possible)</i>				
SEWER	Preferred	Possible	Possible	No	Possible	Possible	
POTABLE WATER	Possible	Preferred	Preferred	No	No	No	Can be placed in combined trench with gas
RECYCLED WATER	Possible	Preferred	Preferred	No	No	No	
GAS in employment land only	Possible	Preferred	Preferred	No	No	No	Can be placed in combined trench with potable water
ELECTRICITY	Preferred	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip
FTTH/TELCO	Preferred	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip
DRAINAGE	Possible	Possible	Possible	Possible	Possible	Possible	Pits to be placed either fully in footpath or nature strip
TRUNK SERVICES	Possible	Possible	Possible	Possible	Possible	No	

NOTES

1. Trees are not to be placed directly over property service connections. The location of trees are to be to the satisfaction of the responsible authority and generally in accordance with Council Landscape Design Guidelines (2017 or as amended)
2. Placement of services under road pavement is to be considered when service cannot be accommodated elsewhere in road reserve.
3. Placement of services beneath edge of road pavement/parking bays is preferable to within traffic lanes.
4. Services underneath pedestrian pavements may be considered where allotment size/frontage width allows adequate room to access and work on a pipe where connections to properties are within a pit.
5. Where allotment size/frontage width allows adequate room to access and work on a pipe where connections to properties are within a pit in the pedestrian pavement/footpath



Council request

1. The Crown Land and Future Biolink Corridors are a similar colour and hard to distinguish
2. The reference to open grassy plains - is this grazing farmland or a flora and fauna reference. This needs to be clear
3. Patterson Road is an existing Biolink corridor and should be referenced as this and not a future biolink. The biolink node located along Cardinia Creek also needs to be identified
4. The DSS serviceability line (and associated note on plan) – unclear what this means for the ICP. Is the land within this line included or excluded from the NDA? And if it is excluded but can then be built on after these investigations, what does that mean for NDA and the ICP? Council requires clarity on this
5. Its very hard to distinguish the trees can this be changed?  
- can the trees that are proposed to be protected be identified?

**Council request:**

1. This map is not easily legible, particularly along Cardinia Creek. Council appreciates that an expanded Plan exists at Appendix 2 which is very useful. Could a note referencing Appendix 2 for Cardinia Creek and Gum Scrub Creek be included on the Plan.
2. There is no legend item showing the drainage assets/ retarding basins that are shown on the 'other uncredited open space'.
3. The proposed industry training facility (Centre of Excellence) is demonstrated on this Plan
4. The conservation area boundary subject to landowner proposed boundary change and DEECA position is a very similar colour to the UDPA. Can this be changed?
5. It needs to demonstrate the other pedestrian/equestrian bridges over Cardinia Creek as identified in Section 13.2 (Active Travel) of Councils submission
6. Potential road connection to the east along the easement boundary as identified in Section 13.3 (Road interface and Potential Connection outside precinct).
7. Relocation of the town centre to the north of the green spine

Council request the plan is modified to demonstrate the following updates:

1. Update to plans:

- The on and off ramps on the Officer South Road interchange (Gippsland side) is demonstrated.
- A symbol for traffic calming devices is demonstrated on all other connector-connector street intersections, otherwise Council spends a lot of resourcing and time negotiating with developers on providing a traffic calming device at these locations Please refer to Section 13.9 submission.
- The location of the connector street - alternative Council requests clarification on the hashed line demonstrated near 105 Patterson Road. On Plan 2 (Precinct Features) there are no trees identified as very high or high value trees to be protected, until it interacts with Patterson Road. Are the maps correct? Please update to reflect the correct situation.
- Require the Connector Street adjacent to the eastern boundary to rural land to be relocated to the urban growth boundary to assist potential future growth and to provide an appropriate interface with rural land.
- Council requests a half diamond interchange at Stephen Road
- It is unclear why the connector road network north of the APA transmission easement and east of Intersection (IN08) going towards the drainage waterway does not follow the APA gas easement. This will create a narrow parcel of land between the APA gas easement and the connector road and Council considers it is close to being undevelopable and will not be consistent with providing a road abutting easements and open space. Council would like to see the road alignment in this area to align with the APA gas easement boundary (as it does to the west) and change its direction once it interfaces with the drainage waterway.
- Stephen Road is demonstrated connecting to Officer PSP. At present the road appears to be an underpass with Princes Freeway. Council understands it is not a underpass and needs to be demonstrated as a bridge connection.

2. The legend description is updated to demonstrate:

- Primary arterial 6 lane (71 metre) Thompson Road
- Primary arterial 6 lane (41 metre) Officer South Road interface with drainage asset
- Connector Street industrial (26 m) - alternative (see notes)
- Traffic Calming devices ( potential roundabouts, t-heads and signalised intersections)

3. Please demonstrate the location of local access street roads, as the PSP demonstrates the cross-sections but does not demonstrate them on Plan 4

Most of this plan is just showing the road-based links. Need to show the off-road shared path links on Plan 5 (ie the link along Gum Scrub Creek in CREP) so that the links in the UDPA make sense. And given the shared path is planned for the east side of Gum Scrub Creek, a second pedestrian/cycle link across the creek at Lecky Rd would be beneficial to support the active transport network proposed by the PSP. A better solution would be to provide a path along the west side of the creek within the UDPA that provides a connection to the north of Princes Freeway. Rather than describing how accessible the UDPA area is, this plan describes how isolated it is.

1. All roads are designed to be bus capable in the precinct. Council would like advice from PTV what is the nominated bus route and timescale. Need Thompson Road demonstrated as PPTN network
2. Council also requests for the location of a bus interchange on road to be demonstrated on the plans.
3. Need to demonstrate equestrian access over Lecky and Thompson Road and Princess Freeway. It is unclear to Council how this will be achieved at present
4. Need shared use path along Patterson Road to connect to electrical transmission easement
5. Could investigate Patterson Road for equestrian travel.....
6. Require a off road shared use path on both side of the drainage service scheme waterways, excluding Cardinia Creek and Gum Scrub Creek
7. Pedestrian/Equestrian crossings into Casey and CREP as requested per G9
- 7a In Mintia Farm PSP reference is made to an equestrian trail on Figure 6 (page 32) and a potential opportunity exists to connect the equestrian trail to the pedestrian bridge as shown in Figure 6 that connects to Officer South Employment PSP.
- 7a In Clyde North PSP reference is made to the metropolitan shared trail and on Plan 18 (page 64) the trail crosses Cardinia Creek from Officer South Employment to Clyde North PSP
- 7b In Cardinia Creek South PSP reference is made to an indicative equestrian trail as shown in Figure 6 (page 34) that crosses Cardinia Creek via a pedestrian/equestrian (indicative) bridge. Nonetheless on Plan 8 (page 42) the equestrian trail is shown to cross Cardinia Creek on an pedestrian/equestrian bridge that is identified to be an ICP item on page 54
- 7c While in Cardinia we have learnt
- 7d The Cardinia Road Employment PSP reference is made on Plan 9 (Housing) page 59 a pedestrian bridge is demonstrated along the electrical transmission easement.
- 7e Council also requests that if there are any gaps in providing a pedestrian/equestrian bridge between the precincts an indicative bridge is demonstrated
8. Gum Scrub Creek connection to the north (potential drainage issues)
9. Making an assumption that the road bridges over GSC & Cardinia Creeks includes SUPs. This plan shows bike paths being on these bridges but pedestrian access not continuing. I haven't had a look at the bridge design information provided in the consultation documents however BRO3 and BRO4 are not included in this information anyway. - Ask Emma
10. Most of this plan is just showing the road-based links. Need to show the off-road shared path links on Plan 5 (i.e. the link along Gum Scrub Creek in CREP) so that the links in the UDPA make sense. And given the shared path is planned for the east side of Gum Scrub Creek, a second pedestrian/cycle link across the creek at Lecky Rd would be beneficial to support the active transport network proposed by the PSP. A better solution would be to provide a path along the west side of the creek within the UDPA that provides a connection to the north of Princes Freeway. Rather than describing how accessible the UDPA area is, this plan describes how isolated it is.



<p>1. The proposed shape of the 8.11 hectare sport reserve is difficult. Based on Council testing the site layout, the proposed facilities required for the site will not appropriately fit on the site and meet National and State sporting facility standards. The consequence of providing a sport reserve that does not meet National and State standards is Council cannot ensure the site will obtain a permit to occupy the site.</p> <p>Council has tested the proposed 8.11 hectare sport reserve and it is clear we cannot fit all required sport facilities on the site. Council requires a more uniform shape to the sport reserve and an increase of land to assist with the appropriate development of the site. Council request consideration of the following:</p> <p>a. Can the sport reserve be modified to assist providing a more uniform lot shape?</p> <p>b. Can the sport reserve be increased to assist providing additional land to fit all required sport facilities on the site?</p> <p>c. Can any conservation land along Gum Scrub Creek be utilised on the basis of no net loss? and</p> <p>d. If any changes through the drainage service scheme occur, whereby less land is required, is there any opportunities for this excess land to be utilised for the sport reserve?</p> <p>If additional land is not provided the sporting reserve will ultimately only provide one oval instead of two ovals and three soccer fields instead of four and this will create a shortage in sporting facilities within the precinct catchment</p> <p>2. Council requests the location of all passive local open spaces are reviewed:</p> <ul style="list-style-type: none"> <li>• <b>EA</b> against what native and non-native trees and vegetation is required to be protected under Plan7 (Native Vegetation Retention and Removal) and revise the location of the local parks to assist the trees or vegetation to be located in the public realm. For example, LP07 in Table 3 identifies the location of the local open space is to retain existing vegetation. There appears to be two trees located nearby to the LP07, but it doesn't appear to protect the trees or vegetation in this location.</li> <li>• <b>TO</b> confirm the local parks are located adjacent to the heritage sites (410 and 425 Officer South Road) proposed to be protected to assist their adaptive re-use.</li> <li>• <b>TO</b> determine what local parks can be co-located with other linear connections or drainage service scheme areas to assist decreasing Councils maintenance and management costs and</li> <li>• <b>TO</b> clarify what opportunities exist for larger local open space parks to assist decreasing Councils future maintenance and management costs.</li> </ul> <p>3. What does the pink along Cardinia Creek represent?</p>
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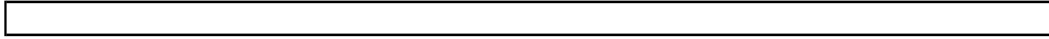
Council requests for the following:

1. This plan is updated to demonstrated the alignment of the trees in the public realm. At the moment it is near impossible to tell where these trees are located to understand if they are protected or will be lost due to road, drainage, utilities or development.
2. There appears to be many trees shown to be protected, that cannot be protected due to the alignment of the other priorities in the PSP, for example the drainage service scheme or road network. Council would like to reduce future conflict and request this plan is reviewed and identifies what trees are protected and not protected in the drainage service scheme, transport corridors and aligns open space (where possible) to protect the trees.
3. Amend Plan 7 to identify the high valued trees for 'biolink purpose' to be retained. Currently high value biolink trees for biolink purposes are not identified for retention or removal. The planning objective associated with the trees should be clearly identified in the PSP on this plan. Currently how Plan 7 interacts with the exhibited Schedule to Clause 52.17 has the effect of permitting the removal of these biolink trees without requiring a permit, as they are not clearly identified to be retained in this plan in the PSP. Cardinia's Biolink Plan is an adopted Council policy that was developed based on rigorous assessment. The VPA arborist assessment identifying the retention of specified trees along Patterson Road has also not been captured. This includes the largest old tree 'tree 126'.
4. Request the following trees 'very high retention value trees' contained within Preliminary Tree Assessment for VPA 2020 are identified on Plan 7 as "Scattered trees to be retained": Asset ID no ID77 (Eucalyptus camaldulensis), ID79 ( Eucalyptus camaldulensis), ID85 ( Eucalyptus camaldulensis) ID121 ( Eucalyptus camaldulensis) and ID126 ( Eucalyptus camaldulensis). The trees have been determined in the VPA arborist report to have very high retention value. They can be practically incorporated into the PSP without resulting in any substantial reduction in developable area or restrict installation of any key infrastructure. All trees are located either entirely within Patterson/ Officer South Road Reserve or directly about the title boundary of PSP property ID no 45 with the road reserve. The Melbourne Strategic Assessment failed to identify these trees which is clearly erroneous. Trees are almost certainly of very high local significance being the only known remnant patch of large old Eucalyptus camaldulensis (River Redgum) in Cardinia Shire. Arguably retention of these trees play a integral role in achieving many objectives of planning in Victoria set out under the Planning and Environment Act and Victoria Planning provisions including but not limited objectives set out in: P&E Act ( sect 12 duties of the planning authority), VPP Clause 11.02, 12, 21.02. Retention also supports a appropriate response to Urban growth area and Green Wedge interface as set out in PSP 2.0 guidelines.



Council requests

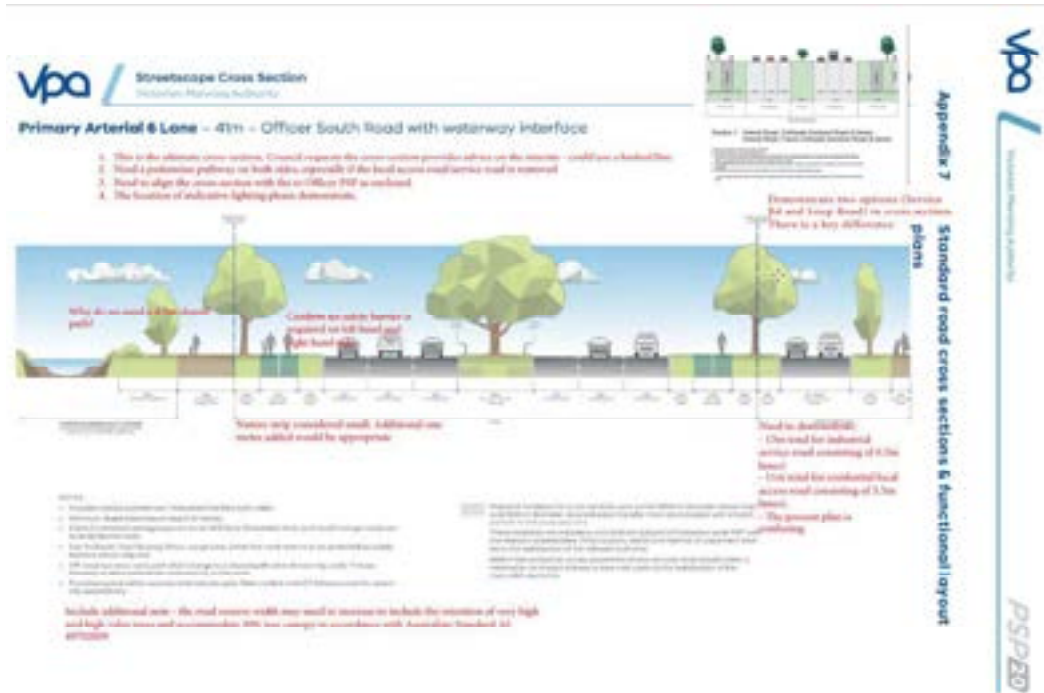
1. Final dot point under 'healthy and valued waterway' is a repeat of the dot point above. Please delete
2. The retarding basins are shown but waterways are not.
3. The Plan is enlarged and demonstrates the 4 service areas as requested under Section 9 of Council submission report

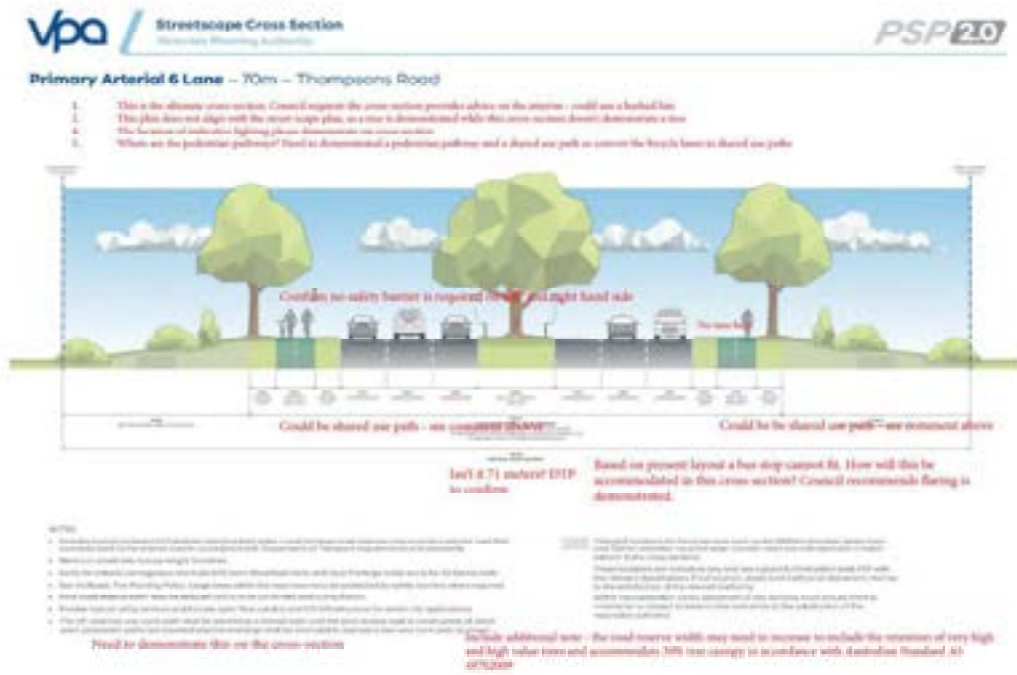


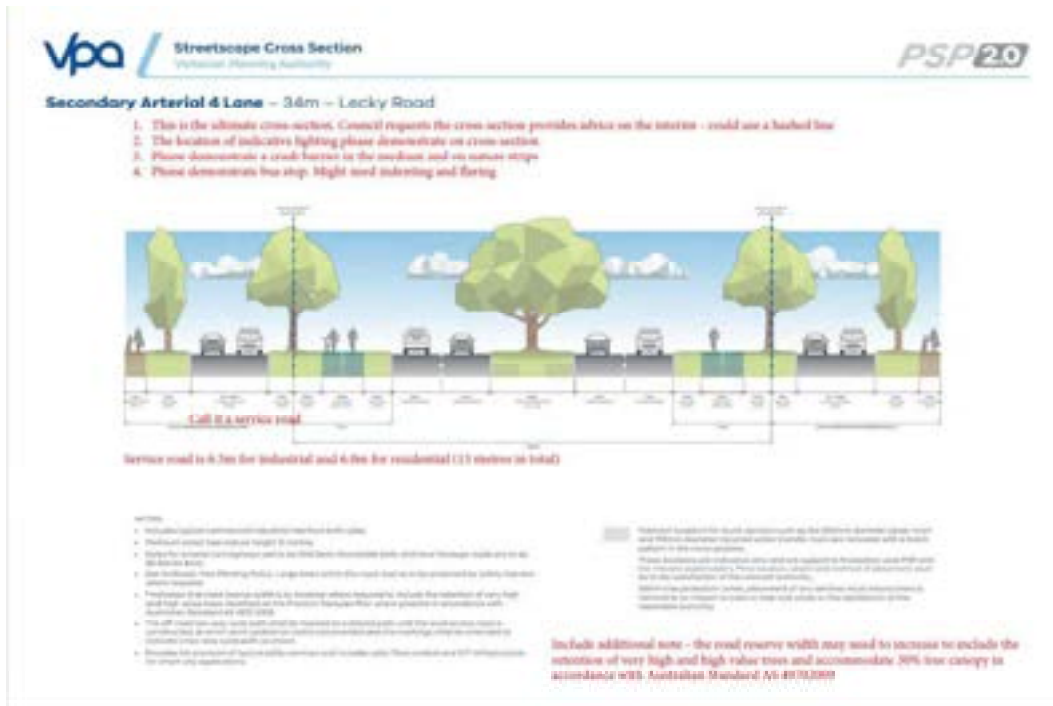
Council request for

1. Stephen Road bridge is demonstrated
2. Intersection 13 does this include the on-off ramps also
3. All pedestrian/equestrian bridges over Cardaini Creek from Casey City Council

1. There is no reference to Plan 13 in Section 3.7 Infrastructure Coordination. It would be useful to relocate the Plan from the Appendix and place in Section 3.7 Infrastructure Coordination instead. Reference to the Plan in the Section 3.7 Infrastructure Coordination with Requirements and Guidelines is required.
2. How does the telecommunication line shown on Plan 13 along Lecky Rd interact with the proposed 'green spine' in this location. Is it possible to plant trees and vegetation above the telecommunication optic fibre line? Can the existing road be dug up to allow for planting? This appears to be a big conflict and Council requests for more information to confirm this can occur and is achievable.



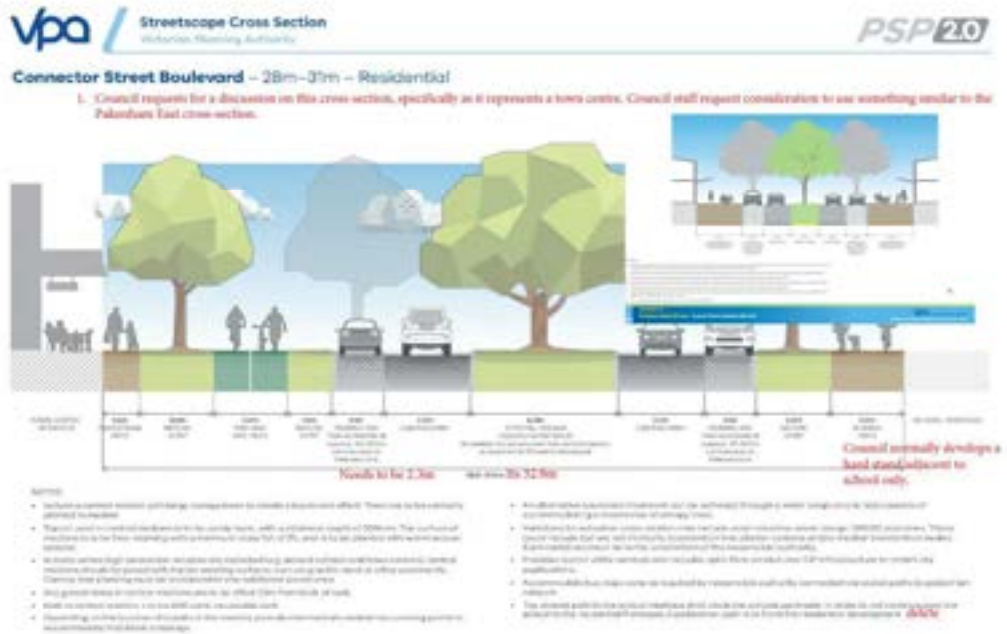


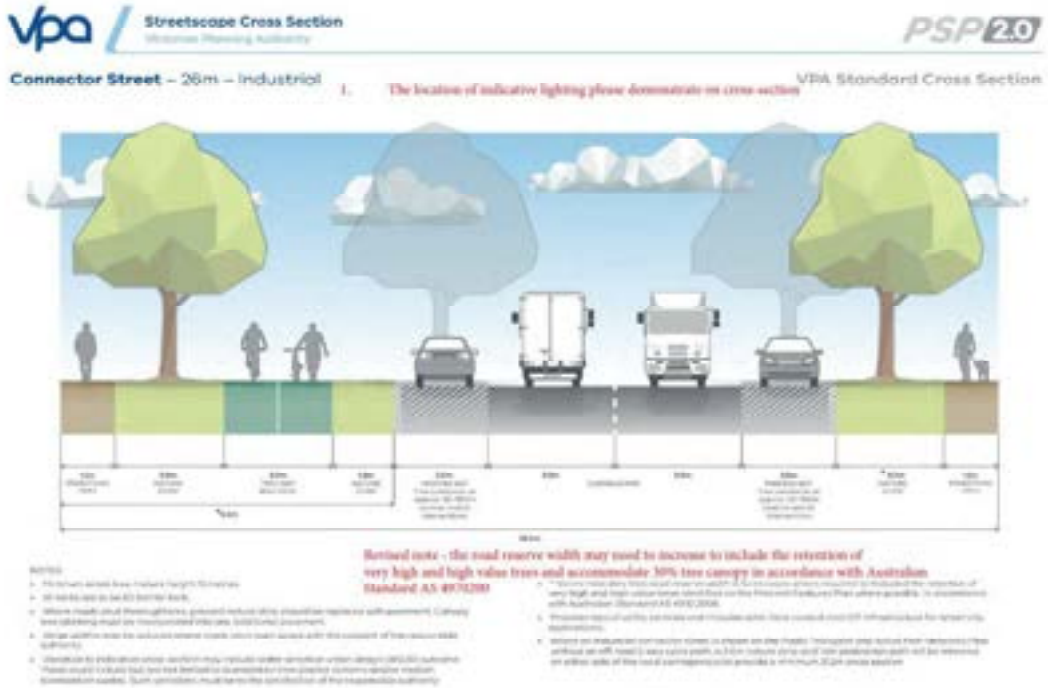


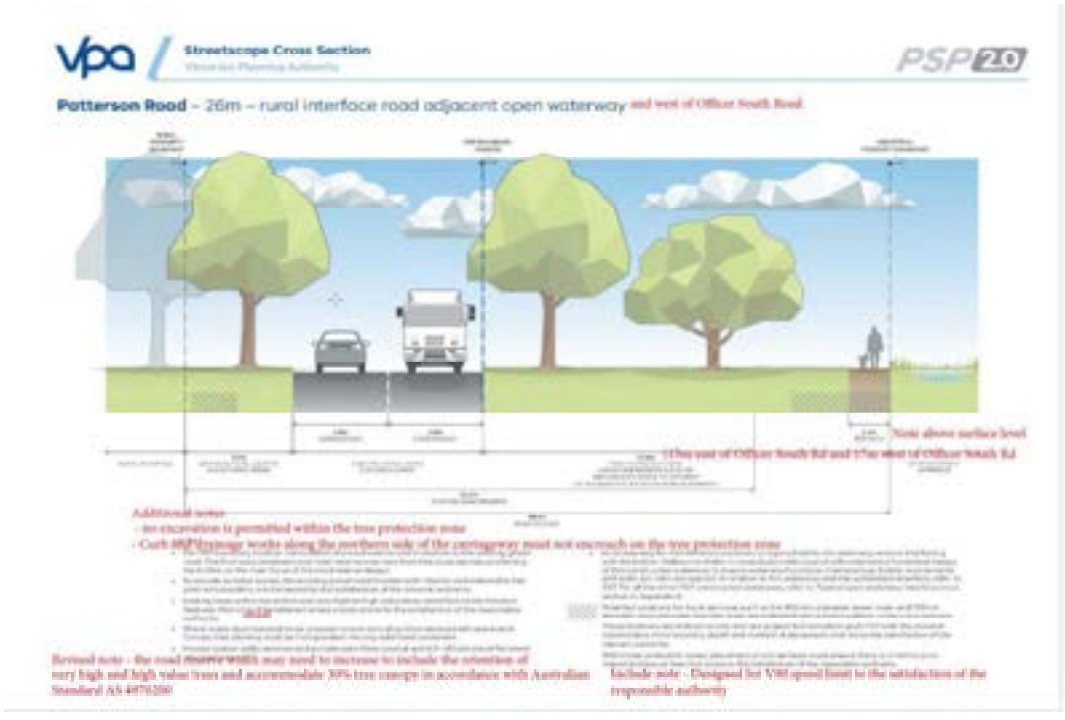


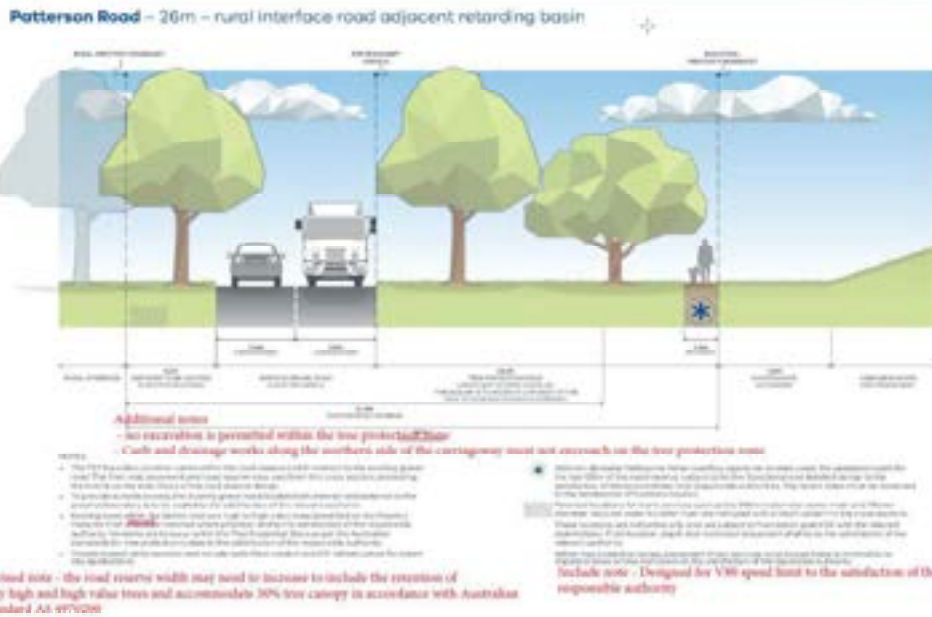


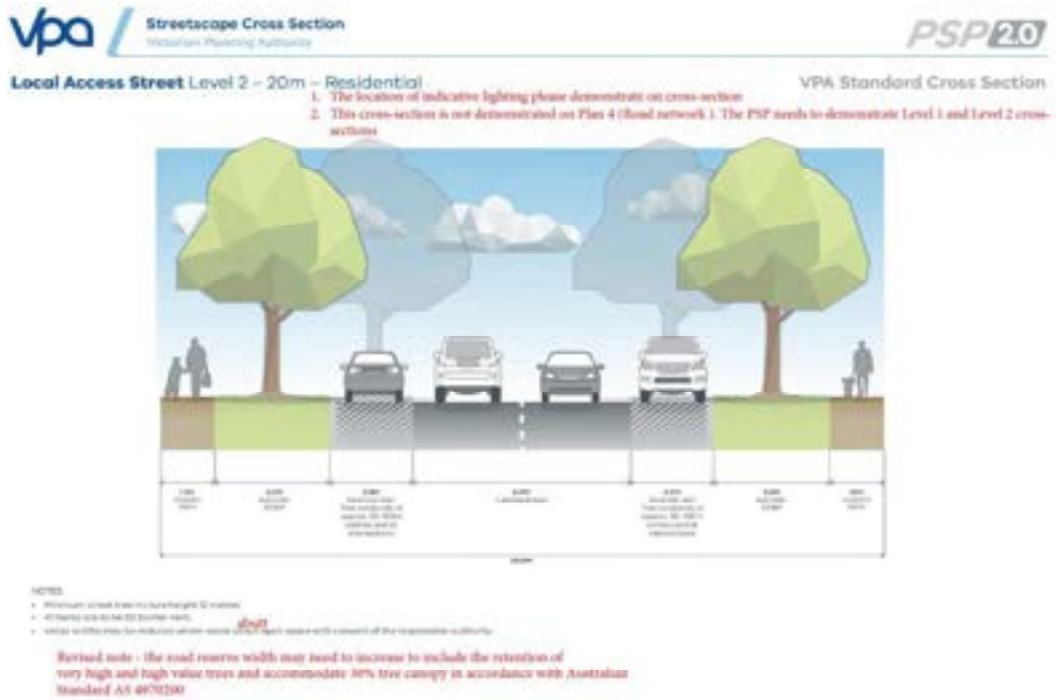








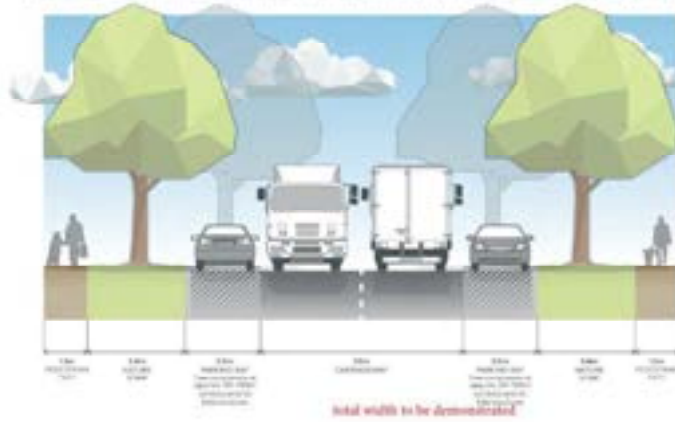






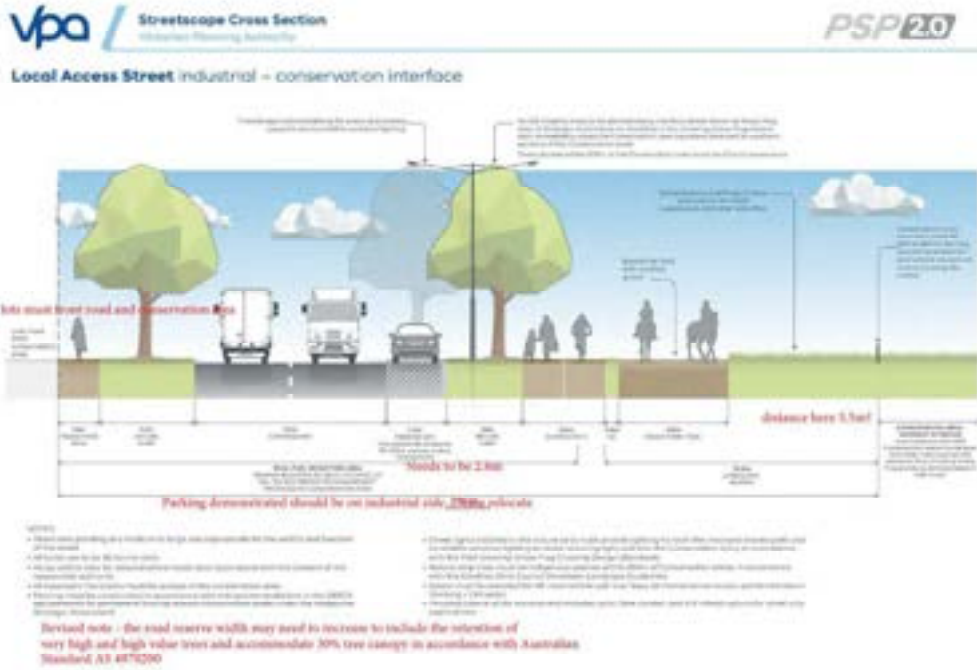
**Local Access Street Level 2 – Industrial (22m)** **VPA Standard Cross Section**

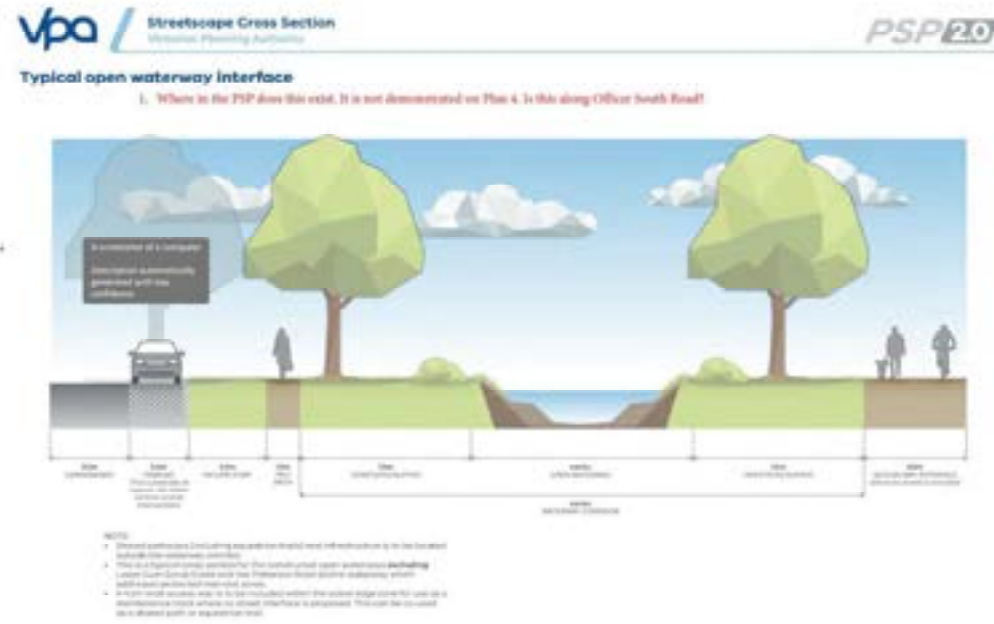
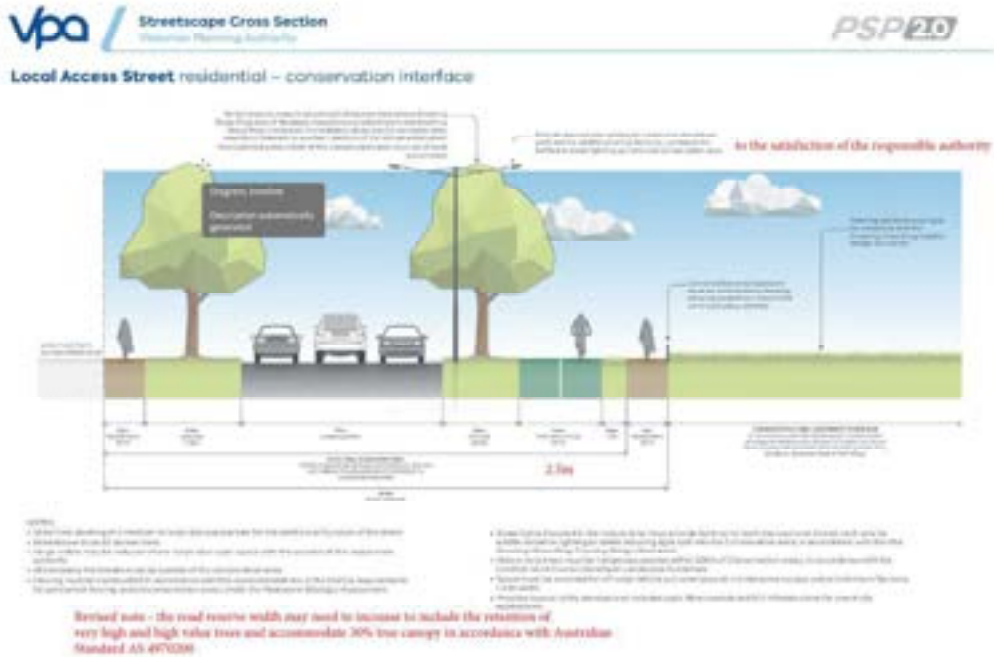
1. The location of indicative lighting poles demonstrate on cross-section
2. This cross-section is not demonstrated on Plan 4 (Road network 1). The POP needs to demonstrate Level 1 and Level 2 cross-sections



- NOTES**
- All widths to be 3m unless stated
  - Where widths may be indicated where indicated, spaces with a comma of the responsible authority.

**Revised note – the road reserve width may need to increase to include the retention of very high and high value trees and accommodate 30% tree canopy in accordance with Australian Standard AS 4970:2009.**





CARDINIA PLANNING SCHEME

Proposed  
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**SCHEDULE 7 TO CLAUSE 37.07 URBAN GROWTH ZONE**

Shown on the planning scheme map as **UGZ7**.

**OFFICER SOUTH EMPLOYMENT PRECINCT STRUCTURE PLAN**

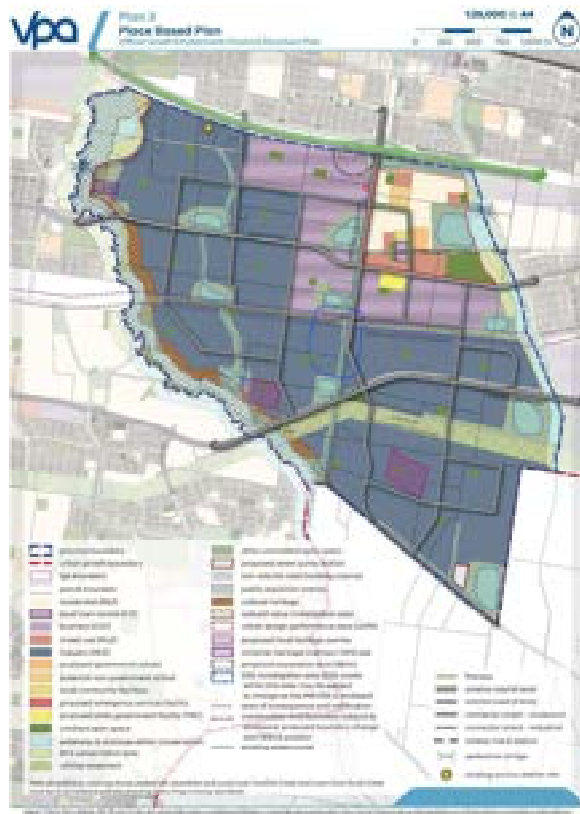
1.0

**The Plan**

Proposed  
C274card

Plan 1 shows the future urban structure proposed in the incorporated *Officer South Employment Precinct Structure Plan*.

**Plan 1 to Schedule 7 of Clause 37.07**



CARDINIA PLANNING SCHEME

**2.0 Use and development**

Proposed  
C274card  
**2.1**

**The Land**

Proposed  
C274card

The use and development provisions specified in this schedule apply to the land within the ‘precinct boundary’ on Plan 1 and shown as UGZ7 on the planning scheme maps. This schedule must be read in conjunction with the incorporated Officer South Employment Precinct Structure Plan (PSP).

Note: *If land shown on Plan 1 is not zoned UGZ, the provisions of this zone do not apply*

**2.2 Applied zone provisions**

Proposed  
C274card

Table 1 allocates the land use/development shown on Plan 1 of this schedule with a corresponding zone from this scheme.

Where the use/development in the left column is carried out or proposed generally in accordance with the incorporated Officer South Employment Precinct Structure Plan, the use, subdivision, construction of a building and construction and carrying out of works provisions of the corresponding zone in the right column apply.

A reference to a planning scheme zone in an applied zone must be read as if it were a reference to an applied zone under this schedule.

Note: *e.g. The General Residential Zone specifies ‘Place of worship’ as a Section 1 Use with the condition, ‘The site must adjoin, or have access to, a road in a Transport Zone.’ In this instance the condition should be read as, ‘The site must adjoin, or have access to, a road in a Transport Zone or an applied Transport Zone in the Urban Growth Zone schedule applying to the land’*

**Table 1: Applied zone provisions**

Land shown on plan 1 of this schedule Local town centre	Applied Zone Provisions Clause 34.01 – Commercial 1 Zone
Land shown on plan 1 of this schedule Business	Applied Zone Provisions Clause 34.02 - Commercial 2 Zone
Land shown on plan 1 of this schedule Industry	Applied Zone Provisions Clause 33.03 - Industrial 1 Zone
Land shown on plan 1 of this schedule Mixed Use	Applied Zone Provisions Clause 32.04 – Mixed Use Zone
Land shown on plan 1 of this schedule Freeway Arterial road	Applied Zone Provisions Clause 36.04 – Transport Zone 2

CARDINIA PLANNING SCHEME

Land shown on plan 1 of this schedule	Applied Zone Provisions
Residential	Clause 32.07 – Residential Growth Zone
All other land	

2.3  
6026/xxxx  
C274card

**Specific provisions – Use of land**

**Section 1 - Permit not required**

Cinema – where the applied zone is Commercial 2 Cinema based facility – where the applied zone is Commercial 2	Must not be on land shown within the 'area of consequence and notification' depicted on Plan 13 - Utilities of the incorporated <i>Officer South Employment Precinct Structure Plan</i> The site must adjoin, or have access to, a road in a Transport Zone 2 or Transport Zone 3.
Child care centre Hall Indoor recreation centre Library Medical centre Restricted recreation facility	The location of the use must generally accord with the location of 'local community facilities' in the <i>Officer South Employment Precinct Structure Plan</i> and with the prior written consent of Cardinia Shire Council.
Dwelling – where the applied zone is Mixed Use	Any frontage at ground floor level must not exceed 2 metres.
Education centre - (other than Tertiary institution and Employment training centre)	The location of the use must generally accord with the location of 'potential non-government school' in the incorporated <i>Officer South Employment Precinct Structure Plan</i> and with the prior written consent of Cardinia Shire Council.
Emergency Services Facility	On land identified as 'proposed emergency services facility' on Plan 3 – Place Based Plan of the incorporated <i>Officer South Employment Precinct Structure Plan</i> .
Hospital	On land identified as 'proposed state government facility' on Plan 3 – Place Based Plan of the incorporated <i>Officer South Employment Precinct Structure Plan</i> .
Minor sports and recreation facility	The location of the use must generally accord with the location of 'local sports reserve' in the incorporated <i>Officer South Employment Precinct Structure Plan</i> and with the prior written consent of Cardinia Shire Council.

**Commented [MB1]:** Child Care Centre is nested under a Education Centre. Is this double-up and could be removed

**Commented [MB2]:** Notice requirements should be included at Clause 66.06 to the relevant school provider – who is responsible within Cardinia Shire Council to provide consent.

CARDINIA PLANNING SCHEME

Service Station – where the applied zone is Industrial 1	<p>Must not be on land shown within the 'area of consequence and notification' depicted on Plan 13 - Utilities of the incorporated <i>Officer South Employment Precinct Structure Plan</i></p> <p>The land must be at least 30 metres from land (not a road) which is in an Activity Centre Zone, Capital City Zone, Commercial 1 Zone, residential zone or Rural Living Zone, land used for a hospital, an education centre or a corrective institution.</p> <p>Must not adversely affect the amenity of the neighbourhood, including through the:</p> <ul style="list-style-type: none"> <li>▪ Transport of materials, goods or commodities to or from the land.</li> <li>▪ Appearance of any stored goods or materials.</li> </ul> <p>Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil.</p>
Shop - where the applied zone is Commercial 1 Zone	The combined leasable floor area on land identified as 'local town centre' in the incorporated <i>Officer South Employment Precinct Structure Plan</i> must not exceed 2,300 sqm.
Any use listed in Clause 62.01	Must meet requirements of Clause 62.01.

**Section 2 – Permit required**

Food and drink premises	On land identified within the South East Water 'proposed separation area (180m)' on Plan 3 – Place Based Plan of the incorporated <i>Officer South Employment Precinct Structure Plan</i> .
Place of assembly (other than Carnival and Circus)	On land identified within the South East Water 'proposed separation area (180m)' on Plan 3 – Place Based Plan of the incorporated <i>Officer South Employment Precinct Structure Plan</i> .
Supermarket – where the applied zone is Commercial 2	The leasable floor area must not exceed 500sqm.
<u>Warehouse- where the applied zone is industrial 1</u>	
<b>Any other use not in Section 1 or 3 in the Table of uses in the applicable applied zone</b>	

**Section 3 – Prohibited**

Use	Condition
Caretaker's house Education Centre	On land identified within the South East Water 'proposed separation area (180m)' on Plan 3 – Place Based Plan of the incorporated <i>Officer South Employment Precinct Structure Plan</i> .
Child care centre - where the applied zone is Commercial 2	
Gaming premise - where the applied zone is Commercial 1	
Primary school - where the applied zone is Commercial 2	
Residential hotel - where the applied zone is Commercial 2	
Restricted retail premises - where the applied zone is Industrial 1	
Rural industry	



CARDINIA PLANNING SCHEME

Secondary school - where the applied zone is Commercial 2

**Any use listed in Section 3 in the Table of uses of the applicable applied zone**

**2.4 Specific provisions - Subdivision**

Proposed C274card

**Urban Design Performance Area**

A permit must not be granted to subdivide land within the Urban Design Performance Area on Plan 3 – Place Based Plan of the incorporated Officer South Employment Precinct Structure Plan, until a Concept Masterplan has been prepared to the satisfaction of the responsible authority. The Concept Masterplan must be generally in accordance with the incorporated *Officer South Employment Precinct Structure Plan*.

An application for subdivision on land within the Urban Design Performance Area must be consistent with any masterplan approved under this schedule.

The responsible authority must seek the views of the Department of Transport and Planning and Melbourne Water in relation to how the Masterplan responds to the potential impacts to the Princes Freeway interchange onramp and drainage assets respectively.

**Commented [MB3]:** Please update to state A permit must not be granted to subdivide land and building and works.....

**Commented [MB4]:** There is no requirement to provide a written response to the Concept Masterplan, on the OSEPSP

**2.5 Specific provisions - Buildings and works**

Proposed C274card

**Urban Design Performance Area**

A permit must not be granted to construct a building or construct and carry out works on land within the Urban Design Performance Area on Plan 3 – Place Based Plan of the incorporated Officer South Employment Precinct Structure Plan, until a Masterplan has been prepared to the satisfaction of the responsible authority. The Concept Masterplan must be generally in accordance with the incorporated *Officer South Employment Precinct Structure Plan*.

An application for development on land within the Urban Design Performance Area must be consistent with any masterplan approved under this schedule.

The responsible authority must seek the views of the Department of Transport and Planning and Melbourne Water in relation to how the Masterplan responds to the potential impacts to the Princes Freeway interchange onramp and drainage assets respectively.

**Buildings and works for future local parks and community facilities**

A permit is not required to construct a building or construct or carry out works for a local park, sport reserve or community facility provided the use or development is carried out generally in accordance with the incorporated *Officer South Employment Precinct Structure Plan* and with the prior written consent of Cardinia Shire Council.

**Dwellings on a lot less than 300 square metres**

A permit is not required to construct or extend one dwelling on a lot with an area less than 300 square metres where a site is identified as a lot to be assessed against the *Small Lot Housing Code* (Victorian Planning Authority, November 2019) via a restriction on title, and it complies with the *Small Lot Housing Code* (Victorian Planning Authority, 2019), incorporated into the Cardinia Planning Scheme.

**Commented [MB5]:** Should a VicSmart provision be included here for dwellings that do not comply with SLHC

**Buildings and works within the gas pipeline easement**

A permit is required to construct a building or construct or carry out works within 50 metres of the boundary of the high-pressure gas easement shown on Plan 3 – Place Based Plan in the incorporated *Officer South Employment Precinct Structure Plan*.

## CARDINIA PLANNING SCHEME

**Bulk Earthworks**

A permit is required for bulk earthworks.

**3.0 Application requirements**

Proposed  
C274card

The following application requirements apply to an application for a permit under Clause 37.07, in addition to those specified in Clause 37.07 and elsewhere in the scheme and must accompany an application, as appropriate, to the satisfaction of the responsible authority.

If in the opinion of the responsible authority an application requirement listed below is not relevant to the assessment of an application, the responsible authority may waive or reduce the requirement.

**Subdivision and Residential development**

In addition to the requirements of Clause 56.01-2, a subdivision design response for a residential subdivision of 10 lots or more must be accompanied by the information listed below. An application for the construction of 10 or more dwellings on a lot must be accompanied by the same information:

- A written statement that sets out how the application implements the incorporated *Officer South Employment Precinct Structure Plan*.
- A land use budget setting out the amount of land allocated to the proposed uses and expected population, dwelling and employment yields.
- A Traffic Impact Assessment including functional layout plans and a feasibility / concept road safety audit that demonstrates how the local street and movement network integrates with adjacent urban development or can integrate with future development on adjacent land parcels.
- A plan showing the proposed road network, that addresses the interface treatments adjacent to arterial roads, open space and environmentally sensitive areas.
- A plan showing access arrangements for properties adjacent to all existing and future arterial roads.
- Potential bus route and bus stop locations prepared in consultation with the Head, Transport for Victoria.
- Subdivision and Housing Design Guidelines, in accordance with the incorporated *Officer South Employment Precinct Structure Plan*, that demonstrates how the proposal responds to and achieves the objectives and planning and design requirements and guidelines within the viable densities section of the PSP.
- A hydrogeological assessment of the groundwater conditions on the site and the potential impacts on the proposed development including any measures required to mitigate the impacts of groundwater on the development and the impact of the development on groundwater.
- An arboricultural report identifying all trees on the site and a tree retention plan identifying how the application responds to Plan 7 Native vegetation retention and removal and any tree protection requirements and guidelines within the incorporated *Officer South Employment Precinct Structure*.
- A landscape master plan prepared by a suitably qualified professional that:
  - Shows natural features including trees and other significant vegetation, habitat for protected species, drainage lines, water courses, wetlands, ridgelines, hill tops and features of geomorphic significance;
  - Recognises and responds to sodic or dispersive soils;
  - Shows recreation facilities to be provided within public open space (with the exception of the active open space);

**Commented [MB6]:** 1. What about employment land? This section needs to be modified to consider employment land also.  
2. Acoustic assessment report. This should also be required for residential subdivision to ensure that any future dwellings (which don't require planning approval) are constructed to appropriate acoustic levels

CARDINIA PLANNING SCHEME

- Shows proposed species, location, approximate height and spread of proposed planting;
- Identifies the retention of existing vegetation and trees based on Plan 7 – Native vegetation retention and removal of the incorporated *Officer South Employment Precinct Structure Plan*;
- Shows storm water facilities that are compliant with the relevant approved drainage strategy; and Integrated Water Management plan.
- Identifies vegetation to be retained and removed and any re-vegetation.
- Written statement outlining how the proposal will contribute to the delivery of affordable and social housing in the precinct, including proposed delivery mechanisms.

**Use – Warehouse**

An application for the use of land where the applied zone is Industrial 1 for warehouse must be accompanied by an Economic Impact Assessment prepared a suitably qualified professional which includes the following information:

- A land suitability assessment for the proposed use.
- The expected number of jobs which the proposed use will generate on the site.
- The extent to which the proposed use contributes to the achievement of the economic needs and job density of the Officer South Employment Precinct

**Integrated Traffic and Transport Management Plan**

An Integrated Traffic and Transport Management Plan must be prepared for all land in contiguous ownership by a suitably qualified professional and may be submitted in the form of plans, tables and reports and must include the following information, as appropriate:

- Whether the capacity of any existing infrastructure requires upgrading (interim or ultimate).
- How the plan responds to the incorporated PSP and ICP, including the Precinct Infrastructure Table.
- The staging of the proposed development.
- How the plan responds to existing approved development within the precinct.
- An assessment of the impact of traffic generated by the precinct upon the surrounding road network.
- The effect of traffic to be generated (including transport modelling as required) by the proposal on the capacity of the local and regional traffic network.
- As assessment of potential traffic mitigation works and traffic management measures that may be required within and external to the site, including the staging of the measures and external works.
- Details of proposed connections to the surrounding road network, where relevant.
- Details of internal and external intersections, performance and treatments.
- Details of how the road design enables the safe movement of a range of emergency vehicles appropriate to the scale of development proposed within the precinct.

All to the satisfaction of the responsible authority.

**Environmentally sustainable development**

An application for residential and non-residential development, excluding subdivision of land must be accompanied by a Sustainable Design Assessment (SDA) report or a Sustainable Management Plan (SMP) prepared by a suitably qualified professional that demonstrates how the development will achieve best practice sustainable design. This includes encouraging energy performance, integrated water management, indoor environment quality, transport, waste management and urban ecology. Best practice environmental design for the development can use the Built Environment Sustainability Scorecard (BESS) or other comparable sustainable design tool.

**Commented [MB7]:** Its not clear how this connects to the 3.0 Application requirement heading. It's a double up of what is required under the residential development and its unclear what the trigger is for it to be submitted

**Commented [MB8]:** To be consistent with Local ESD policy

CARDINIA PLANNING SCHEME

The ~~A~~ Sustainable ~~D~~esign ~~A~~ssessment (including an assessment using BESS, STORM or other methods) ~~should consider~~ as relevant to the below:

**Residential**

- 2-9 dwellings ~~or~~.
- A building used for accommodation other than dwellings with a gross floor area between 100 square metres and ~~999~~1000 square metres.

**Non-residential**

## CARDINIA PLANNING SCHEME

- A non-residential building with a gross floor area of 300 square metres to ~~9994000~~ square metres.
- An extension to an existing non-residential building creating between 300 square metres to ~~9994000~~ square metres of additional gross floor area (excluding outbuildings).

~~The Sustainable Management Plan (including an assessment using BESS/Green star, STORM/MUSIC or other methods) and a Green Travel Plan for should be applicable to the below:~~

**Residential**

- 10 or more dwellings ~~or~~.
- A building used for accommodation other than dwellings with a gross floor area ~~equal to or of~~ more than 1000 square metres.

**Non-residential**

- A non-residential building with a gross floor area ~~equal to or of~~ more than 1000 square metres ~~(excluding outbuilding)~~.
- An extension to an existing non-residential building ~~equal to or~~ creating more than 1000 square metres of additional gross floor area (excluding outbuildings).

**Mixed use**

Applicable assessments for the residential and non-residential components of the development.

Consider as relevant the following tools to support a Sustainable Design Assessment or a Sustainability Management Plan:

- *Sustainable Design Assessment in the Planning Process* (IMAP, 2015)
- *Built Environment Sustainability Scorecard 'BESS'* (Council Alliance for a Sustainable Built Environment 'CASBE')
- *Green Star* (Green Building Council of Australia)
- *Model for Urban Stormwater Improvement Conceptualisation 'MUSIC'* (Melbourne Water)
- *Nationwide House Energy Rating Scheme 'NatHERS'* (Department of Climate Change and Energy Efficiency)
- *Stormwater Treatment Objective - Relative Measure 'STORM'* (Melbourne Water)
- *Urban Stormwater Best Practice Environmental Management Guidelines* (Victorian Stormwater Committee, 1999)
- *Waste Management and Recycling in Multi-Unit Developments - Better Practice Guide* (Sustainability Victoria, 2018).

In determining an application, the responsible authority will consider as appropriate:

- Whether an ESD plan or framework has previously been approved by the responsible authority

**Public infrastructure plan**

An application for subdivision and/or use and development of land must be accompanied by a public infrastructure plan which addresses the following:

- What land may be affected or required for the provision of infrastructure works;
- The provision, staging and timing of road works internal and external to the land consistent with any relevant traffic report or assessment;
- What, if any, infrastructure set out in the infrastructure contributions plan applying to the land is sought to be provided as "works in lieu" subject to the consent of the collecting agency;
- The provision of public open space and land for any community facilities; and
- Any other matter relevant to the provision of public infrastructure required by the responsible authority.

A public infrastructure plan must be consistent with any Integrated Traffic and Transport Management Plan approved under this schedule.

## CARDINIA PLANNING SCHEME

**Traffic impact assessment**

An application that proposes to create or change access to a primary or secondary arterial road must be accompanied by a Traffic Impact Assessment Report (TIAR). The TIAR, including functional layout plans and a feasibility and/or concept road safety audit, must be to the satisfaction of Head, Transport for Victoria or Cardinia Shire Council, as required.

**Retail impact assessment**

An application to use land for a Shop in a local town centre where the combined leasable floor area of all shops exceeds the figure shown in the land use table at 2.3 of this schedule must be accompanied by a retail economic impact assessment prepared by a suitably qualified professional.

**Acoustic assessment report**

Any application for use or development of land for Accommodation, Education centre (other than Tertiary institution and Employment training centre) or Hospital, must be accompanied by an acoustic assessment report prepared by a qualified acoustic consultant or other suitably skilled person to the satisfaction of the responsible authority which:

- Applies the following noise objectives:
  - Not greater than 35 dB LAeq,8h when measured within a sleeping area between 10pm and 6am.
  - Not greater than 40 dB LAeq,16h when measured within a living area between 6am and 10pm.
  - For areas other than sleeping and living areas, not greater than the median value of the range of recommended designed sound levels of Australian Standard AS/NZ 2107:2016 (*Acoustics – Recommended design sound level and reverberation times for building interiors*).
- Noise levels should be assessed:
  - Considering the cumulative noise from all sources impacting on the proposal including road traffic noise and industry noise, as well as other potential noise sources; and
  - In unfurnished rooms with a finished floor and the windows closed and be based on average external noise levels measured as part of a noise level assessment.
- Identifies lots and/or buildings requiring mitigation from noise from all sources impacting on the proposal, including road traffic noise and industry noise. If lots and/or buildings requiring acoustic mitigation are identified, the report should include recommendations for any noise attenuation measures required to meet the applicable noise level objectives. These recommendations should prioritise measures that benefit both outdoor and indoor spaces, and should address:
  - Noise compatible design for buildings, with siting, orientation, and internal layout, to be considered prior to setting building envelope performance requirements;
  - Potential noise character (tonality, impulsiveness or intermittency);
  - Noise with high energy in the low frequency range;
  - Transient or variable noise; and
  - Vibration.

This requirement does not apply if the permit applicant provides, to the satisfaction of the responsible authority, a statement in writing supported by verifiable evidence from a qualified acoustic consultant or other suitably skilled person and having regard to Clause 13.05. The statement must demonstrate that:

- The proposed development is not prejudiced;

**Commented [MB9]:** 1. Sensitive uses (residential) along the Princes Freeway trigger the needs for an acoustic assessment. There is no discussion in the UGZ or PSP about this.  
2. Are there any other sensitive land uses that should be mentioned as requiring an acoustic assessment. If yes, update clause  
3. This condition should also deal with residential subdivision

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- Community amenity and human health is not adversely impacted by noise emissions; and
- No noise attenuation measures are required.

**South East Water Pump Station Amenity Area**

An application to use land, or to construct a building or carry out works on land within the South East Water proposed separation area (180m) on Plan 3 – Place Based Plan of the incorporated Officer South Employment Precinct Structure Plan must be accompanied by an amenity impact assessment prepared by a suitably qualified professional which provides for an assessment of the proposed use against the potential for odour and noise impacts to ensure the use within the proposed buildings will experience an appropriate level of amenity.

**Commented [MB10]:** Is it still proposed?

**Commented [MB11]:** What is an appropriate level of amenity. Will need stronger guidance from EPA on this?

**Sodic and Dispersive Soils Management Plan**

An application to subdivide land or construct or carry out bulk earthworks must be accompanied by a sodic and dispersive soils management plan prepared by a suitably qualified professional, that describes:

- The existing site conditions, including:
  - extent of sodic and dispersive soils based on topsoil and subsoil samples in the works area.
  - land gradient.
  - erosion risk mapping
  - the extent of any existing erosion, landslip or other land degradation.
- Soils investigation, undertaken by a soil scientist;
- The extent of any proposed earthworks;
- Recommendations for soil management practices (including fill) with consideration of anticipated sodic and dispersive soil exposure;
- The management of drainage during all stages of development (including run-off);
- The staging of development;
- Any training and supervisions processes proposed for construction contractors to ensure compliance with the sodic and dispersive soils management plan;
- Proposed document monitoring and reporting processes that ensure works are undertaken in accordance with the sodic and dispersive soils management plan;
- Any treatment of soil proposed to be removed from the site;
- Any post-construction monitoring and/or management requirements; and
- Recommendations that inform a site management plan including:
  - The management, volume and location of any stockpiles.
  - Vehicle access and movement within the site area.
  - Any treatment to manage the soil while works are undertaken.
  - Treatments to rehabilitate areas that are disturbed during site works.
  - Any soil treatment to manage the soil to reduce risk to existing or current infrastructure and dwellings.

**Integrated Water Management**

An application to subdivide land must be accompanied by an Integrated Water Management Strategy, with a focus on drainage servicing, that assesses the existing surface and subsurface drainage conditions on the site, addresses the provision, staging and timing



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of stormwater drainage works, including temporary outfall provisions, flow rate and flow volume management, to the satisfaction of Cardinia Shire Council and Melbourne Water.

**Bushfire Management Plan**

An application to subdivide land adjacent to a Bushfire Hazard Areas shown on Plan 8 Bushfire Hazard Areas of the *Officer South Employment Precinct Structure Plan* must be accompanied by a Bushfire Management Plan that demonstrates how the application will address bushfire risk at the site. The plan must be prepared in accordance with table 4 - Bushfire hazard vegetation management & setback requirements, of the *Officer South Employment Precinct Structure Plan*, unless otherwise agreed in writing by the Responsible Authority and CFA. The plan must include:

- The design and layout of the subdivision, including lot layout, road design and access points, both vehicular and pedestrian.
- The location of any bushfire hazard areas.
- The details of any bushfire protection measures required for individual lots.
- The identification of any areas to form the setback between a bushfire hazard and built form.
- The details of any vegetation management in any area of defensible space including information on how vegetation will be managed and when the vegetation management will occur i.e., annually, quarterly, during the fire danger period.
- Notation that indicated what authority is responsible for managing vegetation within open space areas; and
- Notation that ensures that the areas of classified vegetation in the nominated bushfire hazard areas must be managed to a level that will ensure the vegetation classification under AS3959-2019 will not be altered.

The responsible authority and fire authority may waive this requirement if a plan has been approved for the land.

**4.0 Conditions and requirements for permits**

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**Conditions – Subdivision permits that allow for the creation of a lot of less than 300 square meters**

Any permit for subdivision that allows the creation of a lot less than 300 square metres must contain the following conditions:

- Prior to the certification of the plan of subdivision for the relevant stage, a plan must be submitted for approval to the satisfaction of the Responsible Authority. The plan must identify the lots that will include a restriction on title allowing the use of the provisions of the *Small Lot Housing Code* (Victorian Planning Authority, November 2019) incorporated pursuant to Clause 72.04 of the Cardinia Planning Scheme; and
- The plan of subdivision submitted for certification must identify whether type A or type B of the *Small Lot Housing Code* (Victorian Planning Authority, November 2019) applies to each lot to the satisfaction of the Responsible Authority.

**Conditions - Heritage Sites**

Any permit for the subdivision of land at 410 and 425 Officer South Road must contain the following conditions:

- Prior to the certification of a stage of the subdivision, a Conservation Management Plan must be approved for the heritage place to ascertain cultural value value/significance, appropriate site boundaries, required restoration works, possible future uses and interpretative signage
- Before the commencement of works for any stage of subdivision or development, the heritage place must be appropriately secured against damage as a result of works,

**Commented [MB12]:** What about development?  
And link to Requirement R66 in the PSP

**Commented [MB13]:** CFA are not a referral authority. Update to include them to be a referral authority

**Commented [MB14]:** The opening sentence advises that these conditions relate to subdivision, however dot point two refers to development works. The condition either needs to relate to both subdivision and development (at opening sentence) or reference to development needs to be removed.

CARDINIA PLANNING SCHEME

deterioration, and the effects of weather, trespassing or vandalism to the satisfaction of the Responsible Authority

- Prior to the issue of a statement of compliance for the first stage of subdivision the owner must enter into an agreement with the Responsible Authority made pursuant to Section 173 of the Planning and Environment Act 1987 which provides for works to the heritage places for the purposes of restoration and repair are in accordance with the timeframes and requirements of the approved Conservation Management Plan.

**Condition – Environmental Management Plan**

A planning permit to subdivide land, construct a building, or construct or carry out works on or within 50 metres of land shown as a conservation area in the incorporated *Officer South Employment Precinct Structure Plan* must include the following condition:

Before works start, a Construction Environmental Management Plan consistent with *DEECA requirements for Construction Environmental Management Plans under the Melbourne Strategic Assessment* (Department of Environment, Land, Water and Planning, November 2020) must be submitted to and approved by the Secretary to the Department of Energy, Environment and Climate Action (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*) and the responsible authority, demonstrating how the conservation area will be protected during works.

Once approved the plan will form part of the permit and must be implemented to the satisfaction of the Secretary and the responsible authority.

**Condition - Land Management Co-operative Agreement**

A permit to subdivide land containing a conservation area as shown in the *Officer South Employment Precinct Structure Plan* must include the following condition:

Prior to the commencement of development, a land management plan for the conservation area land must be prepared by a suitably qualified consultant, submitted to, and approved by the Secretary to the Department of Energy, Environment and Climate Action (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*) (Secretary). The land management plan must outline how the biodiversity values for the land identified in the *Biodiversity Conservation Strategy for Melbourne's Growth Corridors* (Department of Environment and Primary Industries, 2013) will be maintained, managed and improved, including:

- How environmental weeds will be managed up until the securing of the conservation area.
- How any revegetation will be undertaken in coordination with weed management activities to prevent re-colonisation of weed species.
- How rubbish and hazards will be removed, and any contaminated material managed up until the securing of the conservation area.

Once approved the plan will form part of the permit and must be implemented to the satisfaction of the Secretary and the responsible authority.

**Condition – Public transport**

Unless otherwise agreed by Head, Transport for Victoria, prior to the issue of a statement of compliance for any subdivision stage, bus stop hard stands with direct and safe pedestrian access to a pedestrian path must be constructed:

**Commented [MB15]:** 1. The conservation land is zoned RCZ and an ESO applies and it is not within the UGZ. Modification required to both UGZ and RCZ.  
2. These requirements are captured in the Schedule 3 to Clause 43.03 IPO and should not be repeated in the UGZ schedule

**Commented [MB16]:** Requires a development related condition for a subdivision permit?

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- In accordance with the Public Transport Guidelines for Land Use and Development; and compliant with the Disability Discrimination Act – Disability Standards for accessible Public Transport 2002.
- At locations approved by the Department of Transport and Planning, at no cost to the Department of Transport and Planning, and to the satisfaction of Head, Transport for Victoria.

**Condition – Road network**

Any permit for subdivision or buildings and works must contain the following conditions:

- Prior to the certification of a plan of subdivision, the plan of subdivision must show the land affected by the widening of the road reserve which is required to provide road widening and/or right of way flaring for the ultimate design of any adjacent intersection.
- Land required for road widening including right of way flaring for the ultimate design of any intersection within an existing or proposed arterial road must be transferred to or vested in council at no cost to the acquiring agency unless funded by the Officer South Employment Infrastructure Contributions Plan.

**Commented [MB17]:** The opening sentence advises that these conditions relate to subdivision or buildings and works. Dot point one only references and deals with subdivision. Another dot point needed to deal with 'building and works'.

**Condition – Public Infrastructure Plan**

Any permit for subdivision must contain the following conditions:

- Prior to the certification of a plan of subdivision or at such other time which is agreed between the council and the owner, if required by the responsible authority or the owner, the owner must enter into an agreement or agreements under section 173 of the *Planning and Environment Act 1987* which provide for:
  - The implementation of the Public Infrastructure Plan approved under this permit.
  - The timing of any payments to be made to a person in respect of any infrastructure project having regard to the availability of funds in the Infrastructure Contributions Plan.

**Commented [MB18]:** This condition needs to also deal with buildings and works

**Conditions – Subdivision or buildings and works permits where land is required for community facilities, public open space, or road widening**

A permit for subdivision or buildings and works, where land is required for community facilities, public open space or road widening must include the following conditions:

- The costs associated with effecting the transfer or vesting of land required for community facilities, public open space or road widening must be borne by the permit holder.
- Land required for community facilities, public open space or road widening must be transferred to or vested in the relevant public agency with any designation (e.g. road, reserve or lot) nominated by the relevant agency.

**Condition – Integrated water management plan**

A permit to subdivide land, must include the following condition:

- Unless otherwise agreed by the Responsible Authority and Melbourne Water, before certification of the plan of subdivision the Integrated Water Management Plan must be endorsed by the Responsible Authority.

**Condition – Bushfire management plan**

A permit to subdivide land adjacent to a Bushfire Hazard Area shown on Plan 8 Bushfire Hazard Areas, must include the following condition:

- Unless otherwise agreed by the Responsible Authority and the Country Fire Authority, before certification of the plan of subdivision the Bushfire Management Plan must be endorsed by the Responsible Authority.

**Commented [MB19]:** CFA is not a referral authority

## CARDINIA PLANNING SCHEME

**Condition – Security of conservation land**

A permit to subdivide land containing a 'conservation area' as shown in the *Officer South Employment Precinct Structure Plan* must include the following condition:

The owner of the land must, as part of the plan of subdivision (or the first plan of subdivision submitted for registration, in the case of any staged subdivision), create the 'conservation area' as a separate lot or reserve. The boundaries of the lot or reserve on the plan of subdivision are subject to the prior satisfaction of the Secretary to the Department of Energy, Environment and Climate Action as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987* (Secretary). The owner must further secure the conservation area, by causing that lot or reserve to be vested, transferred, or protected in perpetuity in one of the following ways:

- Prior to a statement of compliance being issued for the plan of subdivision (or, in the case of a staged subdivision, the plan of subdivision or masterplan which implements the first stage of the subdivision), enter into an agreement under section 173 of the *Planning and Environment Act 1987* by which the owner agrees to transfer ownership of the conservation area to, or to vest the conservation area in, the Minister responsible for section 5 of the *Crown Land (Reserves) Act 1978*, the Council or Melbourne Water. The transfer or vesting must either be for no or nominal consideration. The Secretary and the person or body to whom the land is to be transferred or vested must also be a party to the agreement. The terms of the agreement must include that the owner pays the reasonable costs of the other parties to the agreement that were incurred for the preparation, execution, and registration of the agreement. The owner must cause the agreement to be registered prior to lodgement of the plan of subdivision for registration; or
- Prior to a statement of compliance being issued for the plan of subdivision (or, in the case of a staged subdivision, the plan of subdivision or masterplan which implements the first stage of the subdivision), enter into an agreement with the Secretary under section 69 of the *Conservation, Forests and Lands Act 1987*, which provides for the conservation and management of the conservation area by or on behalf of the owner in perpetuity. The terms of the agreement must include that the owner pays the reasonable costs of the Secretary incurred for the preparation, execution, and registration of the agreement. The owner must cause the agreement to be registered prior to lodgement of the plan of subdivision for registration.

The requirement to include the above condition does not apply if the permit applicant provides the responsible authority with a statement in writing from the Secretary, as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*, that the condition is not required because the Secretary is satisfied that either:

- the land containing the conservation area is expected to be further subdivided and a further planning permit will be required for that subdivision (to which the above condition requirement will apply); or
- the conservation area has been or will be otherwise secured in perpetuity.

**Condition – Fencing of conservation areas**

A permit granted to subdivide land where works are required to carry out the subdivision, or a permit granted to construct a building or carry out works, on land including or abutting a conservation area as shown in the *Officer South Employment Precinct Structure Plan*, must include the following condition:

CARDINIA PLANNING SCHEME

Prior to the commencement of development, a conservation area fencing plan must be submitted to and approved by the Secretary to the Department of Energy, Environment and Climate Action (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*) (Secretary) to ensure the conservation area is adequately protected. The fencing plan must contain the following:

- The boundaries of any conservation area, and the location of any scattered tree and the boundaries of any patch of native vegetation within the conservation area.
- The location and alignment of temporary protection fencing showing the following minimum distance from the element to be protected:

Element	Distance
Conservation area	0.5 metres
Scattered tree	12 x diameter at a height of 1.3 metres
Patch of native vegetation	2 metres

- The timing of installation and removal of temporary protection fencing.
- The timing of installation of permanent fencing.
- Location and details of ongoing maintenance vehicle access points.
- The type of temporary and permanent fencing including materials, heights and spacing of uprights.
- Frequency of inspections and rectification works for temporary protection fencing.

Once approved the plan will form part of the permit and must be implemented to the satisfaction of the Secretary to the Department of Energy, Environment and Climate Action and the responsible authority.

Stockpiles, fill, machinery, vehicle parking, excavation and construction activity of any kind must not be brought into, or be undertaken within, the area to be fenced, except with the prior written consent from the Secretary.

**Condition – Correct alignment of protective fencing**

Buildings and works must not commence until written evidence that protection fencing has been erected in accordance with the approved Conservation Area Fencing Plan is provided by a suitably qualified land surveyor to the Secretary to the Department of Energy, Environment and Climate Action (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*) (Secretary), and the Secretary confirms it is satisfied by the evidence.

**Requirement – Acoustic Report**

Any permit for use or development of land where an acoustic assessment report has identified that mitigation from noise sources is required, must implement any recommendations of the acoustic assessment report submitted with the application and include any conditions necessary, in the opinion of the responsible authority, to implement noise attenuation measures.

All to the satisfaction of the responsible authority.

**Requirement – Sodic and dispersive soil site management plan**

A permit to subdivide land or to undertake earthworks must include a condition that requires a site management plan be prepared that implements the recommendations identified in the sodic and dispersive soil management plan, to the satisfaction of the Responsible Authority.

CARDINIA PLANNING SCHEME

**Gas Pipeline Construction Management Plan**

Prior to the construction of a building or the carrying out of works, including demolition, on land within 50 metres of the boundary of the high pressure gas easement shown on Plan 3 – Place Based Plan in the incorporated *Officer South Employment Precinct Structure Plan*, a Construction Management Plan must be submitted to and approved by the responsible authority. The plan must:

- Prohibit the use of rippers or horizontal directional drills unless otherwise agreed by the operator of the gas transmission pipeline.
- Be endorsed by the operator of the gas transmission pipelines where the works are within or crossing the relevant gas transmission easement.
- Include any other relevant matter to the satisfaction of the responsible authority.
- Land required for community facilities, public open space or road widening must be transferred to or vested in the relevant public agency with any designation (e.g. road, reserve or lot) nominated by the relevant agency.

The responsible authority must be satisfied that the gas transmission pipeline licensee has reviewed and approved the Construction Management Plan.

The Construction Management Plan must be implemented to the satisfaction of the responsible authority.

The Construction Management Plan may be amended to the satisfaction of the responsible authority.

**5.0 Exemption from notice and review**

Proposed  
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None specified.

**6.0 Decision guidelines**

Proposed  
C274card

The following decision guidelines apply to an application for a permit under Clause 37.07, in addition to those specified in Clause 37.07 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

**Use – Warehouse**

Before deciding on a permit application under this schedule the responsible authority must consider, as appropriate:

The extent to which the application contributes towards the provision of jobs as envisaged by the Officer South Precinct Structure Plan

**Integrated Traffic and Transport Management Plan**

Before deciding on a permit application under this schedule the responsible authority must consider as appropriate:

- How the application responds to an **approved** Integrated Traffic and Transport Management Plan.

**Local Town Centre**

Before deciding on an application to create floorspace in excess of any cap in a local town centre, in addition to the decision guidelines at Clause 37.07-14 and Clause 65, the responsible authority must consider, as appropriate:

- The local catchment and Officer South Employment Precinct Structure Plan catchment demand for the additional floor area; and
- The effect on existing and future town centres within Cardinia Shire Council.

**Acoustic Attenuation**

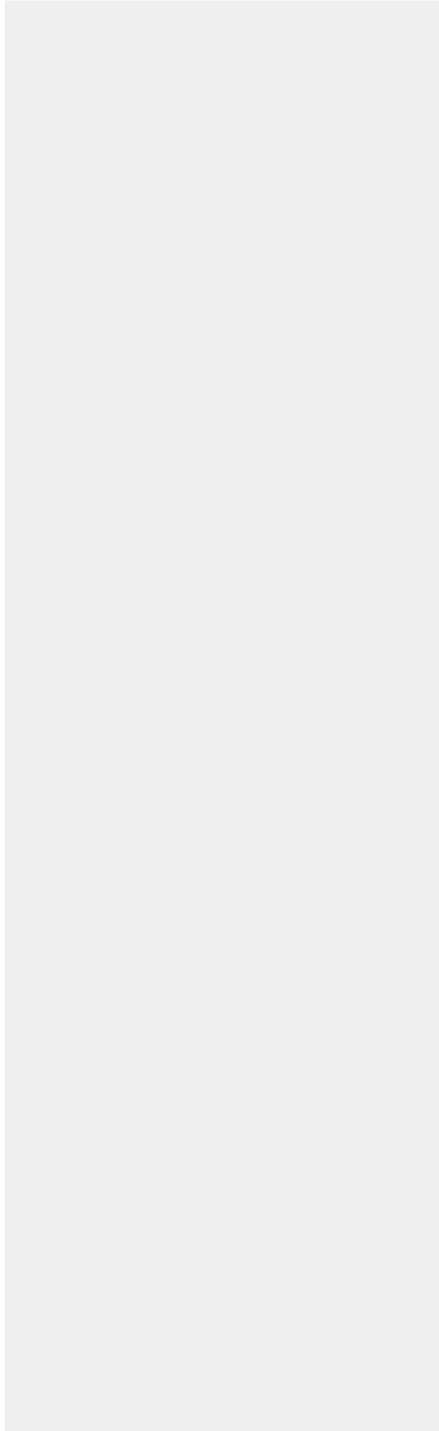
**Commented [MB20]:** There is no reference to the UDPA Concept Masterplan? On this basis is Council required to consider it at all?

**Commented [MB21]:** This condition references 'approved' plan. Assuming this is an individual application requirement and not necessary a plan we would be approving. On this basis reference to 'approved' should be removed.

CARDINIA PLANNING SCHEME

ble authority must consider, as appropriate:

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CARDINIA PLANNING SCHEME

- If Accommodation, Hospital or Education centre (other than Tertiary institution and Employment training centre) is proposed, whether the proposal minimises the impact on human health and amenity from noise exposure near the transport system and other noise emission sources having regard to:
  - whether the impact of potential noise sources have been mitigated through siting, orientation design, layout, and location and whether this reduces the need for acoustic treatment of buildings or compromises the useability of the building by its occupant;
  - any building façade treatments that are required to mitigate noise impacts; and
  - any relevant recommendations of an Acoustic Assessment Report for the application.

**Affordable Housing**

Before deciding on an application to develop or subdivide land for dwellings, the responsible authority must consider, as appropriate:

- Whether the proposed subdivision application contributes towards the provision of affordable housing
- The Ministerial Notice under 3AA(2) of the Act, as amended from time to time.

**South East Water Separation Area**

Before deciding on an application to develop land within the South East Water 'proposed separation area (180m)' on Plan 3 – Place Based Plan of the incorporated *Officer South Employment Precinct Structure Plan*, the responsible authority must consider, as appropriate:

- Whether the proposed use may be affected by potential unintended odour and noise impacts from the pump station; and
- [The view of South East Water Ltd (or their successors)]

**Commented [MB22]:** South East Water needs to be a referral authority

**Princes Freeway Service Station**

Before deciding on an application to subdivide or develop land at the 'existing services station site' on Plan 3 – Place Based Plan of the incorporated *Officer South Employment Precinct Structure Plan*, the responsible authority must consider, as appropriate:

- Whether the proposed subdivision or use should still benefit from the existing access to the Princes Freeway.

**7.0 Signs**

Proposed C274card None specified.



## Traffic Impact Assessment Report

# Officer South Employment Precinct PSP

**Project Number** 220283

**Final Report** 28/11/2023

**Client** Cardinia Shire Council



## Document control record

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### Document control

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Project number	220283
Client	Cardinia Shire Council
Client contact	Marcelle Bell

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Draft	23/11/2023	Preliminary draft	Bernadette Sargeant / Alison Dewar	Ali Abdou
Final	28/11/2023	Final	Bernadette Sargeant / Alison Dewar	Ali Abdou

**220283** Officer South Employment Precinct PSP – Traffic Impact Assessment Report  
[Final](#) 28/11/2023



## Executive summary

Cardinia Shire Council engaged Trafficworks to prepare a traffic impact assessment (TIA) to inform councils submission to the Victorian Planning Authority (VPA) concerning the preparation of the Precinct Structure Plan (PSP) and associated Infrastructure Contributions Plan (ICP) for the **Officer South Employment Precinct PSP**.

A TIA was undertaken to:

- estimate the traffic generation and distribution of the proposed development
- assess the background studies undertaken for the proposed development
- determine the suitability of the proposed access locations onto the adjacent network with and without the development of state infrastructure.

The table below summarises the site and the proposed development, and our conclusions and recommendations.

<b>Address</b>	Officer South Employment Precinct Structure Plan
<b>Zoning and overlays</b>	Urban Growth Zone (UGZ) Floodway Overlay (FO) Land Subject to Inundation Overlay (LSIO) Heritage Overlay (HO) Public Acquisition Overlay (PAO) Environmental Significance Overlap (ESO)
<b>Proposed use and development</b>	Employment precinct of approximately 1,069 hectares, including: <ul style="list-style-type: none"> <li>— industrial and commercial development (primary land use)</li> <li>— residential development</li> <li>— educational development</li> <li>— open space and drainage (active and passive)</li> </ul>
<b>Road network</b>	<p><b>Officer South Road</b> is an unsealed local collector road (existing), proposed to be upgraded to an ultimate 6-lane, two-way primary arterial road (as per the draft PSP)</p> <p><b>Lecky Road (Grices Road / Centenary Boulevard)</b> is an unsealed local access street (existing), proposed to be upgraded to a 4-lane, two-way secondary arterial (as per the draft PSP)</p> <p><b>Thompsons Road</b> does not currently extend through the PSP area, truncating to the east of Cardinia Creek. It is proposed to be upgraded to a 6-lane, two-way primary arterial (as per the draft PSP)</p> <p><b>Patterson Road</b> is an unsealed local collector road (existing), proposed to be upgraded to a sealed 2-lane, two-way connector street (as per the draft PSP)</p>



<b>Traffic generation</b>	<p>GHD model traffic generation:</p> <ul style="list-style-type: none"> <li>— 63,400 vehicles per day (vpd) and 5,720 vehicles per hour (vph) to / from the PSP area.</li> </ul> <p>Modified traffic generation based on RTA Guide:</p> <ul style="list-style-type: none"> <li>— 151,560 vpd and 18,642-18,682 vph to / from the PSP area.</li> </ul>
<b>Conclusion</b>	<p>This assessment:</p> <ul style="list-style-type: none"> <li>— Concludes that the road network proposed will not accommodate the level of development that may be delivered as part of the Officer South Employment Precinct based on the currently proposed land uses.</li> <li>— Provides an estimate of the traffic volumes anticipated to be generated by the precinct based on the RTA Guide, of approximately 2.4 times the GHD model volumes.</li> <li>— Raises concerns with the inputs / outputs of the GHD strategic model and subsequent implications on the provision of PSP infrastructure.</li> <li>— Includes an interim assessment to assist in the delivery of the PSP and inform timeframes for the requirements for state infrastructure to be provided. The interim assessment at the Officer South Road / Princes Freeway interchange revealed:             <ul style="list-style-type: none"> <li>— Approximately 115-990 vph from the PSP area could be accommodated prior to the delivery of state infrastructure, based on a 3-5% growth rate.</li> <li>— This is equivalent to the development of between 175 – 1,500 dwellings or 0.57 – 4.95 ha of employment land.</li> <li>— The available capacity at the Officer South Road / Princes Freeway interchange is estimated to be significantly lower than the expected traffic generation of Stage 1. Hence, upgrades to increase traffic capacity to/from the PSP will be required to facilitate the development of Stage 1.</li> </ul> </li> </ul>
<b>Recommendations</b>	<p>It is recommended that:</p> <ul style="list-style-type: none"> <li>— The GHD strategic model:             <ul style="list-style-type: none"> <li>— is reviewed and revised to ensure that the traffic generation inputs / outputs are consistent with the proposed land uses within the PSP area</li> <li>— the traffic impacts based on the revised strategic model be considered and the proposed PSP infrastructure be modified to reflect the revised outputs.</li> </ul> </li> <li>— To facilitate initial development within the PSP area:             <ul style="list-style-type: none"> <li>— the interim cross section of Officer South Road between IN-01 and the freeway interchange be constructed as a four-lane, two-way road upfront, to limit redundant works and provide the required capacity for the initial stage of the PSP.</li> </ul> </li> <li>— To disperse traffic within the PSP:             <ul style="list-style-type: none"> <li>— a new additional north-south arterial road connection be provided within the PSP area, with consideration given to providing a freeway interchange at Stephens Road.</li> </ul> </li> </ul>



- 
- the PSP road network layout be revised to designate Stephens Road as a higher order road and provide a through connection to Thompsons Road.
  - To facilitate development and improve heavy vehicle accessibility within the PSP:
    - the PSP staging plan be modified to facilitate development along the Thompsons Road corridor as a higher staging priority than Lecky Road, including both east and west bridge connections (BR-02 and BR04).
-



### Referenced documents

References used in the preparation of this report include the following:

- Victorian Planning Authority (VPA) Officer South Employment Precinct Structure Plan – Draft for Public Consultation, dated September 2023
- Victorian Planning Authority (VPA) Officer South Employment Infrastructure Contributions Plan – Draft for Public Consultation, dated September 2023
- “Officer South Employment Precinct Structure Plan – Integrated Transport Assessment” report prepared by Ratio Consultants, dated 9 March 2023
- “Officer South Employment PSP – Transport Modelling Assessment” report prepared by GHD, dated 7 November 2022
- Cardinia Shire Council Planning Scheme
- RTA Guide to Traffic Generating Developments, Version 2.2, October 2002
- RTA Technical Direction TDT 2013/04a – Guide to Traffic Generating Developments Updated Traffic Surveys, dated August 2013
- Trip Generation Surveys – Schools, Analysis Report, prepared by GTA for Roads and Maritime Services (RMS previously RTA), August 2014
- Austroads Guide to Traffic Management, Part 3 – Traffic Study and Analysis Methods
- Victoria Planning Authority (VPA), formerly the Growth Areas Authority’s (GAA), Engineering Design and Construction Manual for Subdivision in Growth Areas, April 2011
- Victorian Department of Transport Public Transport Guidelines for Land Use and Development (2008)
- Austroads Guide to Road Design, Part 3 – Geometric Design
- Austroads Guide to Road Design, Part 4A – Signalised and Unsignalised Intersections
- The Department of Transport and Planning (formally VicRoads) Guidelines for Planning Road Networks in Growth Areas working document (2015)

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[Final](#) 28/11/2023



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<b>Appendix 1 – Cardinia Road Employment Precinct PSP</b>		



## 1 Introduction

Cardinia Shire Council engaged Trafficworks to review the *Officer South Employment Precinct Structure Plan – Draft for Public Consultation* (PSP) and prepare a traffic impact assessment (TIA) to inform Councils feedback on the draft Precinct Structure Plan (PSP) and associated Infrastructure Contributions Plan (ICP).

A TIA was undertaken to:

- estimate the traffic generation and distribution of the proposed development
- assess the background studies undertaken for the proposed development
- determine the suitability of the proposed access locations onto the adjacent network with and without the development of state infrastructure.

For the detail about:

- existing site conditions – see section 2
- assessment of the proposed development – see section 0
- traffic analysis – see section 4
- assessment of the limitations of the PSP area – see section 4.2
- discussion relating to the Staging Plan – see section 7
- discussion relating public and active transports – see section 7
- our conclusions and recommendations – see section 8.



## 2 Existing conditions

### 2.1 Subject site

The Officer South Employment Precinct is located approximately 55 km south-east of Melbourne's CBD along the South East Growth Corridor. The precinct comprises of approximately 1,069 hectares of land and presently comprises farm land, with associated residential dwellings and buildings. There are high-power transmission (electricity) and gas easements which bisect the precinct.

The precinct is located within the Urban Growth Zone (UGZ) with associated Overlays. The precinct is bound by:

- the Princes Freeway and existing residential development within the suburb of Officer to the north
- Lower Gum Scrub Creek and existing residential and employment development to the east
- Patterson Road and Green Wedge (farm land) to the south
- Cardinia Creek and residential development within Casey City Council to the west.

The precinct location and the surrounding area are shown in Figure 1.

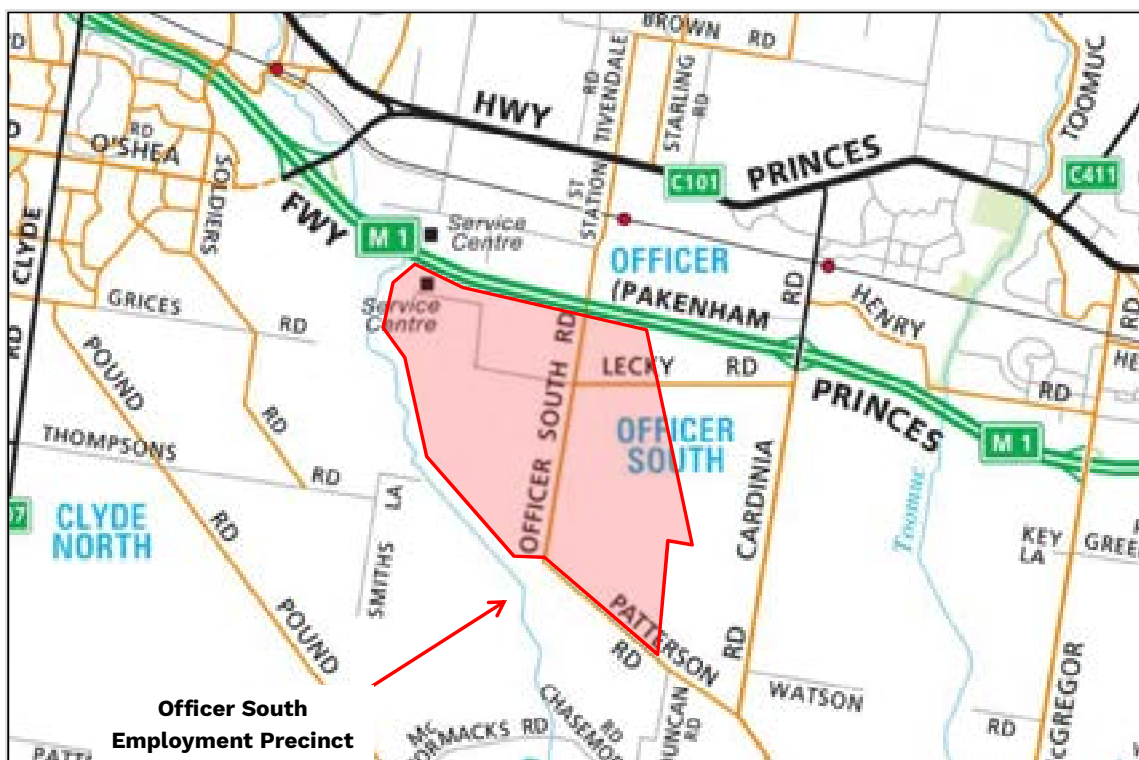


Figure 1: Location plan (reproduced with permission from Melway Publishing Pty Ltd)



The PSP for Officer South Employment precinct indicates there will be future residential, commercial, industrial, open space and drainage development within the precinct, as shown in Figure 2.

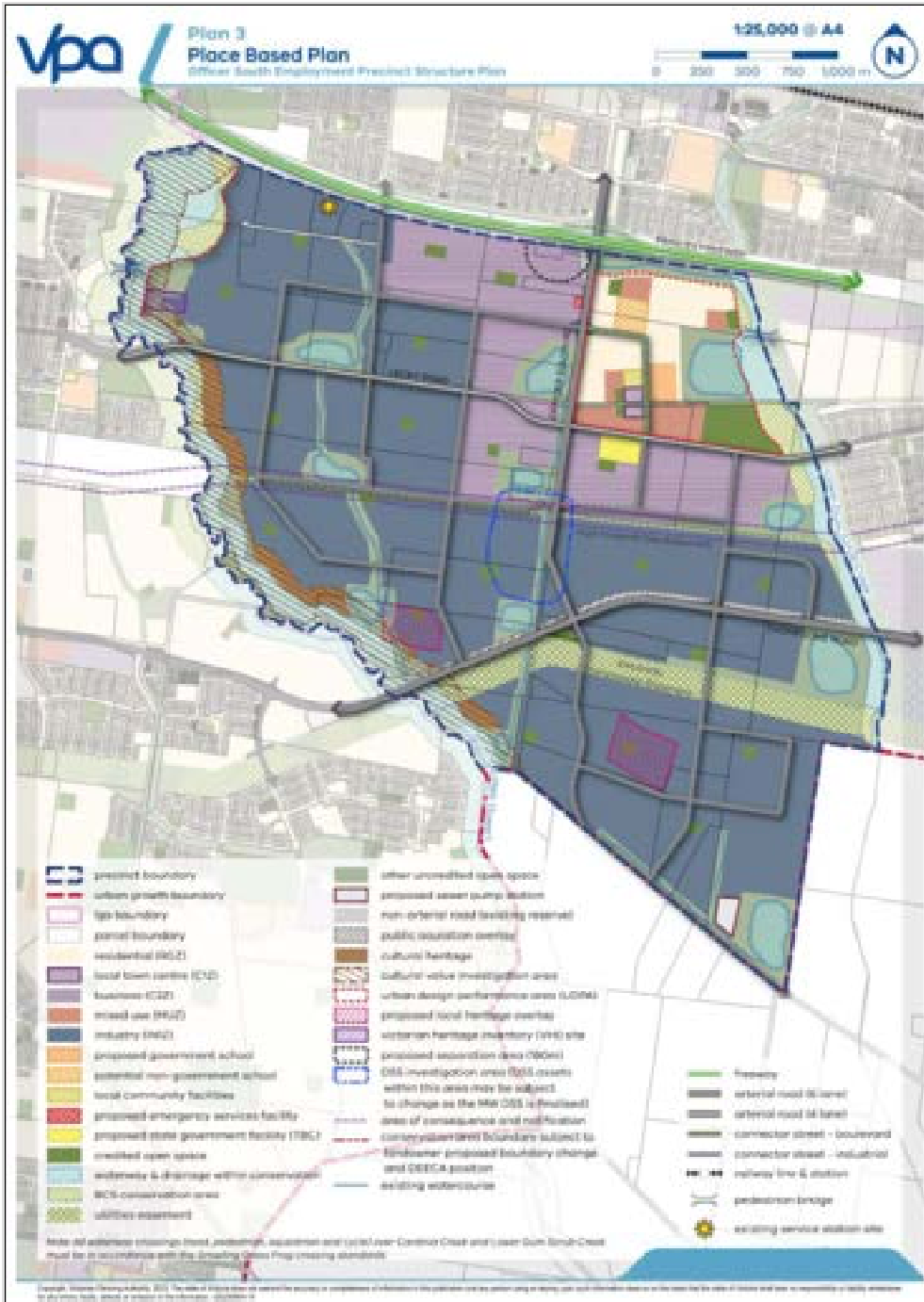


Figure 2: Place Based Plan (reproduced Plan 3 from the Officer South Employment PSP)



## 2.2 Adjacent development potential

Due to its location within the urban growth boundary, there is additional residential, industrial and commercial development occurring surrounding the Officer South Employment Precinct.

The precinct abuts several adjacent growth areas, as shown in Figure 3, including Officer PSP to the north, Cardinia Road Employment PSP to the east and the Minta Farm, Clyde North and Cardinia Creek South PSPs to the west.

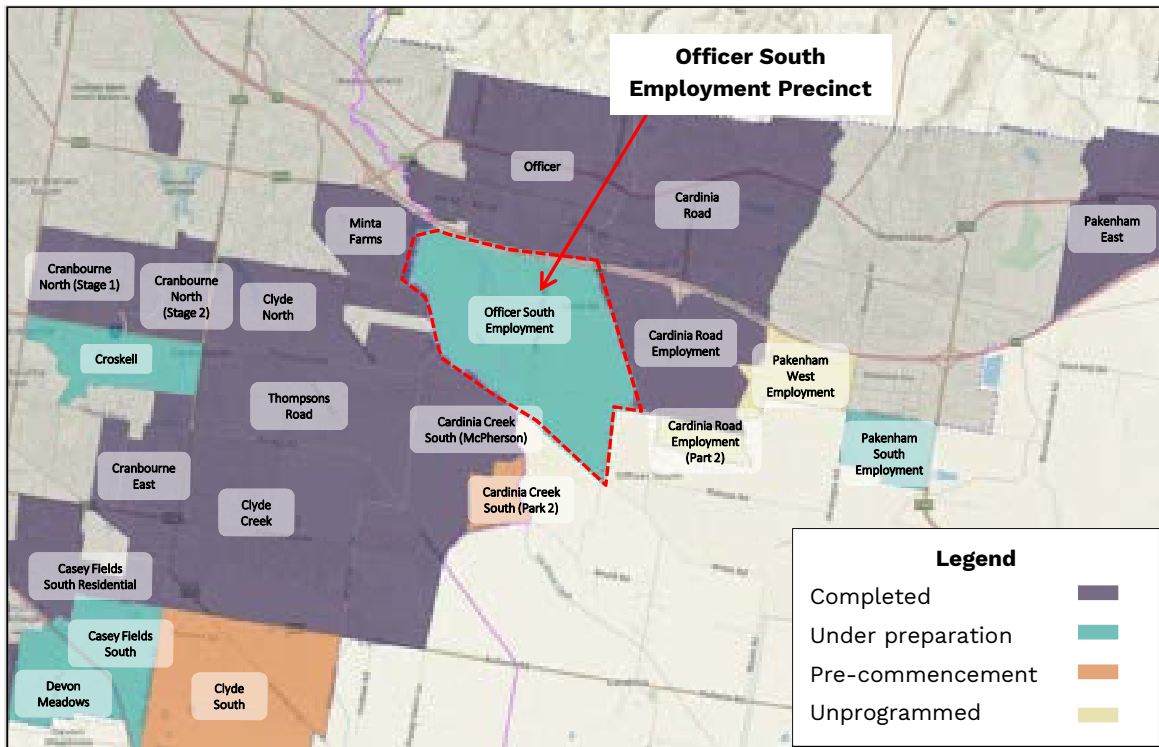


Figure 3: PSP Area Plan (reproduced from the VPA website)

## 2.3 Existing key road network

The road network includes:

- Officer South Road
- Lecky Road (Grices Road)
- Thompsons Road
- Patterson Road
- Princes Freeway.



### 2.3.1 Officer South Road

Table 1 describes the features of the existing and proposed road.

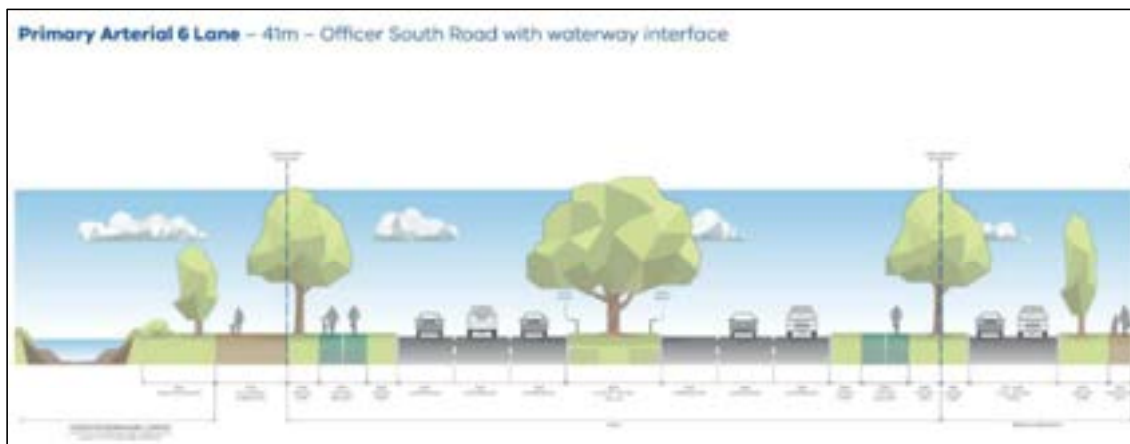


Figure 4 provides further information about the road as part of the draft PSP.

Table 1: Officer South Road features

Feature	Description	
	Existing	Proposed
Road type	Local Major Collector Road (unsealed – 4B1), as per Cardinia Council road register	Primary arterial (6-lane)
Access	Provides access between the Princes Freeway and Bridge Road / Rix Road at the northern end and Patterson Road at the southern end	
Average annual daily traffic (AADT)	264 vpd (south of freeway) 6,345 vpd (north of freeway)	60,000 vpd (typically)
Road reservation	27.2 m wide	41.0 m wide arterial road reserve, plus 12.0 m wide reserve for local frontage road (service road / loop road)
Carriageway	5.5 m – 6.0 m wide with 1 lane in each direction (width varies)	27.0 m wide divided (arterial) carriageway with 3 lanes in each direction, separated by a 6.0 m wide centre median
Kerbside parking	Not permitted	Not permitted
Speed limit	100 km/h (default rural)	80 km/h
Bicycle lanes	None	3.0 m wide two-way off-road bike path on both sides



Feature	Description	
	Existing	Proposed
Footpath / shared paths	None	1.5 m wide footpath on both sides (within service road and/or drainage corridor)
Public transport routes	None	Future bus route / PPTN, including on-road bus stops
Other	N/A	Future principal freight network (PFN) route

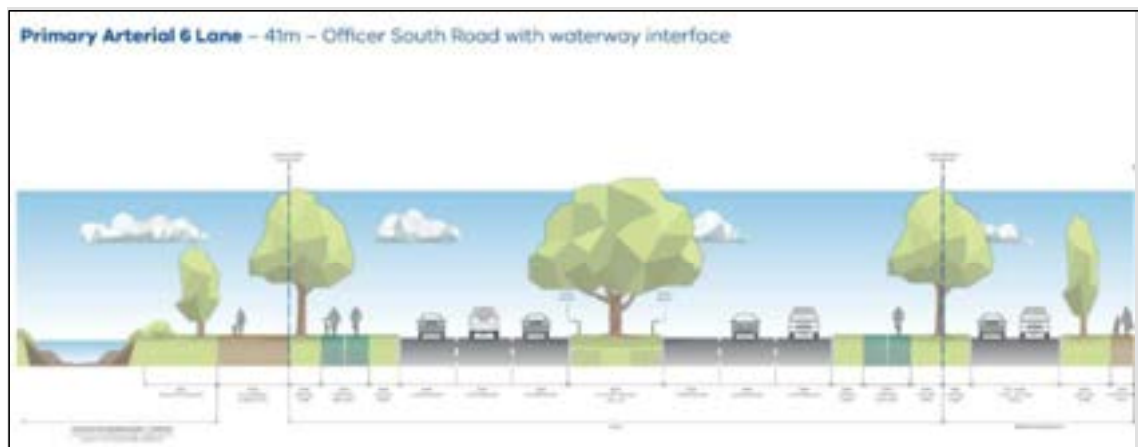


Figure 4: Primary Arterial cross section – Officer South Road

In the Officer PSP area (north of the Officer South Employment PSP), Officer South Road between the Princes Freeway and Bridge Road / Rix Road has been upgraded to a four-lane two-way road with a 60 km/h speed limit. This section of road is classified as a local arterial road (4A) and includes the provision of an off-road shared path on the western side of the carriageway.

Currently, Officer South Road continues to the north of Bridge Road / Rix Road to the railway line and continues as Station Street north of the railway line to provide a connection to Princes Highway.

As part of the state’s level crossing removal project, there is a current project to remove the Station Street level crossing by November 2024. This project involves the truncation of Officer South Road / Station Street at the railway line, requiring traffic to detour along Bridge Road and Rix Road via Brunt Road and Siding Avenue to access Princes Highway.

It is acknowledged that as part of the Officer PSP, the Station Street connection is ultimately planned to be truncated and replaced by a north-south arterial road connecting the Officer South Road / Bridge Road / Rix Road intersection with the Princes Highway / Bayview Road intersection. However, this road is a state infrastructure item not funded by the PSP, with no current funding commitment or timeframe.



There are known current congestion issues at the Brunt Road / Princes Highway intersection, limiting the available future intersection capacity. It is also noted that Siding Avenue is the key road passing through the future Officer town centre, designated to be a 40 km/h zone prioritising pedestrians, cyclists, parking and local access along its length.

Based on the above, there is uncertainty in relation to future access to/from Officer South Road from the Officer South Employment PSP and Officer PSP areas in the interim, prior to the unknown future delivery of the north-south arterial road.

### 2.3.2 Lecky Road / Grices Road / Centenary Boulevard

Table 2 describes the features of the existing and proposed road. Figure 5 and Figure 6 provide further information about the road as part of the draft PSP.

Table 2: Lecky Road / Grices Road / Centenary Boulevard features

Feature	Description	
	Existing	Proposed
Road type	Local access street (unsealed), as per Cardinia Council road register	Secondary arterial (4-lane)
Access	<p>Lecky Road / Centenary Boulevard (within Cardinia Shire Council) provides access to Cardinia Road to the east and terminates at Stephens Road to the west.</p> <p>Grices Road (within Casey City Council) terminates at Cardinia Creek at the east end and provides access to Clyde Road at the western end.</p> <p>At present there is no connection across Cardinia Creek between Casey City Council and Cardinia Shire Council or the PSP area.</p>	<p>To the east of Officer South Road, the existing Lecky Road carriageway is proposed to be closed. The proposed Lecky Road carriageway will follow a new alignment and link with Centenary Boulevard to the east of Lower Gum Scrub Creek. This will provide access to Cardinia Road at the eastern end (within the Cardinia Road Employment Precinct).</p> <p>To the west of Officer South Road, Lecky Road will follow the existing alignment and link with Grices Road to the west of Cardinia Creek, following the construction of the Cardinia Creek bridge (by the state). This will provide access to Clyde Road at the western end (within Casey City Council).</p>
AADT	94 vpd	40,000 vpd (typically)
Road reservation	18.5 m wide	34.0 m wide arterial road reserve, plus 12.0 m wide reserve for local frontage road (one-way service road)
Carriageway	5.5 m – 6.0 m wide with 1 lane in each direction (unsealed, width varies)	24.0 m wide divided (arterial) carriageway with 2 lanes in each





Feature	Description	
	Existing	Proposed
		direction, separated by a 6.0 m wide centre median
Kerbside parking	Not permitted	Not permitted
Speed limit	100 km/h (default rural)	80 km/h
Bicycle lanes	None	3.0 m wide two-way off-road bike paths on both sides
Footpath / shared paths	None	1.5 m wide footpath on both sides (within service road)
Public transport routes	None	Future bus route / PPTN, including on-road bus stops

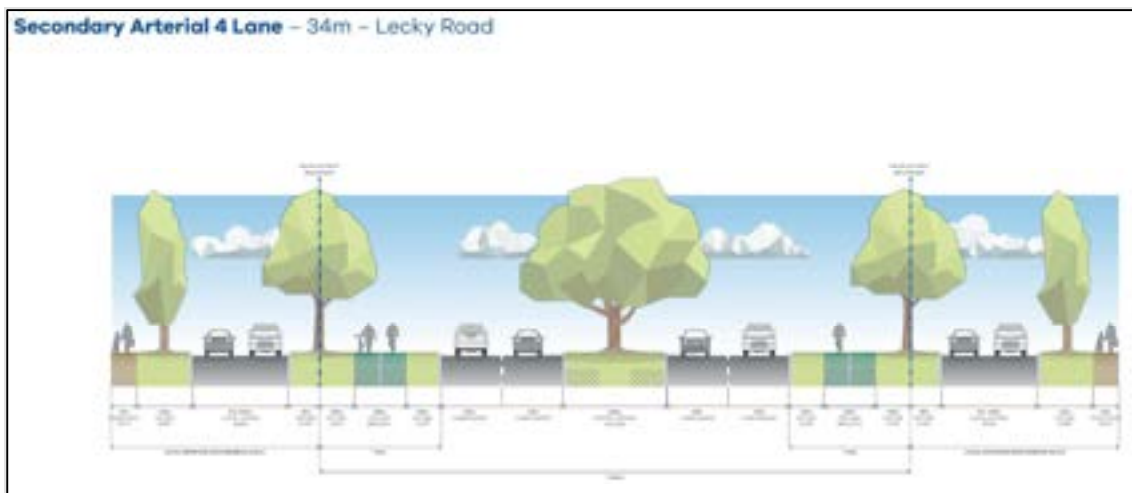


Figure 5: Secondary Arterial – Lecky Road / Grices Road / Centenary Boulevard

Lecky Road / Grices Road / Centenary Boulevard will form a local east-west secondary arterial road corridor through the Cardinia Road Employment Precinct, linking Clyde Road (Casey City Council) and Cardinia Road (Cardinia Shire Council).

It is noted that the existing alignment of Lecky Road is proposed to be modified to the east of Officer South Road, with the new alignment linking with Centenary Boulevard.

The corridor will be known as Grices Road between Clyde Road and Cardinia Creek, Lecky Road within the PSP area (Cardinia Creek to Lower Gum Scrub Creek) and Centenary Boulevard between Lower Gum Scrub Creek and Cardinia Road.



Figure 6: Secondary Arterial –Lecky Road / Grices Road / Centenary Boulevard – Plan view

It is noted that the Lecky Road / Grices Road / Centenary Boulevard plan view (Figure 6) shows zebra crossings located on the bends within the service roads / local frontage roads. To ensure safety of pedestrians, zebra crossings should be provided perpendicular to the road and located to ensure adequate sightlines are provided between pedestrians and vehicles. As shown, the pedestrian crossings may not provide safe crossing facilities for pedestrians and should be reviewed.

### 2.3.3 Thompsons Road

Table 3 describes the features of the existing and proposed road. Figure 7 and Figure 8 provide further information about the road as part of the draft PSP.



Table 3: Thompsons Road features

Feature	Description	
	Existing	Proposed
Road type	None (within PSP area)	Primary arterial (6-lane)
Access	<p>The existing Thompsons Road provides access between Mornington Peninsula Freeway interchange in Carrum at the west end and terminates west of Cardinia Creek at the eastern end within Casey City Council. There is no existing connection across the creek or to the PSP area.</p> <p>Thompsons Road currently connects to the local government areas of Kingston, Frankston, Greater Dandenong and Casey.</p>	<p>The draft PSP shows a future road bridge across Cardinia Creek connecting Casey City Council and Cardinia Shire Council and the PSP area.</p> <p>Thompsons Road will provide a connection to the east through the adjacent Cardinia Road and Pakenham South Employment PSP areas to ultimately connect with Healesville-Koo Wee Rup Road.</p> <p>Thompsons Road is a state arterial road and the delivery/funding for these works are not part of the draft PSP.</p>
Two-way AADT	14,000 vpd (within Casey City Council)	60,000 vpd (typically)
Road reservation	Nil	<p>41.0 m – 70.0 m wide arterial road reserve, plus 12.0 m wide reserve for local frontage road (service road / loop road)</p> <p><i>*41.0 m width road reserve, with additional Public Acquisition Overlay provided for DTP<sup>1</sup> use.</i></p>
Carriageway	Nil	27.0 m wide divided (arterial) carriageway with 3 lanes in each direction, separated by a 6.0 m wide centre median
Kerbside parking	N/A	Not permitted
Speed limit	N/A	80 km/h
Bicycle lanes	N/A	3.0 m wide two-way off-road bike path on both sides
Footpath / shared paths	N/A	1.5 m wide footpath on both sides
Public transport routes	N/A	Future bus route / PPTN, including on-road bus stops
Other	N/A	Future principal freight network (PFN) route

<sup>1</sup>Department of Transport and Planning (DTP)



Figure 7: Primary Arterial – Thompsons Road



Figure 8: Primary Arterial – Thompsons Road – Plan view

It is noted that the Thompsons Road plan view (Figure 8) shows zebra crossings located on the bends within the loop roads / service roads / local frontage roads. To ensure safety of pedestrians, zebra crossings should be provided perpendicular to the road and located to ensure adequate sightlines are provided between pedestrians and vehicles. As shown, the pedestrian crossings may not provide safe crossing facilities for pedestrians and should be reviewed.



### 2.3.4 Patterson Road

Table 4 describes the features of the existing and proposed road. Figure 9 and Figure 10 provide further information about the road as part of the draft PSP.

Table 4: Patterson Road features

Feature	Description	
	Existing	Proposed
Road type	Local Major Collector Road (unsealed – 4B1), as per Cardinia Council road register	Rural Interface Road
Access	Provides access between Cardinia Road (outside of the precinct) at the east end and Officer South Road at the north-west end	
Two-way AADT	132 vpd	3,000 vpd
Road reservation	21.7 m wide	26.0 m wide rural interface road <i>A wider road reserve may be required to provide a biolink and protect the existing trees.</i>
Carriageway	5.5 m – 6.0 m wide with 1 lane in each direction (unsealed, width varies)	7.0 m wide carriageway, with one lane in each direction
Kerbside parking	Not permitted	Not permitted
Speed limit	100 km/h (default rural)	60–80 km/h (TBC)
Bicycle lanes	None	None
Footpath / shared paths	None	1.5 m wide footpath adjacent to the PSP property boundary, located within tree reserve / biolink
Public transport routes	None	None

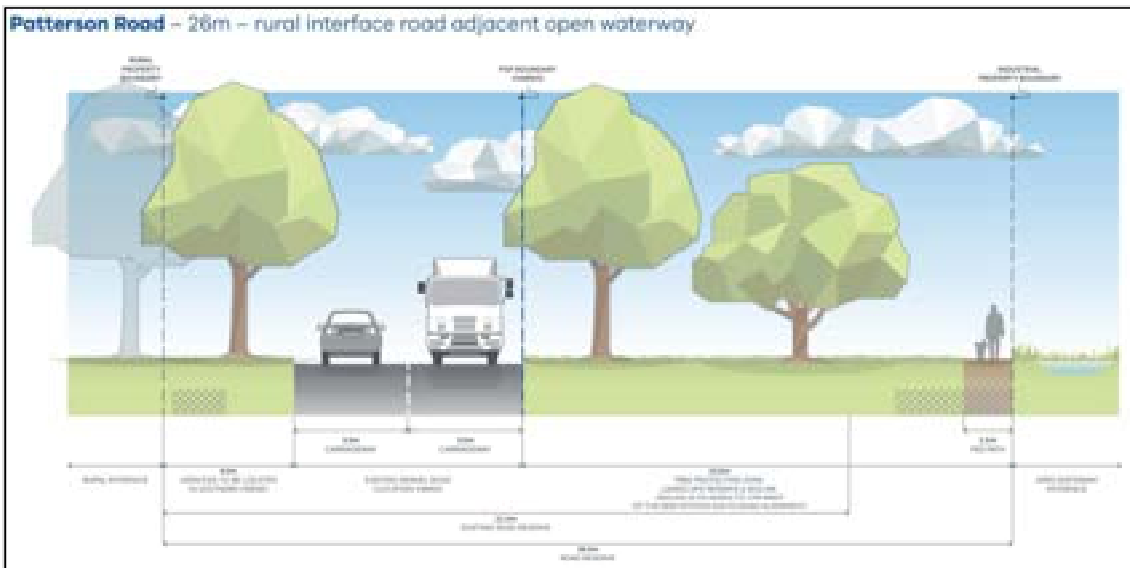


Figure 9: Rural interface road (with open waterway) – Patterson Road

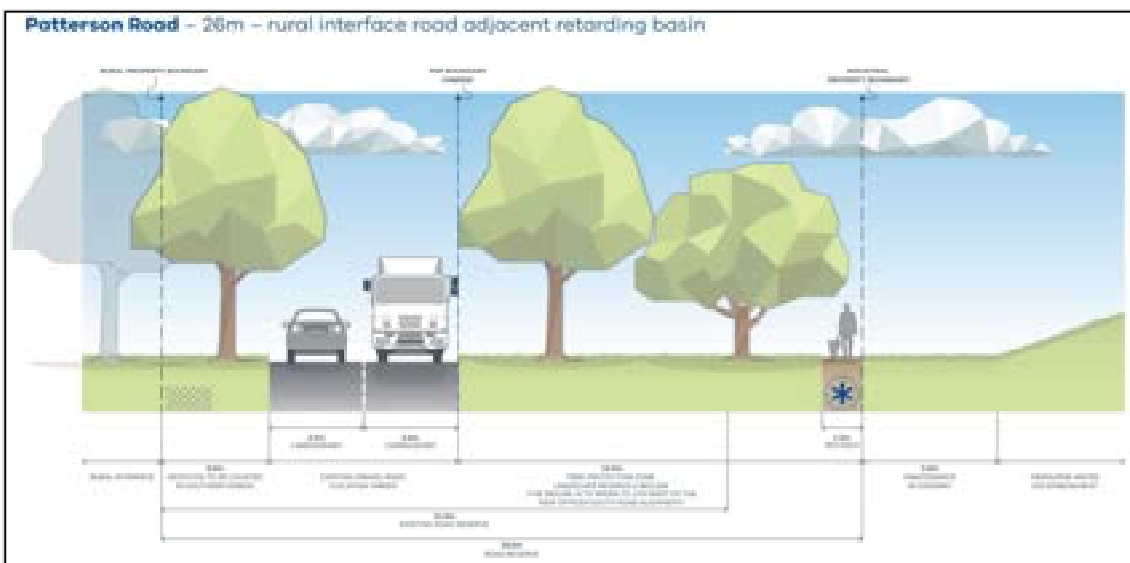


Figure 10: Rural interface road (with retarding basin) – Patterson Road



### 2.3.5 Princes Freeway

Table 5 describes the features of the existing road.

Table 5: Princes Freeway features

Feature	Description
	Existing
Road type	6-lane freeway, narrowing to 4-lanes east of the Cardinia Road interchange
Access	Eastern section provides access between Narre Warren to the west and Morwell to the east.  West of Narre Warren it continues as the Monash Freeway, which provides access to the Melbourne CBD and the Princes Freeway western section which provides access to Geelong.
Two-way AADT	67,000 vpd <sup>1</sup>
Road reservation	Approximately 120 m wide
Carriageway	6 x 3.5 m wide lanes divided road
Kerbside parking	Not permitted
Speed limit	100 km/h
Bicycle lanes	Not permitted
Footpath / shared paths	Not permitted
Public transport routes	Not permitted

<sup>1</sup> Traffic volume obtained from VicRoads Open Data Portal. Traffic volume last updated in 2020.

Access to / from Princes Freeway is currently available via a half diamond interchange at Officer South Road, providing access to / from the Melbourne CBD (west). A future full diamond interchange is planned in this location to facilitate access to / from Gippsland to the east. However, this is a state infrastructure item not funded by any of the surrounding PSPs, with no current funding commitment or timeframe.



### 2.4 Heavy vehicle access

Heavy vehicle access for higher mass limited (HML) and B-Double vehicles is restricted to ensure access only occurs along suitable routes as per the National Heavy Vehicle Register (NHVR) gazetted network. Maps showing the gazetted HML vehicle and B-Double networks in Victoria are available via the VicRoads website and extracts are shown in Figure 11 and Figure 12.



Figure 11: HML vehicle network (Source: <https://nhvr.maps.arcgis.com/>)



Figure 12: Gazetted B-Double network (Source: <https://nhvr.maps.arcgis.com/>)





Access along roads in the vicinity of the Officer South Employment PSP is currently restricted as follows:

- HML vehicles (i.e. 19 m semi-trailers):
  - permitted for travel along Princes Freeway and along each of the key local collector roads in Officer, including Bridge Road, Rix Road, Brunt Road and Officer South Road (south of Bridge Road)
  - currently permitted for travel with conditional approval along Officer South Road and Station Street (between Bridge Road and Princes Highway)
    - conditional access is currently approved with comments notifying users that access will be revoked following the level crossing removal in November 2024 (if not sooner), as follows:
 

*“Conditionally approved - Local road under DTP management as part of MRPA’s Station Street, Officer, Level Crossing Removal Project until Nov 30, 2024 or earlier, if revoked”*
    - it is noted that access for the businesses south of the railway line will be retained, but with access restricted to/from the south following the level crossing removal.
- B-Double vehicles (26 m):
  - permitted for travel along Princes Freeway and Officer South Road (south of Bridge Road)
  - currently permitted for travel with conditional approval along Officer South Road and Station Street (between Bridge Road and Princes Highway), as per the HML network as described above. Access will be revoked following the level crossing removal in November 2024 (if not sooner).
  - not permitted for travel along Bridge Road, Rix Road or Brunt Road unless specifically permitted through Council/NHVR for pickup/delivery purposes only.

Based on the existing network as described above, there will be implications on heavy vehicle access to/from the PSP area as follows:

- From November 2024, there will be no alternative north-south access for B-Double vehicles from the Officer South Employment PSP area to access Princes Highway, following the truncation of Station Street at the level crossing. All B-Double vehicle access to/from the PSP will need to be facilitated via the Officer South Road freeway interchange.

Until such time that the Officer South Road freeway interchange is upgraded to provide full access (state infrastructure), all higher productivity freight vehicles travelling to/from the east (Gippsland) will be required to access the freeway and subsequently perform a U-turn manoeuvre at the O’Shea Road / Princes Freeway full diamond interchange, located approximately 3 km to the west of Officer South Road.



- As semi-trailers (19 m articulated vehicles) are permitted to travel on Bridge Road with no specific approvals needed, they will likely use Bridge Road to access Cardinia Road when traveling to/from Gippsland rather than detouring via the freeway to the west.
  - Bridge Road is a major collector road within a residential subdivision, comprising a four-lane, two-way divided carriageway and with the provision of 3 dual-lane roundabouts between Officer South Road and Cardinia Road.
  - Roundabouts on collector streets are designed to safely accommodate buses, and while a 19 m semi-trailer may physically fit through the intersection, they will encroach into the adjacent lanes, raising safety and operational concerns.
  - The use of large heavy vehicles along Bridge Road should be discouraged where possible.



### 3 Assessment of the proposed development

The Officer South Employment Precinct comprises approximately 1,069 hectares of land located within an Urban Growth Zone (UGZ). The following specific land uses are proposed within the Draft Officer South Employment PSP:

- 628.3 ha of net developable area for employment
  - 502.6 ha of net developable area for industrial land uses (including creation of approximately 10,236 jobs in the State Significant Industrial Precinct)
  - 125.7 ha of net developable area for commercial / business land uses (including creation of 11,008 jobs in the Regionally Significant Commercial Area)
- 43.9 ha of net developable area for residential development (1,617 dwellings, with 5,013 residents), inclusive of employment development within the town centre and mixed use areas (creation of 769 jobs)
  - 22.1 ha for amenity-based (low rise and medium density) residential development (797 dwellings at 36 lots / ha)
  - 13.7 ha for mixed use areas, including medium to high density residential development (548 dwellings at 40 lots / ha), with opportunities for home-based businesses, small offices and retail premises
  - 1.5 ha for activity / town centre areas, including high density residential development (60 dwellings at 40 lots / ha), commercial development (1,600 m<sup>2</sup>) and retail development (2,300 m<sup>2</sup>)
  - 6.6 ha for balance area (low rise and medium density) residential development (211 dwellings at 32 lots / ha).
- 10.75 ha of net developable area for community and education
  - 6.5 ha of developable area for two primary schools (government and non-government)
  - 4.25 ha of developable area for community facilities (including emergency services and government facility)
- 333.69 ha open space
  - 23.02 ha of credited active open space (sports reserve and local parks)
  - 310.68 ha of uncredited passive open space
- 50.23 ha transport
- 2.0 ha utilities.



Ultimately, primary vehicular access to the precinct is provided via Officer South Road, Thompsons Road and Lecky Road / Grices Road / Centenary Boulevard, with Patterson Road and Stephens Road providing additional minor access points (local access only).

The Lecky Road / Centenary Boulevard and Thompsons Road bridge crossings across Lower Gum Scrub Creek (BR-01 and BR-02 as per the Precinct Infrastructure Plan) are partially funded by both Officer South Employment Precinct and Cardinia Road Employment Precinct.

The Lecky Road / Grices Road and Thompsons Road bridge crossings across Cardinia Creek (BR-03 and BR-04 as per the Precinct Infrastructure Plan) are identified as state infrastructure items and are not proposed to be provided or funded as part of the Officer South Employment PSP.

While an extension of Stephens Road is shown in the Road Network Plan to connect Officer and Officer South, the provision of a bridge crossing of Princes Freeway along Stephens Road has not been specifically identified in the PSP.

Hence, in the interim (before the provision of major state infrastructure), primary vehicular access to the precinct will be provided via Officer South Road (linking with the Princes Freeway to the north), Lecky Road / Centenary Boulevard (linking with Cardinia Road to the east via Bridge BR-01) and Thompsons Road (linking with Cardinia Road to the east via BR-02). Patterson Road will provide an additional minor access point to the south (local access only) and provides limited access to South Gippsland only.

### 3.1 Traffic generation and distribution

#### 3.1.1 Traffic generation assumptions

Traffic generation for new developments is typically estimated using the traffic generation rates provided in the RTA Guide to Traffic Generating Developments (2002), as well as the updated rates provided in the RMS Technical Direction 04a – Updated traffic surveys (2013). These rates were adopted as no alternative traffic generation rates were provided by the VPA when requested by Council.

The following assumptions have been applied to assist in estimating the traffic generation for the precinct:

- A peak hour rate of 13% of the daily traffic has been applied for the industrial / business portion of the precinct. This figure is based on a combination of specified rates within the RTA Guide and existing surveyed traffic volumes within South East Business Park (industrial precinct in Pakenham), as follows:
  - Review of the RTA Guide (2002) and RMS Technical Direction 04a (2013) suggests a variety of peak hour generation rates, including:
    - Industrial Estates: 14 – 16% of daily traffic (as per Table 3.4 of RTA Guide, 2002)



- Warehouses: 12.5% of daily traffic (as per section 3.10.2 of RTA Guide, 2002)
- Business Parks and Industrial Estates: 11 – 12% of daily traffic (RMS Technical Direction 2013)
- Review of traffic surveys undertaken in November 2022 at the main access points to the South East Business Park reveals peak hour percentages, as follows:
  - 7 – 9 % of daily traffic, at the eastern end of South East Boulevard
  - 7.5 – 10.5% of daily traffic, at the western end of South East Boulevard
- It is acknowledged that a rate of 13% was also applied for the assessment of the nearby Pakenham South Employment Precinct (agreed by DTP).
- A ratio of 40% has been applied to estimate the equivalent Gross Floor Area (GFA) as a percentage of the total developable land for the industrial / business land uses. This is based on the accepted rates previously applied in the Pakenham South Employment PSP, as well as the ratio of total land to GFA measured within the existing South East Business Park in Pakenham South.
  - It is noted that the Cardinia Road Employment Precinct used a ratio of 50% to estimate the GFA for the industrial / business land uses (as specified in *Table 1: Estimated Employment Generation* on page 20 of the Cardinia Road Employment PSP and reproduced in Appendix 1). Should this rate be applied, the traffic generation estimates for the precinct would be higher.
- A high-level traffic generation rate of 200 trips / ha of developable land has been applied to estimate the traffic generation for the industrial and business land uses within the PSP. This rate is equivalent to 5 daily trips / 100m<sup>2</sup> GFA, when applying the 40% ratio as above, and 0.65 peak trips / 100m<sup>2</sup> GFA when applying the 13% peak hour ratio.
  - The applied rate is a high-level rate used to reflect the estimated traffic generation for the variety of uses proposed within the precinct, without requiring a breakdown of the specific land use types. Applying this rate takes into consideration that some specific uses will generate less traffic (e.g. heavy industrial) and some uses will generate more traffic (e.g. commercial). It is understood that this rate was also applied in the preparation of the Pakenham South Employment PSP.
  - It is noted that the applied rate is conservative, as it is higher than the rate specified for 'business parks and industrial estates' in the RMS Technical Direction, where a daily rate of 4.6 trips / 100m<sup>2</sup> GFA and a peak rate of 0.52 – 0.56 trips / 100m<sup>2</sup> GFA applies. This rate is reflective of traffic generated from a combination of factories, warehouses, offices, retailers, workshops, manufacturers and other commercial businesses.



- A ratio of 10% has been applied to estimate the equivalent commercial Gross Floor Area (GFA) as a percentage of the total developable land for the mixed use land. This is an estimation to reflect the land uses as specified in the PSP document, specifying a focus on residential dwellings (provision of 548 lots), with an allowance for homebased businesses, small offices and retail premises, specialty shops, local produce stores and cafés activating open space. The rate of 10% GFA has been applied to reflect the low level of expected commercial development provided within the residential area.
- The supplementary report *Trip Generation Surveys – Schools, Analysis Report (2014)*, prepared by GTA Consultants for Roads and Maritime Services (RMS, formerly RTA), was used to estimate the peak hour traffic generation for the proposed schools. A specific daily traffic generation rate is not specified in this document, however, review of the available daily traffic volume data indicates the daily generation is 30% higher than the combined peak hour volume (i.e. AM and PM + 30%).
- The proposed active reserve has not been included in the assessment as it is anticipated that it will not generate traffic to / from the precinct during the commuter peak hours.

### 3.1.2 Traffic generation to / from development

The RTA Guide provides traffic generation rates for the peak periods associated with the use, as well as for the peak activity time of the adjacent road network (i.e. commuter peak hour). The peak hours for the proposed uses in the PSP generally align with the commuter peak hours (i.e. 8-9am and 5-6pm), with the exception of the following:

- the retail peak hour (after 9am) does not typically align with the AM commuter peak hour (8-9am)
- the peak hour associated with the school (3-4pm) typically occurs prior to the on-road PM peak hour (5-6pm).

Based on the above, the retail and mixed use (specialty shops) traffic has been removed from the AM peak hour total generation and the school traffic has been removed from the PM peak hour total generation.

The traffic generated by the proposed development is summarised in Table 6.



Table 6: Daily and peak traffic flow for the proposed development

Development Component & Scale	Trip Generation Rate		Trip Generation (No. of vehicles)	
	Peak Hour	Daily	Peak Hour	Daily
628.3 ha industrial / business use 2,513,200 m <sup>2</sup> GFA	13% of daily traffic	5 trips / 100 m <sup>2</sup> GFA (assuming GFA is 40% of the total area)	16,336	125,660
3,900 m <sup>2</sup> GFA town centre (retail / shopping centre)	12.5 trips / 100 m <sup>2</sup> GFA	121 trips / 100 m <sup>2</sup> GFA (assuming GFA is 40% of the total area)	488 <sup>1</sup>	4,719
13.7 ha mixed use (specialty shops) 13,700 m <sup>2</sup> GFA	5.6 trips / 100 m <sup>2</sup> GFA	55.5 trips / 100 m <sup>2</sup> GFA (assuming GFA is 10% of the total area)	767 <sup>1</sup>	7,604
1,053 primary school students	1.23 trips / student (AM) 1.01 trips / student (PM)	2.91 trips / student	1,295 (AM) 1,064 (PM) <sup>2</sup>	3,066
1,617 residential lots (medium density)	0.65 trips / dwelling	6.5 trips / dwelling	1,051	10,511
<b>Total</b>			<b>18,682 (AM)</b> <b>18,642 (PM)</b>	<b>151,560</b>

<sup>1</sup> Not included in AM peak total due to the peak period not coinciding with commuter peak hour.

<sup>2</sup> Not included in PM peak total due to the peak period not coinciding with commuter peak hour.

### 3.2 GHD strategic modelling

The Victorian Planning Authority (VPA) commissioned GHD to prepare a strategic model using the Victorian Integrated Transport Model (VITM) based on full development of the Officer South Employment PSP (at the full development design year of 2051).

The GHD model includes the following road network upgrades which are outside the scope of the PSP provision:

- Thompsons Road extension and duplication (6-lane arterial), including a bridge connection across Cardinia Creek (to the west) and a connection over Lower Gum Scrub Creek to Cardinia Road and Healesville – Koo Wee Rup Road (to the east)
- Grices Road / Lecky Road extension and duplication (4-lane arterial), including a bridge connection across Cardinia Creek (to the west) and a connection over Lower Gum Scrub Creek to Cardinia Road (to the east)
- Officer South Road upgrade (6-lane arterial), including upgrade to a full diamond interchange at Princes Freeway



- Stephens Road overpass, providing a local connection to Officer.

The assumptions used to derive the model are unclear, with no specific mention of the traffic generation or distribution assumptions adopted in the model. High level information provided suggests that the GHD model:

- employment: 21,544 jobs
- population: 1,640 residential dwellings / 5,132 people
- education: 1,053 primary school students.

Review of the information provided, including the 'trip generation' figures presented on the 2051 output diagrams, indicate that the PSP area will generate the following traffic volumes at full development:

- 63,400 vehicles per day (vpd)
- 7,900 vehicles per 2-hour AM peak period
- 10,400 vehicles per 2-hour PM peak period.

It is acknowledged that the employment and population figures applied in the GHD model are generally consistent with the PSP. However, using the RTA guide, the Officer South Employment Precinct is estimated to generate approximately 2.4 times the daily traffic volume applied in the GHD model when considering the overall land size and developable area of the PSP.

A summary of the daily traffic volumes is as follows:

- GHD strategic model traffic generation: 63,400 vpd
- estimated traffic generation (RTA Guide rates): 151,560 vpd.

Based on the above, the input data used to develop the GHD strategic model is resulting in low traffic generation estimates.

As a further comparison, applying differing assumptions has the following potential impact on the overall traffic generation for the PSP:

- should the lower rate of 4.6 trips / 100 m<sup>2</sup> GFA be applied to the industrial and business land uses (as per the RMS Technical Direction), the daily traffic generation would reduce by approximately 10,000 vpd. This is still approximately 2.2 times the daily traffic volume applied in the GHD model.
- should the higher ratio of 50% be applied to estimate the GFA of the industrial and business land uses (as per the Cardinia Road Employment Precinct), the daily traffic generation would increase by approximately 30,000 vpd. This is approximately 2.7 times the daily traffic volume applied in the GHD model.

Hence, the outputs of the GHD strategic model are considered very low regardless of the (unknown) assumptions applied.





### 3.2.1 Assumed GHD model traffic generation assumptions

The following high-level assumptions have been made using RTA traffic generation rates to understand the approximate input data used to develop the GHD model in lieu of further information. It is noted that clarification on the input assumptions was requested, but not supplied by the VPA or GHD.

Table 7: Daily traffic volumes

Development Component & Scale	Daily Trip Generation Rate	Trip Generation (No. of vehicles)
Industrial / commercial (21,544 employees)	2,300 trips / 1,000 employees (high level rate applicable to industrial estates with a variety of factory types, as per Table 3.4 of the RTA Guide)	49,551 vpd
Education (1,053 students)	2.91 trips / student	3,064 vpd
Residential (1,640 dwellings)	6.5 trips / dwelling (applicable to medium density dwellings)	10,660 vpd
<b>Total</b>		<b>63,275 ≈ 63,400 as per GHD output</b>

Further examining the assumed GHD model traffic generation rate for the industrial component of the PSP, and reverse engineering using the RTA daily traffic generation rate for industrial uses, results in an equivalent industrial GFA of 99.1 ha for the PSP (refer to equation 1).

Equation 1

$$\text{Traffic generation} = \frac{5 \text{ vpd}}{100 \text{ m}^2 \text{ GFA}} = \frac{49,551 \text{ vpd}}{X \text{ m}^2 \text{ GFA}}$$

$$\therefore X \text{ m}^2 \text{ GFA} = \frac{49,551 \text{ vpd}}{5 \text{ vpd}} \times 100 \text{ m}^2 = 991,024 \text{ m}^2 = 99.1 \text{ ha}$$

This reveals a 15.8% ratio between GFA and total developable industrial land (refer to equation 2). This is well below the 40% ratio observed in nearby employment precincts, such as those discussed above.

Equation 2

$$\frac{\text{Gross Floor Area (GFA)}}{\text{Developable Hectare}} = \frac{99.1 \text{ ha}}{628.3 \text{ ha}} = 15.8\%$$

Hence, this low GFA ratio suggests that the PSP would need to comprise very low density industrial uses with low vehicular demands on the developed land to return the volumes assessed in the GHD model.



Low density industrial uses may include facilities with a large storage requirement, i.e. shipping container storage, or highly automated factories with minimal staffing requirements.

Alternatively, should standard industrial densities apply with a 40% GFA ratio, the assumed traffic generation in the GHD model is equivalent to only approximately 248 ha of developed land (refer to equation 3).

Equation 3

$$\frac{\text{Gross Floor Area (GFA)}}{\text{Developable Hectare}} = \frac{99.1 \text{ ha}}{X \text{ ha}} = 40\%$$

$$\therefore X \text{ ha} = \frac{99.1 \text{ ha}}{40\%} = 247.8 \text{ ha}$$

Based on the above, the zoning of the land within the PSP may not be accurately reflected by the input data used to develop the GHD model.

Noting the discrepancy between the traffic generation from the GHD model and the average traffic generation estimated based on the rates in the RTA Guide, it is recommended that:

- the GHD strategic model is reviewed and revised to ensure that the traffic generation inputs / outputs are consistent with the proposed land uses within the PSP area
- the traffic impacts based on the revised strategic model be considered and the proposed PSP infrastructure be modified to reflect the revised outputs.

### 3.2.2 Modified traffic generation and distribution

The above assessment suggests that the input data used in the GHD model may not accurately reflect the level of development that may occur within the PSP area.

As such, to determine the anticipated impact at key intersections on the arterial network at full development of the PSP, the GHD model outputs have been used as a base with additional traffic added to each development zone to reflect the higher anticipated traffic generation for the precinct.

The following assumptions have been applied to assist in estimating the modified traffic generation and distribution for the precinct:

- The 2051 GHD model output volumes have been applied as base volumes, applying a ratio of 55% of the 2-hour peak period volumes to estimate the peak hour traffic volumes within the precinct. This is the generally accepted rate to convert 2-hour peak volumes (VITM output) to normal 1 hour peak volumes. This is consistent with the ratio applied in the Integrated Transport Assessment prepared by Ratio for the VPA.
- No additional traffic has been added to reflect the educational or residential components of the PSP, as this has already been included in the GHD model.



- Additional traffic added to the GHD model to reflect the increased industrial generation has been applied spatially within the precinct using the model distribution (i.e. model volumes within each zone have been increased by a consistent factor to give the overall volume estimated).
- A 10% reduction in the total industrial traffic generation has been included to make allowance for internal trips within the PSP area (i.e. multi-use trips).
- Additional traffic added to the GHD model to reflect the increased generation for the town centre / shopping centre component of the PSP has been applied to the north-east corner of the precinct (in the PM peak only). Of the estimated traffic generation, 50% has been added to the volumes as new trips. This is as per Commentary 8 of Austroads Guide to Traffic Management Part 12, which specifies:
  - 50% new trips
  - 22% diverted drop-in trips
  - 28% undiverted drop-in trips (i.e. internal to PSP).
- No additional traffic has been added to the GHD model for the mixed-use commercial component of the PSP. Traffic generation associated with the mixed-use commercial component is assumed to be internal to the PSP area only, due to the small, local function of the commercial uses.
- Additional traffic added to the GHD model has been distributed as per the following overall directional splits:
  - 25% to/from north via Officer South Road (accessing Officer and Princes Freeway interchange)
  - 20% to/from east via Lecky Road / western arterial
  - 15% to/from east via Thompsons Road
  - 20% to/from west via Lecky Road / Grices Road
  - 15% to/from west via Thompsons Road
  - 5% to/from south via Patterson Road.

It is noted that these directional splits have been estimated based on the likely movement of traffic to the wider road network at full development of the PSP area and anticipated delivery of state infrastructure (i.e. access to the west via Thompsons Road and Lecky Road / Grices Road).

- 10% of traffic generated in the north-western section of the precinct has been distributed to the Stephens Road bridge (local connection only). This equates to approximately 2% of the overall traffic volume.



Based on the above assumptions, the increased mid-block traffic volumes were estimated to provide a high-level indication of the likely traffic volumes at full development of the PSP, reflecting the traffic generation rates specified in the RTA Guide. The mid-block volumes were then converted to intersection turning movement volumes at each of the key intersections, using the approach and departure volumes to balance the turn movements.

Figure 13 shows the anticipated AM and PM traffic volumes to reflect the RTA guide.



Figure 13: Anticipated traffic volumes to reflect the RTA guide



## 4 Traffic Analysis

### 4.1 SIDRA intersection analysis

SIDRA software is used to analyse the intersections and determine anticipated intersection operations. Typically, the main characteristics used to assess intersection operation are the:

- degree of saturation (DOS)
- 95th percentile queue lengths
- average delay.

Table 8 provides an explanation of the intersection operating characteristics.

Table 8: Definitions of intersection operation characteristics

Degree of Saturation (DOS)			Operation
Sign control	Roundabout	Traffic signals	
< 0.6	< 0.6	< 0.6	Excellent operating conditions, minimal delays
0.6 - 0.699	0.6 - 0.699	0.6 - 0.699	Very good operating conditions, minimal delays
0.7 - 0.799	0.7 - 0.849	0.7 - 0.899	Good operating conditions, delays and queuing increasing
0.8 - 0.899	0.85 - 0.949	0.9 - 0.949	Fair operating conditions, delays and queues growing. Any interruption to flow such as minor incidents causes increasing delays
0.9 - 1.0	0.95 - 1.0	0.95 - 1.0	Poor operating conditions, flows starting to breakdown and queues and delays increase rapidly.
> 1.0	> 1.0	> 1.0	Very poor operating conditions with queues and delays increasing rapidly. Once queues develop it takes a significant time for queues to dissipate resulting in long delays to traffic movements

The DOS of an intersection is the ratio between the arrival (demand) flow and the intersection capacity during a given flow period. A degree of saturation of 1.0 is the theoretical capacity of an intersection, achievable if all parameters are optimal. Inefficiencies in driver behaviour and specific site conditions (including sight lines, gap acceptances, follow-up headways) make this unrealistic in practice.



The practical degree of saturation (or practical capacity) of an intersection is a more realistic measure of what can be achieved prior to an intersection becoming oversaturated and prior to traffic flows breaking down and queues and delays increasing rapidly.

Austrroads Guide to Traffic Management Part 3 (AGTM3) specifies the following target DOS (practical degree of saturation / practical capacity) for different intersection types:

- 0.90 for traffic signals
- 0.85 for roundabouts
- 0.80 for unsignalised intersections.

#### 4.1.1 Primary arterial intersection analysis

The Officer South Road / connector road intersection (IN-01) is a primary arterial – connector street intersection. It is the most critical intersection within the Officer South Employment PSP when considering traffic capacity, due to its proximity to the Princes Freeway (key access point and most critical intersection for the entire PSP) and the resulting high traffic volumes travelling through the intersection.

The VPA has a series of standard intersection designs prepared to provide layout guidance for different intersection types. Figure 14 provides the VPA standard benchmark layout for a primary arterial – connector street intersection.

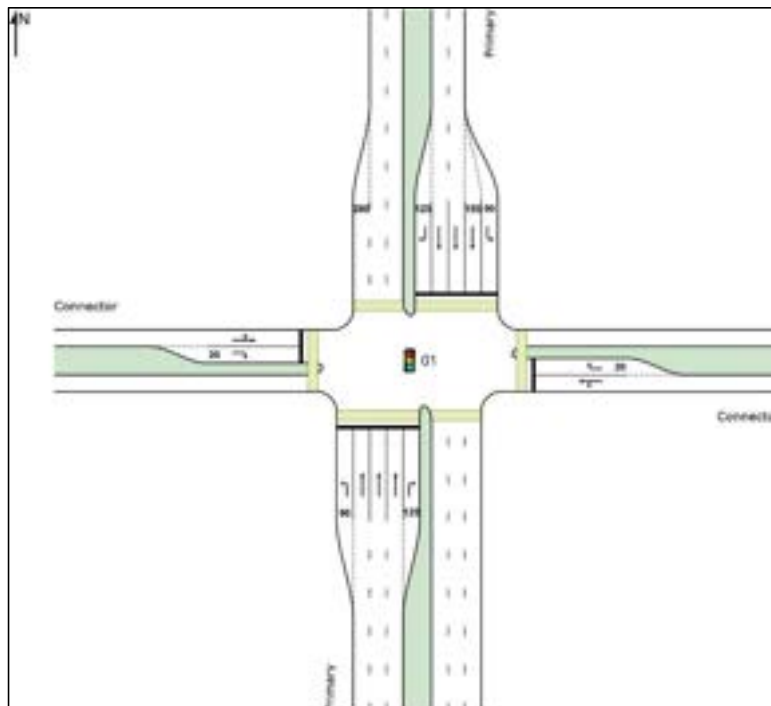


Figure 14: VPA standard benchmark layout - primary arterial – connector street intersection



SIDRA analysis was undertaken at IN-01 during the AM and PM peak periods by applying:

- the VPA standard benchmark layout and the anticipated intersection volumes based on the RTA Guide. This analysis revealed the standard layout was insufficient to accommodate the anticipated traffic volumes (i.e. with a DOS of greater than 0.9).
- the VPA standard benchmark layout was also analysed with the GHD model volumes (under-estimated). This analysis revealed the standard benchmark layout was also insufficient to accommodate even the lower GHD model volumes.

The VPA standard benchmark layouts are insufficient to accommodate the anticipated traffic volumes generated by the PSP, due to the limitations of the existing road network, including the lack of connectivity to the north across the freeway, as well as the significant level of proposed development within the PSP area.

A summary of the SIDRA outputs for IN-01 is shown in Table 9.

Table 9: Summary of SIDRA results applying the VPA standard benchmark layout

Intersection no.	GHD model volumes				Anticipated Volumes (RTA guide)			
	DOS		Cycle time		DOS		Cycle time	
	AM	PM	AM	PM	AM	PM	AM	PM
<b>IN-01</b> Officer South Road / Connector Street (town centre)	0.917	1.058	150	150	2.054	2.040	150	150

As a result, the VPA standard benchmark layout was used as a base, with modifications made to the intersection layout as required (including adding / lengthening lanes and adding slip lanes) to cater for the traffic volumes and to achieve the target DOS of 0.9 for signalised intersections.

The intersection required to accommodate the anticipated traffic volumes (RTA Guide) is shown in Figure 15. Any additional lanes required when compared with the VPA standard benchmark intersection are highlighted in blue. A summary of the SIDRA outputs is shown in Table 10.



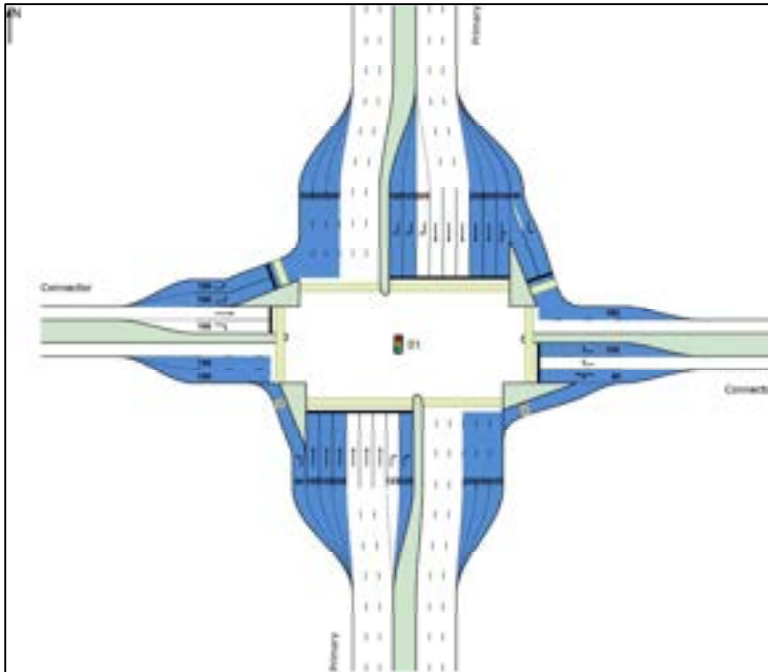


Figure 15: IN-01 intersection layout required to accommodate the anticipated volumes (RTA Guide)

Table 10: Summary of SIDRA results applying the layout required to accommodate the anticipated volumes

Intersection no.	Anticipated Volumes (RTA guide)			
	DOS		Cycle time	
	AM	PM	AM	PM
<b>IN-01</b> Officer South Road / Connector Street (town centre)	0.751	0.888	150	150

Review of the required intersection layout reveals flaring to 6 lanes in each direction along Officer South Road. This layout is unrealistically large, and presents significant implications in relation to the practicality and viability of construction, including:

- the significant road reserve widths and associated land take required
- construction costs.

As discussed in Section 3.2, the GHD strategic model needs to be reviewed and revised, as it is considered unrealistic to provide the layout required to accommodate the anticipated volumes (RTA Guide).



This process was undertaken for all signalised primary arterial intersections within the PSP, with modifications made to the VPA standard benchmark layouts where required to ensure an adequate DOS below practical capacity at each intersection and to ensure vehicle queues can be accommodated. As above, this resulted in several unrealistically large intersections which are not practical to deliver.

Table 11 provides a summary of the SIDRA intersection analysis completed, providing a comparison between the different intersection layouts modelled for each volume scenario. The respective intersection layouts are shown in Table 12.



Table 11: Summary of SIDRA analysis – primary arterial intersections

Intersection no.	Intersection layout (refer to Table 12)	GHD model volumes								Anticipated Volumes (RTA guide)							
		DOS		95% queue (m)		Average delay (sec)		Cycle time		DOS		95% queue (m)		Average delay (sec)		Cycle time	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
<b>IN-01</b> Officer South Road / Connector Street (town centre)	VPA standard layout	0.917	1.058	356	593	56	110	150	150	2.054	2.040	2645	2313	664	110	150	150
	RTA required layout									0.751	0.888	256	334	60	107	150	150
<b>IN-05</b> Officer South Road / Lecky Road	VPA standard layout	0.886	0.890	161	180	37	44	90	100	1.714	1.386	1583	1177	492	291	150	150
	RTA required layout									0.894	0.822	230	206	66	64	150	150
<b>IN-08</b> Officer South Road / south Connector Street	VPA standard layout	0.748	0.847	67	130	24	39	60	90	1.674	1.913	1806	2043	507	605	150	150
	RTA required layout									0.877	0.812	282	242	57	59	150	150
<b>IN-09</b> Thompsons Road / west Connector Street	VPA standard layout	0.888	0.878	369	291	20	22	100	80	1.426	1.536	1993	1859	257	436	150	150
	RTA required layout									0.894	0.889	344	395	68	43	110	110
<b>IN-10</b> Thompsons Road / Officer South Road	VPA standard layout	0.876	0.992	194	426	30	69	90	150	1.636	1.673	1320	1926	408	523	150	150
	RTA required layout									0.856	0.895	244	317	59	152	150	150



Intersection no.	Intersection layout (refer to Table 12)	GHD model volumes								Anticipated Volumes (RTA guide)							
		DOS		95% queue (m)		Average delay (sec)		Cycle time		DOS		95% queue (m)		Average delay (sec)		Cycle time	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
<b>IN-11</b> Thompsons Road / east Connector Street (cross intersection)	VPA standard layout	0.857	0.888	150	242	36	48	90	130	1.663	1.980	1266	1562	489	666	150	150
	RTA required layout									0.876	0.898	199	238	43	52	110	130
<b>IN-12</b> Thompsons Road / east Connector Street (T-intersection)	VPA standard layout	0.562	0.506	73	64	12	11	60	60	0.829	0.773	146	156	16	19	60	70
	RTA required layout									0.829	0.773	146	156	16	14	60	70



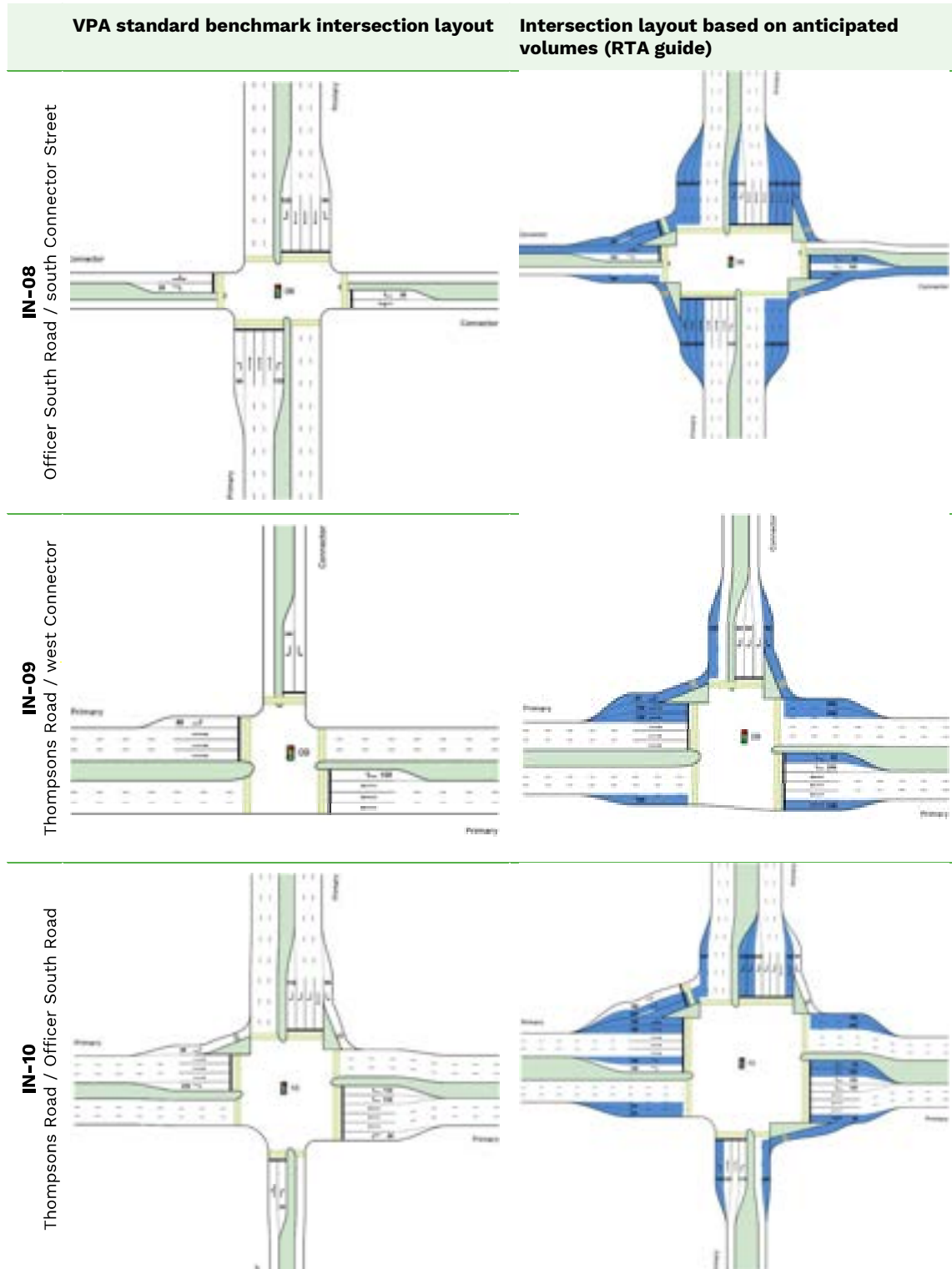
The analysis indicates that the VPA standard benchmark layouts will be unable to accommodate the anticipated volumes (RTA Guide) or support the level of development currently envisaged in the PSP (with the exception of IN-12).

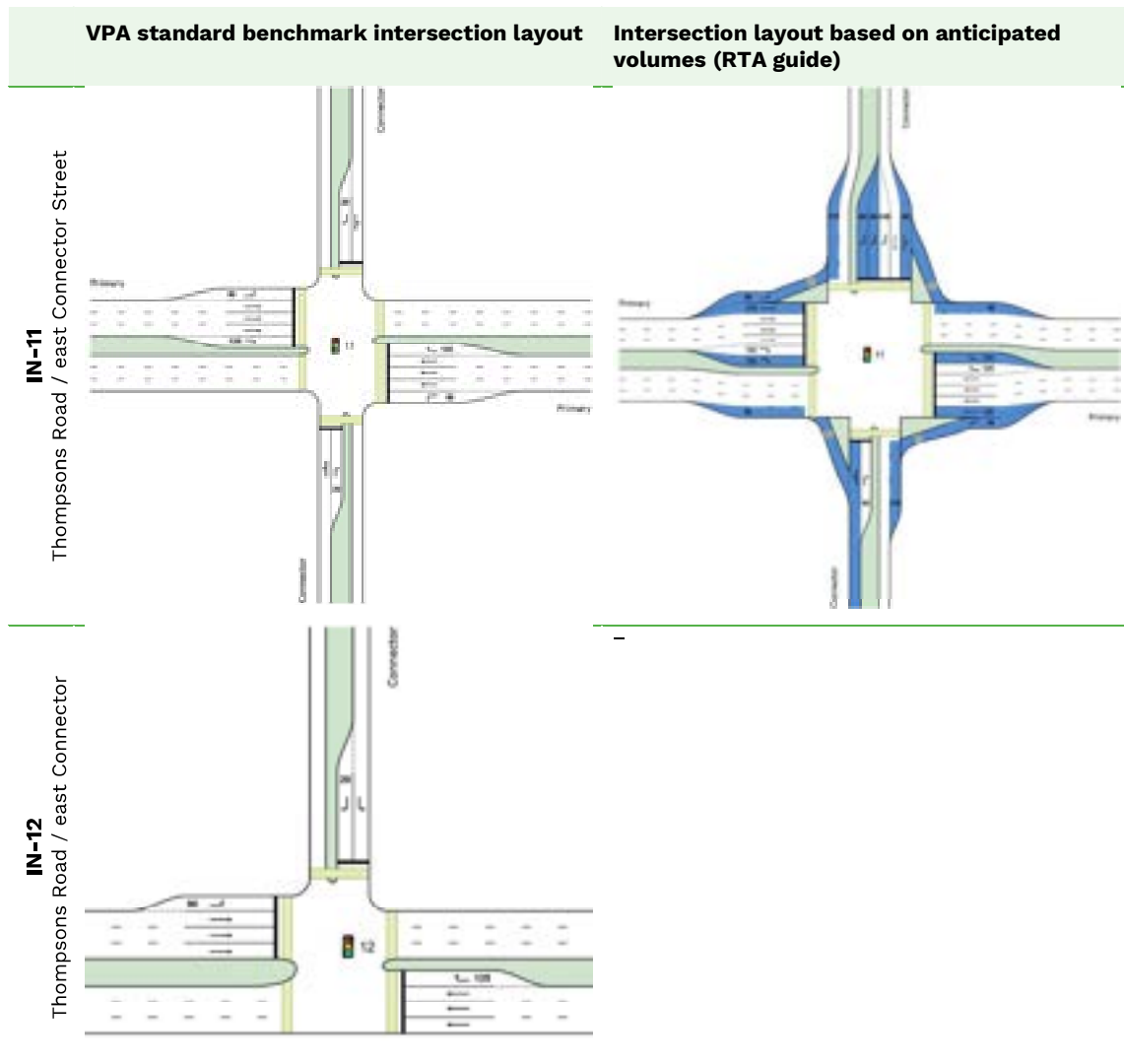
While the GHD volumes are considered to be underestimated, the analysis indicated that even with the low GHD volumes applied, the VPA standard benchmark layouts will be unable to accommodate the level of development proposed (with the exception of IN-12), when considering the intersection DOS and/or the provision of lane lengths to accommodate 95<sup>th</sup> percentile queue lengths.

To ensure the proposed road network will operate satisfactorily, it is recommended that the GHD traffic modelling be revised to ensure it is reflective of the likely traffic generation of the uses proposed within PSP area and the road network be designed accordingly.

Table 12: Ultimate intersection layouts – primary arterial intersections

	VPA standard benchmark intersection layout	Intersection layout based on anticipated volumes (RTA guide)
<b>IN-01</b> Officer South Road / Connector Street		
<b>IN-05</b> Officer South Road / Lecky Road		





### 4.1.2 Secondary arterial intersection analysis

Additional SIDRA intersection analysis was undertaken for all signalised secondary arterial intersections within the PSP (i.e. along Lecky Road), applying the VPA standard benchmark layouts only.

Table 13 provides a summary of the SIDRA intersection analysis completed, providing a comparison between the different volume scenarios.



Table 13: Summary of SIDRA analysis – secondary arterial intersections

Intersection no.	GHD model volumes								Anticipated volumes (RTA guide)							
	DOS		95% queue (m)		Average delay (sec)		Cycle time (sec)		DOS		95% queue (m)		Average delay (sec)		Cycle time (sec)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
<b>IN-02</b> Lecky Road / Connector Street	0.745	0.886	125	210	28	39	80	90	1.677	1.350	2099	1440	424	241	150	150
<b>IN-03</b> Lecky Road / Connector Street	0.889	0.802	104	125	38	33	70	80	1.413	1.262	1928	1458	324	236	150	150
<b>IN-04</b> Lecky Road / Connector Street	0.623	0.816	67	103	27	35	70	80	1.810	1.898	2028	1712	614	728	150	150
<b>IN-06</b> Lecky Road / east Connector Street (town centre)	0.683	0.836	77	96	27	34	70	70	1.576	1.398	1802	1152	369	324	150	150
<b>IN-07</b> Lecky Road / east Connector Street (T-intersection)	0.862	0.903	181	235	33	39	110	120	1.673	1.345	2633	1094	461	241	150	150





The analysis indicates that the VPA standard benchmark layouts will be unable to accommodate the anticipated volumes (RTA Guide) or support the level of development currently envisaged in the PSP.

The analysis indicated that even with the low GHD volumes applied, the VPA standard benchmark layouts will be unable to accommodate the level of development proposed (with the exception of IN-06), when considering the intersection DOS and/or the provision of lane lengths to accommodate 95<sup>th</sup> percentile queue lengths.

To ensure the proposed road network will operate satisfactorily, it is recommended that the GHD traffic modelling be revised to ensure it is reflective of the likely traffic generation of the uses proposed within PSP area and the road network be designed accordingly.

## 4.2 Integrated Transport Assessment Report (ITA)

The VPA commissioned Ratio Consultants to prepare an Integrated Transport Assessment (ITA) report to inform the preparation of the PSP. The ITA provides guidance on the intersection layouts to be funded by the ICP, based on the outputs of the GHD strategic model.

It is acknowledged that the ICP has applied a bespoke design (with supplementary ICP levy) for IN-05 and IN-10. However, this is due to the location of a culvert (CU-01) directly to the west of IN-05 and the unique Primary Arterial / Primary Arterial / Connector Street layout at IN-10, rather than changes to layout to increase capacity. All other intersections have been allocated the standard ICP levy.

Review of the ITA reveals that:

- analysis was undertaken at only 4 of the 12 identified ICP intersections as directed by the VPA (i.e. IN-01, IN-05, IN-06 and IN-10)
- the analysis suggests that the VPA standard benchmark intersections can adequately accommodate the traffic generated by the PSP area based on the outputs of the GHD strategic model.

The ITA has adopted the outputs of the GHD strategic model without an assessment or review of the traffic generation rates used to derive the model. As there are concerns with the inputs / outputs used to derive the GHD strategic model (as discussed in section 3.2), these issues would need to be resolved before the analysis in the ITA should be reasonably accepted.

Irrespective of the concerns with the GHD strategic model, there are also concerns with the analysis provided in the ITA, including:

- The ITA indicates that it has adopted the VPA standard benchmark intersection layouts, however, the short / turn lane lengths shown in the intersection modelling are longer than shown in the VPA standard benchmark layouts. Hence, while the ITA states the benchmark designs will be sufficient, this does not appear to be the case.



- In reference to the traffic analysis undertaken in Section 4.1, and applying the volumes from the GHD strategic model as per the ITA, supplementary ICP levies are likely to be required to return a satisfactory DOS (<0.9) and lane lengths capable of accommodating the 95% percentile queues at all signalised intersections, with the exception of IN-06 and IN-12.
- The ITA has adopted a variation to the VPA standard benchmark intersection for a Primary Arterial / Industrial Collector Road, and applied has applied the alternative layout to the assessment of IN-01
  - This intersection includes additional right turn lanes on the primary arterial road and slip lanes on all legs, which are not provided in the VPA standard benchmark design (refer to Figure 16 and Figure 17).
  - The ITA report indicates that the *Vicroads Guidance for Planning Road Networks in Growth Areas handbook (2015, currently under review)* cross section should be used for industrial land uses, however this is not stated in the VPA standard benchmark documentation or referenced on the VPA standard benchmark design plans.

It is noted that this alternative VicRoads intersection is more similar to the VPA standard benchmark intersection for a primary arterial connection with a secondary arterial, rather than for a connector street.

- The ICP does not allow for an additional / supplementary levy for IN-01 above and beyond what is provided for the VPA standard benchmark intersection. Noting the additional lanes provided, the intersection could not be delivered within the standard footprint (requiring additional land take) or adequately funded by the standard ICP levy applied.
- As analysis has not been provided, it is unclear if this alternative intersection layout would also be applicable to the other Primary Arterial Road / Connector Road intersections within the PSP (i.e. IN-08, IN-09, IN-11 and IN-12).

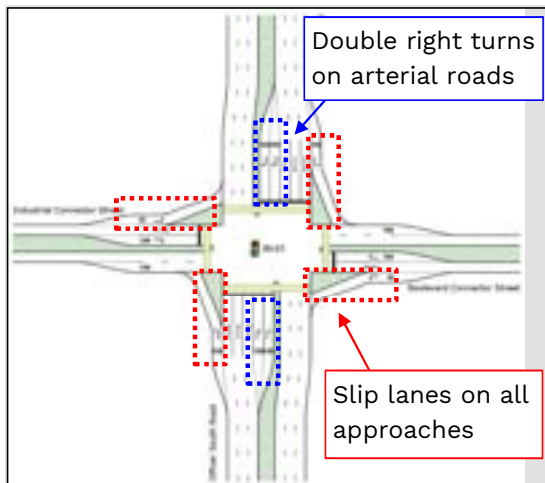


Figure 16: IN-01 intersection layout, as per Ratio ITA and the VicRoads design layout

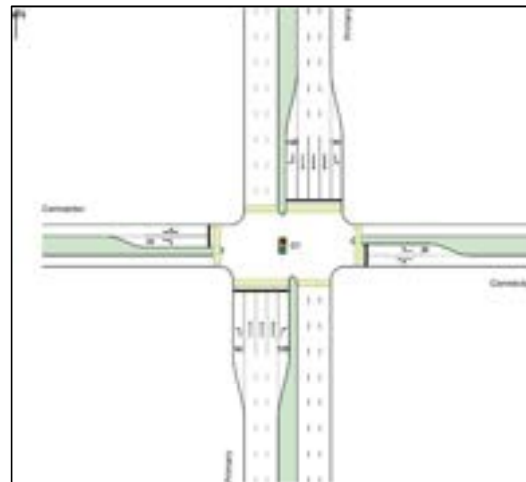


Figure 17: IN-01 intersection layout, as per the VPA standard benchmark design layout

- Based on the SIDRA outputs provided in the ITA report:
  - the input and demand volumes are equal which implies that the analysis has adopted a peak flow factor (PFF) of 100%.
    - a PFF of 100% assumes there is a consistent flow of traffic across the hour. Typically, traffic volumes fluctuate across the peak hour and the SIDRA default PFF of 95% allows for the model to reflect this fluctuation.
    - the default PFF can be adjusted to help calibrate the model and better reflect actual conditions, based on surveyed traffic volume data. This type of information is not available in this case and no alternative justification for altering the PFF in the model has been provided.
    - it is noted that altering the PFF to 100% will result in the model returning improved intersection operating conditions when compared with applying the default PFF of 95%.
  - intersection IN-01 has been modelled with split phasing (east-west) due to the unbalanced flows from the connector road approaches.
    - The proposed phasing (as shown in the appendix of the ITA) indicates that both pedestrians and a conflicting right turn movement are proposed to run in the same phase. This is a significant safety concern (refer to phase D in Figure 18).
    - Reproducing the analysis presented in the ITA report but modifying the phasing to remove the conflict and include the pedestrian movement in Phase C, the minimum phase time required for phase C would increase and the intersection would operate above practical capacity.



- Further consideration should be given to intersection phasing to ensure both safe and sufficient intersection operations are achieved.



Figure 18: IN-01 phasing, as per Ratio ITA

- The design of new intersections typically aims to ensure an intersection operation of below practical capacity (i.e. DOS < 0.9 for signalised intersections). It is acknowledged that a DOS of 0.95 has been accepted as the tolerable target DOS during peak periods at congested signalised intersections in some scenarios where there are constrained conditions (i.e. in built up areas where additional land take is not feasible).

The ITA has applied a target DOS of less than 1.0 (i.e. equal to the theoretical capacity rather than practical capacity, where the demand = capacity). This was justified by stating that *“although operating conditions with a DOS of close to 1.00 are undesirable, it is acknowledged that this level of congestion is typical of many urban intersections during the AM and PM commuter peak hours”*.

Given these intersections are located within a greenfield site with no site constraints, there are concerns with the high target DOS applied in the analysis.

It is also a typical DTP requirement that SIDRA analysis be undertaken for new intersections, achieving a DOS of less than 0.9 with a design life of 10 years, prior to the approval of design plans for construction.

### 4.3 ICP intersection layout plans

The VPA commissioned Stantec to prepare interim and ultimate intersection layout plans to include in the Infrastructure Contributions Plan (ICP). These designs were based on the VPA standard benchmark designs and the outputs of the ITA report, where applicable.



Review of the design plans presented in the *Officer South Employment Precinct PSP Transport Infrastructure Designs*, prepared by Stantec (issue P2, dated 15/08/2023) reveals the following concerns:

- the Stantec intersection design layouts appear to be mostly derived from the VPA standard benchmark layouts rather than the outputs of the ITA (where applicable), but with slip lanes added at each of the connector street intersections (with the exception of IN-06).
  - SIDRA analysis undertaken for the VPA standard benchmark layouts (refer to section 4.1) indicates these layouts will not be able to accommodate the anticipated PSP traffic volumes.
  - While the inclusion of slip lanes at connector street intersections will have an impact on capacity, the Stantec intersection layouts are unlikely to operate satisfactorily.
- IN-01 – Officer South Road / Connector Street (town centre)
  - the northern leg of IN-01 is shown to taper back to one lane in each direction in the interim, to match with the existing layout of the freeway interchange. There is a very short residual two-lane two-way section (approximately 120 m) which reduces the capacity of Officer South Road at the freeway interchange and IN-01. It is anticipated that this section of Officer South Road will require duplication within the early stages of development to facilitate movement to / from the freeway. Therefore, it is recommended that the interim cross section of Officer South Road between IN-01 and the freeway interchange be constructed as a four-lane, two-way road upfront, to limit redundant works and provide the required capacity for the initial stage of the PSP.
  - the short lane lengths shown on the Stantec design plans for the connector street legs are not in accordance with the lane lengths shown in the Ratio ITA modelling (and appear to be more in line with the VPA standard benchmark layouts)
    - The Ratio ITA modelling shows a right turn lane of 150 m length on the east approach and 100 m length on the west approach. The Stantec plans indicate right turn lanes of only 40 m length are proposed (25 m storage plus 15 m taper).
    - The Ratio ITA modelling shows a flared departure lanes of 150 m length on both the east and west departures. The Stantec plans indicate short departure lanes of only approximately 70 m length are proposed (40 m storage plus 30 m taper).
- IN-05 – Officer South Road / Lecky Road
  - the short lane lengths shown on the Stantec design plans for the Lecky Road legs are not in accordance with the lane lengths shown in the Ratio ITA modelling.



- It is noted that both the interim and ultimate layouts for the Lecky Road legs (secondary arterial) are the same at the intersection, whereas the VPA standard benchmark layout shows longer lane lengths for the ultimate layout.
- The Ratio ITA modelling shows a right turn lane of 150 m length on the east approach and a right turn lane of 100 m length on the west approach, whereas the Stantec plans indicate 55 m turn lane lengths are proposed (35 m storage plus 20 m taper). Both the Stantec and Ratio intersection layouts have shorter right turn lane lengths than the VPA standard benchmarking intersection for a primary / secondary road intersection.
- The Ratio ITA modelling shows left turn slip lane lengths of 100 m on both the east and west approaches, whereas the Stantec plans indicate a 70 m length on the east approach (50 m storage plus 20 m taper) and an 85 m length on the west approach (65 m storage plus 20 m taper) are proposed.
- IN-06 – Lecky Road / Connector Street (town centre)
  - the short lane lengths shown on the Stantec design plans for the connector street legs are not in accordance with the lane lengths shown in the Ratio ITA modelling. It is noted that both the interim and ultimate layouts are the same at the intersection (as per the VPA standard benchmark layout).
  - The Ratio ITA modelling shows right turn lanes of 50 m on both the east and west approaches, whereas the Stantec plans indicate 40 m turn lane lengths are proposed on the connector street approaches (25 m storage plus 15 m taper).

In addition to the above, all the ICP intersections designed by Stantec, except for IN-06, include left turn slip lanes which are not provided in the VPA standard benchmark intersection designs with connector streets. Therefore, the VPA standard levy for the benchmark intersections would underestimate the construction costs and intersection footprint / land take associated with the intersections shown in the ICP. This should be reviewed. It is acknowledged that slip lanes generally allow additional intersection capacity and should be retained from a capacity perspective, where possible.

The interim intersection layout plans revert back to a single carriageway (two-lane two-way) mid-block between intersections. Considering the spacing between signalised intersections, it is unclear whether the merge / diverge tapers will have adequate lengths. If these lengths need to be increased, an interim single carriageway may not be appropriate (overlapping merges) and a wide median alternative with one lane in each direction could be considered.



## 5 Limitations of the PSP

### 5.1 Network capacity

The proposed PSP ultimate road layout provides 5 key road connections for access to the PSP area, including a north-south connection along Officer South Road (primary arterial) and east-west connections along both Thompsons Road (primary arterial) and Lecky Road / Grices Road (secondary arterial).

The theoretical mid-block capacity of a primary arterial road (6-lanes) is in the order of 5,400 vehicles per hour (vph), with secondary arterial roads carrying 3,600 vph. This is based on a mid-block capacity of 900 vph per traffic lane, as per Austroads Guide to Traffic Management Part 3.

This suggests that the PSP area will be able to accommodate in the order of 14,400 vph based on the presented road layout.

As indicated in section 3.1, the PSP area is anticipated to generate significant traffic volumes in the order of 18,600 vph during peak periods. This is significantly higher than the outputs of the GHD model used to inform the PSP which indicates peak volumes in the order of 3,000 – 6,000 vph. It is also significantly higher than the theoretical capacity of the key access roads (approximately +30% additional traffic).

The above assessment confirms the SIDRA analysis undertaken for the PSP that there is a lack of network capacity to sufficiently cater for the traffic volumes anticipated to be generated by this PSP.

### 5.2 Network permeability

Victorian Planning Provisions (Clause 56.06 – Access and Mobility Management of the planning scheme) provides a neighbourhood street network objective intended to *“provide for direct, safe and easy movement through and between neighbourhoods for pedestrians, cyclists, public transport and other motor vehicles using the neighbourhood street network.”*

It states that the neighbourhood street network should be designed to:

- include arterial roads at intervals of approximately 1.6 kilometres (i.e. one-mile) that have adequate reservation widths to accommodate long term movement demand
- include connector streets approximately halfway between arterial roads and provide adequate reservation widths to accommodate long term movement demand
- ensure connector streets align between neighbourhoods for direct and efficient movement of pedestrians, cyclists, public transport and other motor vehicles.

It is noted that the spacing of roads can be adjusted to account for local conditions, such as rivers, rail lines, topography and cultural / heritage sites.



The street network objective generally reflects the traditional one-mile-grid network which is common in other parts of Melbourne as it creates a permeable and adaptable road network.

Based on the limitations of the Officer South PSP area, including the location of the Princes Freeway to the north, Lower Gum Scrub Creek to the east and Cardinia Creek to the west, the ability to provide a standard one-mile-grid road layout is restricted.

Reviewing the PSP area, the following is provided:

- Available north-south connections
  - 2.45 km between Officer South Road and Cardinia Road
  - 3.6 km between Officer South Road and Soldiers Road / Bell Road
  - 1.2 km between Officer South Road and Stephens Road (however, if delivered, proposed to be a local access road restricted to light vehicle access only, due to the local road cross section to the north of Princes Freeway).
- Available east-west connections
  - 1.6 km between Lecky Road / Grices Road / Centenary Boulevard and Thompsons Road
  - 1.2 km between Lecky Road / Grices Road / Centenary Boulevard and Princes Freeway.

While the east-west connections generally meet the access management and one mile grid principles, there is a lack of north-south connections within the PSP network resulting in capacity constraints and congestion for the north-south movement.

Ideally, a new additional north-south arterial road connection should be provided within the PSP area to disperse traffic. The only location that may be suitable would be upgrading the Stephens Road bridge (and the north-south connector road south of Stephens Road) to provide an additional major north-south connection to the Princes Freeway and out of the PSP area. This connection would provide much needed additional road capacity.



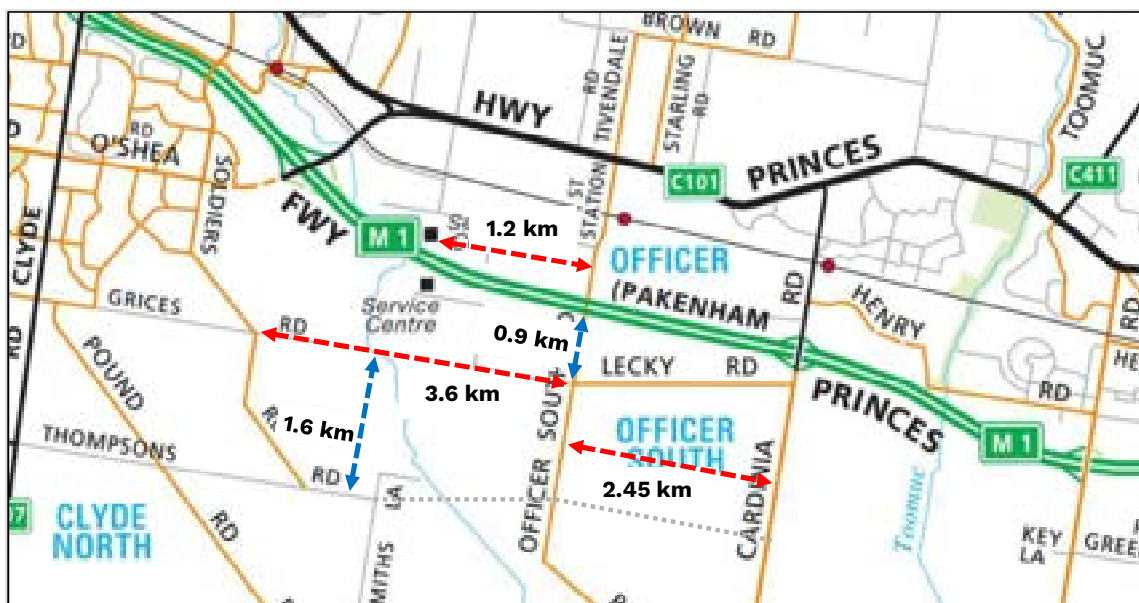


Figure 19: Arterial road spacing

### 5.2.1 Stephens Road

Both the PSP and the GHD strategic model show a new bridge connection to the Officer PSP at Stephens Road. This bridge is not funded as part of the PSP / ICP.

It is unclear whether the provision of the Stephens Road bridge is to be provided as state infrastructure or if there is an expectation that Council delivers the bridge.

It is understood that Council has indicated that this bridge is unlikely to be funded by Council's Capital Works Program in the foreseeable future, due to the significant cost and minimum overall benefit associated with delivering this minor connection. Therefore, the only north-south connection to this PSP area from Officer will likely be via Officer South Road.

However, to provide additional north-south capacity in the PSP and disperse traffic, consideration should be given to providing a freeway interchange at Stephens Road. It is acknowledged that this would be located in close proximity to the Officer South Road interchange and the existing service centre. This would need further investigation to establish its viability.

Should an additional freeway interchange be provided at Stephens Road, it is recommended that the PSP road network layout be revised to designate Stephens Road as a higher order road within the PSP and provide a through connection to Thompsons Road.



### 5.3 Ultimate PSP state infrastructure

The road network required to support the PSP area includes several state funded projects which will not be delivered as part of the PSP and have no official timeline for delivery. This includes:

- the Lecky Road / Grices Road bridge crossing of Cardinia Creek (BR-03)
- the Thompsons Road bridge crossing of Cardinia Creek (BR-04)
- the Officer South Road / Princes Freeway full diamond interchange (IN-13)
- the Stephens Road overpass across Princes Freeway (not funded by the PSP/ICP).

Until this infrastructure is delivered, the primary access to / from the PSP area will be via Officer South Road to the north (i.e. to Princes Freeway and Princes Highway) or possibly via Lecky Road to the east (i.e. to Cardinia Road).

The existing road connections to both Cardinia Road and Princes Highway already have reported operational issues during the peak hours, which will be exacerbated by the continued development of the Officer PSP and Cardinia Road Employment PSP areas, as well as the development of the Officer South Employment PSP area. The planned closure of the level crossing and associated truncation of Officer South Road will also put further pressure on the existing Brunt Road / Princes Highway and Bridge Road / Cardinia Road intersections.

Hence, the permissible level of development within the PSP area will need to be limited until state infrastructure is delivered.



## 6 PSP Staging Plan

The PSP for Officer South Employment precinct provides an Infrastructure and Development Staging plan, as shown in Figure 20. This plan proposes that development of the PSP be split into four stages and identifies the associated infrastructure requirements for each stage.

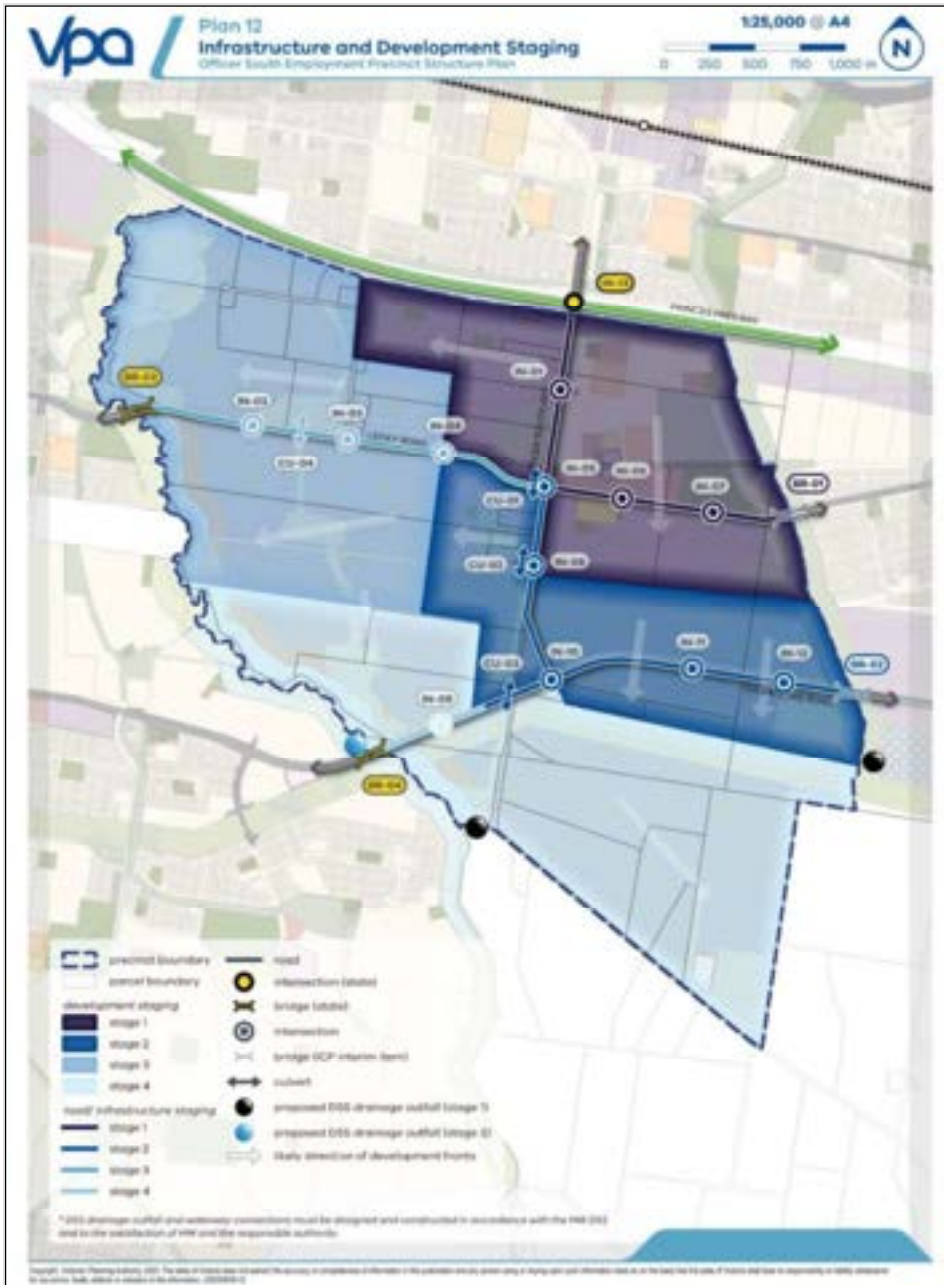


Figure 20: Staging Plan (reproduced Plan 12 from the Officer South Employment PSP)



## 6.1 Traffic implications of staging plan

Review of the staging plan indicates the following:

- initial development (Stage 1) is proposed to comprise the Regionally Significant Commercial Area (RSCA), town centre and residential components of the PSP, located in the north-eastern section of the PSP. It also identifies access for Stage 1 is to be provided via:
  - Officer South Road to the north, linking with the existing Princes Freeway interchange (half-diamond) and Bridge Road / Rix Road
  - Lecky Road / Centenary Boulevard to the east, linking with Cardinia Road across Lower Gum Scrub Creek (BR-01 required)
- development within Stage 2 is proposed to comprise the remaining section of the commercial area and a portion of the State Significant Industrial Precinct (SSIP), located directly to the south of Stage 1. Access for Stage 2 is proposed to be provided via:
  - Officer South Road to the north, linking through Stage 1 to the Princes Freeway interchange and Bridge Road / Rix Road
  - Thompsons Road to the east, linking with Cardinia Road across Lower Gum Scrub Creek (BR-02 required)
- development within Stage 3 is proposed to comprise the north-western portion of the industrial precinct, centred around Lecky Road. Access for Stage 3 is proposed to be provided via:
  - Officer South Road to the north, linking through Stage 1 to the Princes Freeway interchange and Bridge Road / Rix Road
  - Lecky Road to the west, linking with Grices Road across Cardinia Creek (state infrastructure item BR-03 required).
- development within Stage 4 is proposed to comprise the southern portion of the industrial precinct, centred around Thompsons Road. Access for Stage 4 is proposed to be provided via:
  - Officer South Road to the north, linking through Stages 1 and 2 to the Princes Freeway interchange and Bridge Road / Rix Road
  - Thompsons Road to the west, linking across Cardinia Creek (state infrastructure item BR-04 required).

It is acknowledged that the Lecky Road and Thompsons Road connections to Cardinia Road in Stages 1 and 2 require the provision of two bridges across Lower Gum Scrub Creek (BR-01 and BR-02 respectively). Due to the existing connection along Officer South Road, these bridge connections are unlikely to be delivered at the start of each stage, with initial development assumed to gain access to the PSP area via Officer South Road only.



It is further noted that the PSP indicates a full-diamond freeway interchange will be provided at Officer South Road (IN-13), with the upgrade from the existing half-diamond interchange to be state infrastructure.

The upgrade of IN-13 to a full-diamond interchange is a significant upgrade required for the continued development of the precinct, providing:

- additional capacity for vehicles travelling to/from the east and west and alleviating pressure and heavy vehicle volumes on Bridge Road / Rix Road to provide connections to Cardinia Road and the Princes Freeway towards Gippsland
  - Bridge Road is currently carrying in the order of 10,000 vpd, prior to truncation of Station Street and full development of the Officer PSP area. Therefore, Bridge Road may be operating close to or over capacity at the start of the Officer South Employment PSP development.
- an eastbound heavy vehicle connection linking the Officer South Employment PSP area with Gippsland, noting that current heavy vehicle access restrictions along Bridge Road / Rix Road will require all B-Double vehicles to use the Princes Freeway to the west and U-turn at the O’Shea’s Road interchange to travel east from the PSP.

It is noted that provision of the Thomsons Road connection to the east (within Stage 2) will also provide an alternative heavy vehicle route to facilitate additional B-Double vehicles from the PSP.

Reviewing the proposed connections into Casey City Council to the west, the current staging plan indicates the Lecky Road connection will be provided during Stage 3 and the Thompsons Road connection will be provided during Stage 4 (final stage). It is noted that these items are state infrastructure and funding / timing is not confirmed. It is critical that the bridge connections are delivered to provide additional capacity for the PSP and ongoing PSP development will be contingent on their delivery.

When reviewing the wider traffic impact, the provision of the Thompsons Road bridge should be considered in preference to the Lecky Road bridge.

Thompsons Road provides a wider corridor connection to the west of the PSP area, facilitating the following broader connections to/from the PSP:

- the O’Shea’s Road / Princes Freeway full diamond interchange
- Clyde Road (north-south arterial road)
- Eastlink (toll road)
- Mornington Peninsula Freeway
- access to several other key arterial roads and principal freight network (PFN) routes, including South Gippsland Highway, Western Port Highway, Dandenong Valley Highway and Nepean Highway.



Lecky Road provides a connection to the west of the PSP area via Grices Road, only facilitating additional local connections to/from the PSP including access to:

- the surrounding areas of Minta Farm, Clyde North, Cranbourne North and Berwick
- the O’Shea’s Road / Princes Freeway full diamond interchange
- Clyde Road (north-south arterial road).

Considering the above, it is recommended that the PSP staging plan be modified to facilitate development along the Thompsons Road corridor as a higher staging priority, including both east and west bridge connections (BR-02 and BR04).

## **6.2 Stage 1 interim capacity assessment – Officer South Road / Princes Freeway interchange**

Intersection analysis was undertaken to determine the level of development within the PSP that could be supported if access to and from the PSP area is only provided via the existing Officer South Road / Princes Freeway half-diamond interchange (i.e. no state infrastructure items are delivered and with no sealed connection available from the PSP to the east or west via either Lecky Road / Grices Road / Centenary Boulevard or Thompsons Road).

This assessment included iterative sensitivity analysis to determine the maximum traffic volume that could be accommodated at the interchange prior to reaching practical capacity. The assumptions used to inform this assessment are provided in the following sections.

### **6.2.1 Estimated traffic growth**

The DTP Open Data Portal indicates a high-level growth rate of 2.8 – 3.0% per annum along Officer South Road to the north of the freeway. This reflects current conditions and is assumed to include the current rate of development within the Officer PSP, located to the north of Princes Freeway. Hence, a rate of 3% per annum has been adopted as the lower limit of anticipated traffic growth for the surrounding area.

Information on population growth within the Officer Precinct is available from the Forecast ID website (<https://forecast.id.com.au/cardinia/>). A summary of the population forecast data and associated growth rates is provided in Table 14. This has been used to provide a further estimate of future growth for the surrounding area.



Table 14: Officer Precinct Population Data

Year	Forecast population	Growth (from previous year)	Growth from 2023
2021	11,854	-	-
2023	16,711	19%	-
2026	23,889	13%	13%
2031	29,839	5%	8%
2036	31,288	1%	5%
2041	30,487	-1%	3%

Based on the above population forecasts, a design year of 2036 has been adopted to reflect full development of the Officer PSP area (noting the reduction in population beyond 2036). A rate of 5% per annum is applicable to the growth between 2023 and 2036 and has been adopted as the upper limit of anticipated growth in the surrounding area.

## 6.2.2 Interchange traffic volumes

Traffic volumes at the Officer South Road / Princes Freeway interchange were obtained from SCATS data on Thursday 17 August 2023.

The peak periods were determined to be:

- AM peak: 8:15 am to 9:15 am
- PM peak: 4:00 pm to 5:00 pm

The existing traffic volumes were projected to 2036 to accommodate full development of the Officer PSP area prior to adding additional traffic generated by the Officer South Employment Precinct.

Growth rates have been applied to reflect the traffic growth between 2023 and 2036, as follows:

- 3-5% per annum along Princes Freeway
- 3-5% per annum along Officer South Road (north of the freeway)
- 1% per annum along Officer South Road (south of the freeway).

A reduced 1% growth rate was adopted for the Officer South Road (south of the freeway) as the traffic growth along this section of Officer South Road is anticipated to be associated with the PSP.





### 6.2.3 PSP traffic distribution

For the purpose of this assessment, it is assumed that the interchange will likely be the only initially available sealed road access point to the PSP, with all generated traffic from early development expected to be travelling through this intersection.

The peak hour traffic distribution is assumed to be as follows:

- AM peak: 60% entering 40% leaving
- PM peak: 40% entering 60% leaving

The peak hour directional splits at the intersection are assumed to be as follows:

- 60% of traffic will travel to / from the west along Princes Freeway
- 40% will travel to / from the north along Officer South Road.

It is acknowledged that all B-Double vehicles accessing the Officer South Employment Precinct will be required to use the existing half-diamond freeway interchange to access the precinct, regardless of the intended direction of travel. This is due to existing heavy vehicle restrictions along Bridge Road and Rix Road and the proposed truncation of Officer South Road. Hence, eastbound B-Double vehicles will be required to U-turn at the O'Shea's Road / Princes Freeway full diamond interchange, located approximately 3 km to the west of Officer South Road.

### 6.2.4 SIDRA analysis

SIDRA analysis at the Officer South Road / Princes Freeway interchange was based on the assumptions detailed above, as well as the following:

- a 110 second cycle time has been applied in the model, based on the existing SCATS OP sheet information
- the existing signal phasing sequence has been applied to the model, obtained from the SCATS OP sheet information
- Officer South Road (south approach) has been modelled with:
  - two lanes merging back to one lane in each direction for base case
  - two continuous lanes in each direction, assumed to have been constructed as part of the initial development of the PSP (noting the current interim ICP plans do not allow for this duplication).
- signal metering on the freeway on-ramp has been included in the model.

Figure 21 provides the existing (base case) intersection layout and Figure 22 provides the assumed interim PSP intersection layout (i.e. duplicated southern leg).





Figure 21: Officer South Road / Princes Freeway interchange layout (existing / base case layout)

Figure 22: Officer South Road / Princes Freeway interchange layout (assumed PSP layout)

The iterative assessment revealed the AM peak period as the critical peak, due to the queueing capacity of the on-ramp signal metering (215 m). Noting the trigger for the freeway interchange has been based on ensuring the queue from the freeway ramp meter does not impact the operation of the freeway interchange, rather than on practical capacity / DOS.

Table 15 shows the additional traffic that could be accommodated by the freeway interchange. Table 16 provides a summary of the SIDRA outputs.

Table 15: Interim assessment – sensitivity analysis – additional traffic volume

Scenario	Additional trips (vph)	Equivalent development		Approximate equivalent development percentage	
		Residential (0.65 trips / dwelling)	Industrial (200 trips per hectare)	RTA Guide traffic generation (AM peak = 18,682 vph)	GHD model traffic generation (AM peak = 4,345 vph)
3% growth rate	990 vph	1,500 dwellings	4.95 ha	5%	22.7%
5% growth rate	115 vph	175 dwellings	0.57 ha	0.6%	2.6%



Table 16: SIDRA results – Princes Freeway / Officer South Road interchange

			Baseline (2036)			Future conditions			
			Movements	DOS	95% queue (m)	Average delay (sec)	DOS	95% queue (m)	Average delay (sec)
				AM	AM	AM	AM	AM	AM
3% growth rate	Outbound Off-Ramp / Officer South Road	Officer South Road (south approach)	0.017	0.2	0.4	0.089	9.0	2.2	
		Officer South Road (north approach)	0.293	53.0	5.1	0.457	71.5	7.2	
		Princes Freeway Outbound Off-Ramp (west approach)	0.331	13.5	7.3	0.443	54.3	23.9	
	Inbound On-Ramp / Officer South Road	Officer South Road (south approach)	0.142	10.8	30.8	0.369	59.6	19.6	
		Officer South Road (north approach)	0.302	75.9	11.4	0.407	121.5	13.6	
	On-ramp Metering Signals	Princes Freeway On-Ramp (east approach)	0.850	17.2	6.1	1.115	201.5	114.0	
	5% growth rate	Outbound Off-Ramp / Officer South Road	Officer South Road (south approach)	0.021	0.2	0.4	0.028	0.4	0.4
			Officer South Road (north approach)	0.468	83.0	6.1	0.468	83.0	6.0
			Princes Freeway Outbound Off-Ramp (west approach)	0.415	19.0	7.2	0.421	19.2	10.3
Inbound On-Ramp / Officer South Road		Officer South Road (south approach)	0.169	10.5	28.5	0.232	12.9	22.3	
		Officer South Road (north approach)	0.390	105.3	11.9	0.390	105.3	11.2	
On-ramp Metering Signals		Princes Freeway on-ramp (east approach)	1.087	160.8	89.9	1.116	202.5	114.6	



At full development of the Officer Precinct, there would be capacity in the surrounding road network to accommodate between approximately 115-990 vph prior to the delivery of state infrastructure, based on a 3-5% growth rate.

This assumes that the duplication of Officer South Road between IN-01 and the freeway interchange has been delivered, which is not included in the current interim ICP. Should this section of road not be duplicated in the initial stages, there would be less capacity for the PSP development than indicated.

It is also understood that there are on-going discussions between council and developers within the Cardinia Road Employment Precinct (CREP), which indicate that a local connection via Lecky Road to Officer South Road may be provided to facilitate continued development within CREP until additional capacity is provided at Cardinia Road. Hence, prior to the development of the PSP, there may already be some additional development traffic using Officer South Road to access the freeway. This would reduce the available capacity at the interchange and impact the amount of development from within the PSP which could occur prior to upgrades being required.

Once the interchange reaches capacity, other infrastructure items will be required to facilitate further development. This could include the upgrade of the Princes Freeway interchange or the provision of the Thompsons Road corridor and/or Lecky Road connections.

The staging plan indicates that Stage 1 will include all residential development (1,617 dwellings) and a significant portion of the Regionally Significant Commercial Area. The available capacity at the Officer South Road / Princes Freeway interchange is estimated to be significantly lower than the expected traffic generation of Stage 1. Hence, upgrades to increase traffic capacity to/from the PSP will be required to facilitate the full development of Stage 1.



## 7 Public and active transport

The PSP for Officer South Employment precinct provides a Public Transport and Active Path Networks plan, as shown in Figure 23. This plan provides guidance on the location of proposed future public transport (bus) routes, shared paths, bicycle paths and the equestrian trail network. This plan also identifies key features, pedestrian bridges and intersection treatments within the PSP.

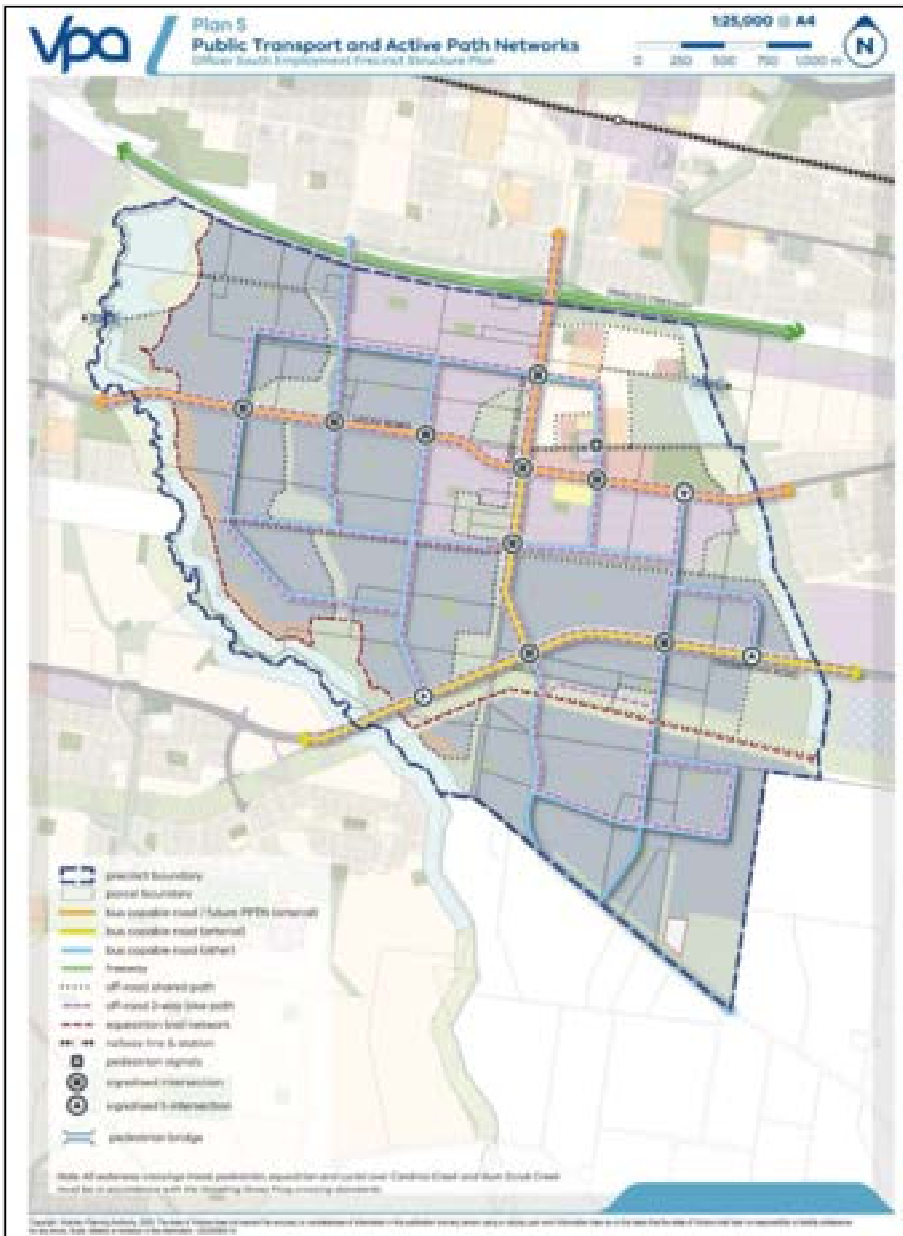


Figure 23: Public Transport and Active Path Networks (reproduced Plan 5 of the Officer South Employment PSP)



It is recommended that the provision of public transport services and shared / bicycle paths throughout the PSP should be considered in conjunction with the initial stages of development, to:

- encourage the early uptake of public and active transport use for residents and workers,
- reduce PSP isolation
- provide key connections to nearby services and facilities.

The early provision and uptake of public and active transport modes for travel may also assist in reducing the reliance on cars and help to relieve some pressure on the proposed road network.

## 7.1 Public transport

The PSP includes several routes identified to be future Principle Public Transport Network (PPTN) routes, in addition to identifying the remaining arterial and connector roads as bus capable roads.

Future PPTN routes are identified along the length of Lecky Road, as well as the portion of Officer South Road to the north of Lecky Road. This will enable wider public transport connections to:

- the Officer precinct to the north
- the Cardinia Road Employment Precinct the east
- the Minta Farm and Clyde North precincts within Casey City Council to the west.

As there is no train connection within the PSP area, the provision of the PPTN bus routes will also help facilitate bus access to the precinct from the Officer railway station.

The PSP does not currently make provision for a transport hub or bus interchange to facilitate the transfer of people and connection of alternative routes. Consideration should be given to the provision of a transport hub / bus interchange facility to better service the PSP area and link various public transport services.

Reviewing the PSP, a transport hub or interchange is likely to be best placed in the vicinity of the Lecky Road and Officer South Road intersection, nearby to the town centre, residential area and commercial area (SSCA), as well as to the two identified PPTN routes.

In addition, it is noted that the Stephens Road bridge is identified as a bus route however, as discussed in Section 5.2.1, this connection is not being delivered as part of the PSP.



## 7.2 Active transport

The PSP identifies a network of proposed off-road bicycle paths along key roads and off-road shared paths within open spaces to provide connected, safe and convenient active transport throughout the PSP.

The PSP also identifies the provision of a shared path and equestrian trail network, located along the electricity transmission easement and along the Cardinia Creek reserve. This is primarily a recreational trail and provides an extension of the existing equestrian trails from the Cardinia Creek Parklands and City of Casey.

It is noted that the provision of the equestrian trail is also included in the Local Access Street (industrial) cross section presented in the PSP, indicating a 4.0 m wide crushed gravel equestrian trail (refer to Figure 24).

However, there is no further information provided in the PSP to inform the design or delivery of the proposed equestrian trails to ensure safe and suitable road crossing points are provided along the trail. This is of particular concern at the arterial road crossings at Thompsons Road (6 lane primary arterial) and Lecky Road (4 lane secondary arterial), where standard pedestrian crosswalks are unlikely to cater for the specific needs of horses.

It is recommended that the PSP provide further guidance on how safe road crossings for horses along these equestrian trails can be provided.

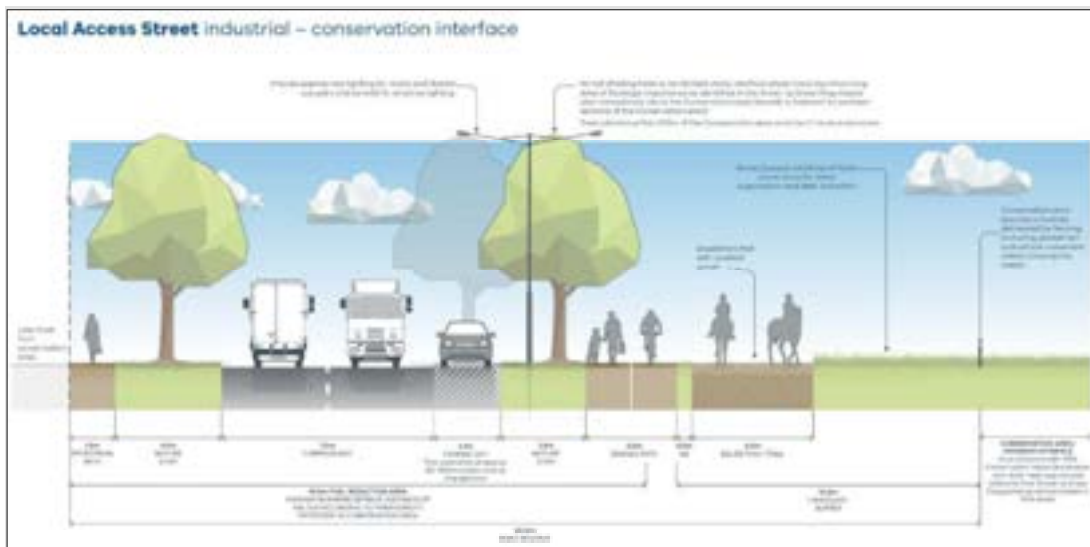


Figure 24: Local Access Street – industrial



## 8 Conclusions and recommendations

The assessment concludes that the road network proposed will not accommodate the level of development that may be delivered as part of the Officer South Employment Precinct based on the currently proposed land uses.

The daily traffic volumes generated by the Officer South Employment Precinct based on the outputs of the modelling undertaken by GHD and the RTA guide, which represent average traffic generation rates, are as follows:

- GHD strategic model traffic generation: 63,400 vpd
- estimated traffic generation (RTA Guide rates): 151,560 vpd.

Based on the RTA guide, the Officer South Employment Precinct is estimated to generate approximately 2.4 times the traffic volume when compared with the outputs of the GHD strategic model, when considering the:

- currently proposed land uses
- overall land size
- developable area of the PSP.

It is unclear what inputs were applied in the GHD model to achieve this result.

SIDRA analysis undertaken for the PSP signalised intersections indicates that:

- The VPA standard benchmark layouts will be unable to accommodate the anticipated volumes (RTA Guide) or support the level of development currently envisaged in the PSP (with the exception of IN-12).
- The road network required to accommodate the anticipated volumes (RTA Guide) will result in unrealistically large intersections which cannot be practically delivered based on the land take required and the construction costs of delivering these intersections.
- Even with the low GHD volumes applied, the VPA standard benchmark layouts will be unable to accommodate the level of development proposed (with the exception of IN-06 and IN-12), when considering the intersection DOS and/or the provision of lane lengths to accommodate 95<sup>th</sup> percentile queue lengths.

Noting the discrepancy between the traffic generation from the GHD model and the average traffic generation estimated based on the rates in the RTA Guide, **it is recommended that:**

- **the GHD strategic model is reviewed and revised to ensure that the traffic generation inputs / outputs are consistent with the proposed land uses within the PSP area**
- **the traffic impacts based on the revised strategic model be considered and the proposed PSP infrastructure be modified to reflect the revised outputs.**



The ITA has adopted the outputs of the GHD strategic model without an assessment or review of the traffic generation rates used to derive the model, and therefore the concerns with the GHD model would need to be resolved and addressed before the analysis in the ITA should be reasonably accepted. Furthermore, the ITA has adopted alternative intersections to the VPA standard benchmark intersections with no supplementary levy identified to deliver the alternative intersection layout.

The Stantec intersection design layouts prepared as part of the ICP:

- appear to be mostly derived from the VPA standard benchmark layouts, but with slip lanes added at each of the connector street intersections (with the exception of IN-06).
- are not in accordance with the outputs of the ITA, with turn lane lengths shorter than modelled.
- **are unlikely to operate satisfactorily and should be reviewed and revised.**

Furthermore, the Stantec designs show the northern leg of IN-01 to taper back to one lane in each direction in the interim, which reduces the capacity of Officer South Road at the freeway interchange and IN-01. To facilitate initial development within the PSP area, it is recommended that:

- **the interim cross section of Officer South Road between IN-01 and the freeway interchange be constructed as a four-lane, two-way road upfront, to limit redundant works and provide the required capacity for the initial stage of the PSP.**

A review of the road network indicates that while the east-west connections generally meet the access management and one mile grid principles, there is a lack of north-south connections within the PSP network resulting in capacity constraints and congestion for the north-south movement. To disperse traffic within the PSP, **it is recommended that:**

- **a new additional north-south arterial road connection be provided within the PSP area, with consideration given to providing a freeway interchange at Stephens Road.**
- **the PSP road network layout be revised to designate Stephens Road as a higher order road and provide a through connection to Thompsons Road.**

The PSP staging plan indicates that the Thompsons Road will be provided as part of Stage 4 (final stage). **It is recommended that:**

- **the PSP staging plan be modified to facilitate development along the Thompsons Road corridor as a higher staging priority than Lecky Road, including both east and west bridge connections (BR-02 and BR04).**

Furthermore, due to the accessibility issues of heavy vehicles accessing the precinct from the east (i.e. Gippsland), the upgrade of IN-13 to a full-diamond interchange is a significant upgrade required for the continued development of the precinct.





Based on the current infrastructure, an interim assessment at the Officer South Road / Princes Freeway interchange revealed that there would be capacity in the surrounding road network to accommodate between approximately 115-990 vph prior to the delivery of any state infrastructure, based on a 3-5% growth rate at the interchange to reflect full development of the Officer Precinct, north of the interchange.

- This capacity is equivalent to the development of between 175 – 1,500 dwellings or 0.57 – 4.95 ha of employment land (based on the rates provided in the RTA Guide).
- The staging plan indicates that Stage 1 will include all residential development (1,617 dwellings) and a significant portion of the Regionally Significant Commercial Area.
- The available capacity at the Officer South Road / Princes Freeway interchange is estimated to be significantly lower than the expected traffic generation of Stage 1. Hence, **upgrades to increase traffic capacity to/from the PSP will be required to facilitate the development of Stage 1.**



## Appendix 1 – Cardinia Road Employment Precinct PSP

Estimated Employment Generation, including footprint ratios for various land use types, extracted from Page 20 of the Cardinia Road Employment Precinct PSP.

Table 1- Estimated Employment Generation

Employment Land Type	Net Employment Area (Hectares)	Building Height Ratio (Storeys)	Footprint Ratio	Gross Floor Area (Hectares)	Jobs Ratio (Jobs per Hectare)	Total Jobs*
Activity Centre	5.57	2	0.3	3.31	50	168
Commercial	27.59	4	0.5	54.18	200	13,549
Service Business	134.08	1	0.5	67.04	50	3,352
Industrial	180.39	1	0.5	90.20	18	1,678
<b>Total for Precinct</b>	<b>353.07</b>	<b>n/a</b>	<b>n/a</b>	<b>217.71</b>	<b>n/a</b>	<b>18,735</b>

\* Full Time Equivalent

Source: Cardinia Shire Council, based on estimates by MacroPlan Australia 2008