

Greater Avalon Employment Precinct

WADAWURRUNG COUNTRY

Background Report

November 2025

ACKNOWLEDGEMENT OF COUNTRY

The **Victorian Planning Authority proudly acknowledges** Victoria's Aboriginal community and their rich culture and pays respect to their Elders past and present.

We acknowledge Aboriginal people as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely.

We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life and how this enriches us.

We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

We acknowledge the Wadawurrung people as the Traditional Owners of the land to which this planning scheme amendment applies.

The Greater Avalon Employment Precinct is located on the traditional lands of the Wadawurrung people. The Wadawurrung People are represented by the Wadawurrung Traditional Owners Aboriginal Corporation.

We acknowledge the Wadawurrung as the Aboriginal Traditional Owners of their unceded Country. We acknowledge their ongoing connection to this land, and we pay our respects to their Elders past and present.

We thank Wadawurrung Traditional Owners Aboriginal Corporation for their engagement throughout this project.

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INTRODUCTION

The Victorian Planning Authority (VPA), in partnership with the City of Greater Geelong (CoGG), has prepared a planning scheme amendment for the Greater Avalon Employment Precinct (GAEP). The draft amendment proposes to introduce a Framework Plan for the GAEP, rezones land for GAEP West to the Industrial 1 Zone and Rural Conservation Zone and introduces a Native Vegetation Precinct Plan, Design and Development Overlay and Development Plan Overlay. It also makes provision for the future rezoning for GAEP North and makes other changes to the Greater Geelong Planning Scheme to implement the project.

The GAEP is included in [Plan for Victoria](#) which directs the future of planning throughout Victoria. It is also included in the [Avalon Corridor Strategy](#) which sets a strategy for the long term development of the Geelong-Werribee Corridor. [Victoria's Economic Growth Statement](#) identifies it as one of three regional greenfield locations to unlock industrial and employment land.

The Avalon Airport is guided by its own masterplan (the *Avalon Airport Masterplan 2015*, which is currently being updated).

In summary, the GAEP will:

- Enable the transition of non-urban land to urban land.
- Facilitate the creation of an employment precinct adjacent to Avalon Airport that will be an attractor for national, state and regionally significant economic investment including in manufacturing, freight and logistics industries.
- Facilitate logical long-term development of the precinct through a staged delivery approach tied to infrastructure provision.
- Provide government agencies, CoGG, developers, investors and local communities with certainty about future development.
- Establish a planning framework that that protects key state interests relating to airport operations, transport, biodiversity and drainage, and provides for flexible and innovative development outcomes.
- Set out objectives, requirements, and conditions for land use, development and subdivision.

1 STRATEGIC CONTEXT

1.1 How to Read this Document

This background report explains the key steps, planning assessments and outcomes that have informed the preparation of the GAEP.

Specifically, this report:

- Provides background and history to the project.
- Summarises the physical and strategic context of the precinct.
- Identifies the land use and development issues, opportunities and constraints for the precinct.
- Outlines how technical studies have informed the preparation of the draft planning scheme ordinance.

A full list of the supporting documents that have informed the preparation of the background report and precinct can be found at the end of the report.

The report is structured as follows:

Part 1 – Context

The first part contains the contextual overview of the precinct background document, the context of the site including key issues under consideration and existing policy and legislation that applies to the area.

Part 2 – Planning Process

The second part includes the active stakeholder engagement work undertaken to date and explains how the project has evolved through this process. The outcomes from these engagement sessions include a vision, which is an overarching place-based outcome intended for the precinct.

Part 3 – Planning Pathway

The third part explains how the planning pathway has evolved during the project. It also explains the four key matters of state interest which are critical to the precinct and surrounding area and how they will be addressed.

Part 4 – Planning Scheme Amendment

This section briefly explains the proposed planning scheme amendment.

Part 5 – Appendices

This section contains the technical and administrative information required to support the implementation of the strategic land use context and place-making elements of the precinct. It comprises:

- A list of technical work undertaken which supports the project
- A glossary of terms

1.2 Background

The GAEP was first identified in the Avalon Corridor Strategy, prepared for CoGG and Wyndham City Council with input from the VPA. At the request of CoGG, the Minister for Planning made the VPA the planning authority to prepare a planning scheme amendment that facilitates the development of the precinct.

During the pre-commencement project scoping, the VPA analysed the Extractive Industry Interest Areas (EIAs) that apply to parts of the precinct, including considering options to undertake quarrying and then develop the land for employment purposes. In 2023 the state government made the decision to prioritise the employment role of the precinct over its potential use for extractive resources.

The project initially commenced as a precinct structure plan (PSP) project utilising the PSP 2.0 process, including holding pitching sessions and workshops to discuss ideas, issues, and opportunities for the precinct.

Following a review of the VPA's Housing Statement "priority planning projects for growing suburbs", an alternative planning pathway was identified for GAEP. The project now involves the preparation of a framework plan for the whole precinct, and the application of the Development Plan Overlay to GAEP West. Both precincts must address the following matters of state interest:

- Safeguarding of Avalon Airport and ensuring future development is compatible with the airport's operations.
- The capacity of state transport infrastructure and the need for any upgrades.
- Protection of environmental and biodiversity values, including native grassland and habitat for threatened species such as the Victorian Grassland Earless Dragon.
- Protection of Ramsar wetlands, coastal saltmarsh, and the Western Treatment Plant from stormwater runoff from proposed development areas.

Further details of the above are provided in Section 3.

1.3 Spatial Context

1.3.1 Regional and Local Context

The GAEP is located on the traditional lands of the Wadawurrung. The precinct is centred around Avalon Airport and south of the Princes Freeway between the townships of Lara and Little River. Geelong CBD is approximately an 16km drive south-west of the precinct from the Avalon Road interchange.

The broader transport and freight context includes proximity to:

- **Port of Geelong** (7km south-west) and **Point Wilson** (adjacent to the east), both key logistics and defence-related assets
- **Port of Melbourne** (approximately 55 km north-east), Victoria's principal container port
- **Freight and passenger rail services** running north of the precinct, linking to both Geelong and Melbourne's freight networks
- **Major road corridors** including the Princes Freeway and key arterials connecting to regional and metropolitan freight routes

West of Avalon Road comprises rural living and farming uses. North of the Princes Freeway are rural living uses that form part of Lara and Little River with light industrial uses next to the Avalon Road interchange. East of the precinct is Melbourne Water's Western Treatment Plant, and a quarry to the south-east. South of the precinct is the Avalon Coastal Reserve and Port Phillip Bay. The Western Treatment Plant, Avalon Airport and some of the coastal areas to the south are classified as a Ramsar wetland.

The precinct is also located near some of Victoria's fastest-growing residential corridors – Geelong to the south-west and Wyndham/Melton to the north-east – reinforcing its role in supporting employment and economic development.

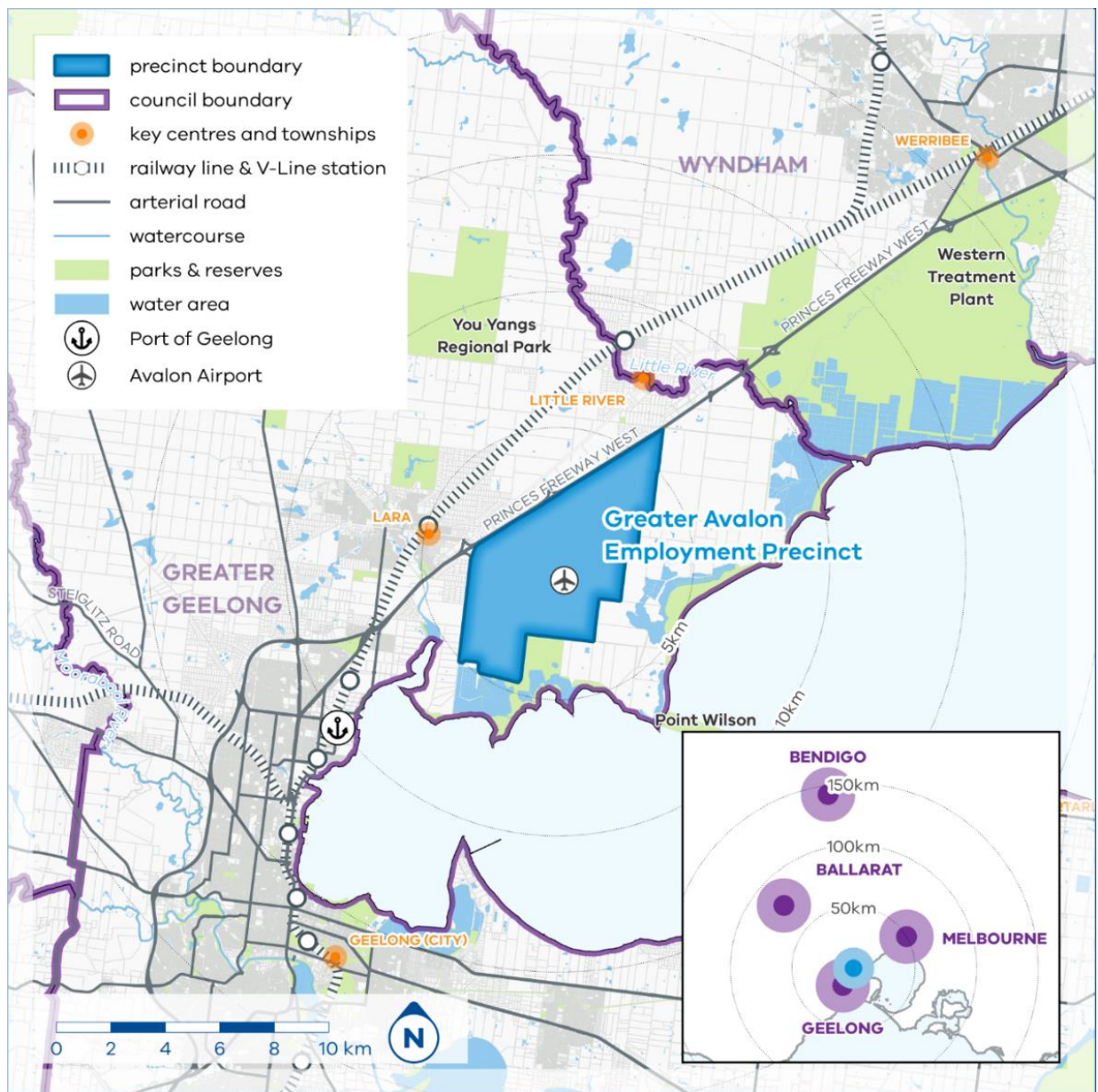
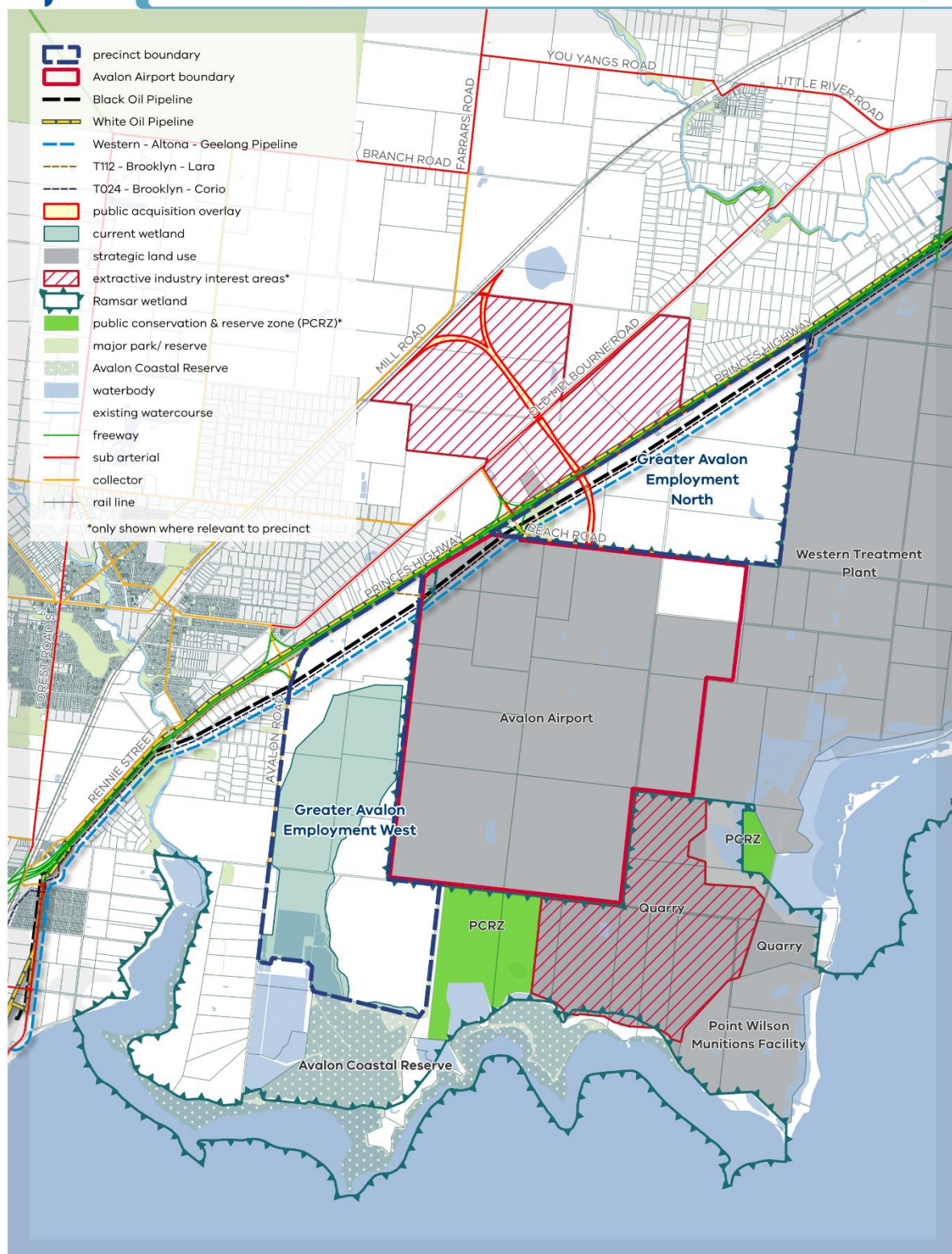


Figure 1 Regional Context Plan



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Figure 2 Local Context Plan

1.4 Subject Site

The below section explains the context of the precinct and specific issues and considerations that have been found while studying the area.

The GAEP is generally bound by the Princes Freeway to the north, the Western Treatment Plant to the east, Dandos Road and the Avalon Coastal Reserve to the south, and Avalon Road to the west.

As of 2025, there are 14 landowners within the precinct (excluding the airport land that is owned by the Commonwealth Government and Linfox), with properties ranging from 2.64ha to 783ha.

The precinct is mostly used for agricultural grazing and cropping and includes parts of the former Cheetham Saltworks. It also includes the Geelong Motorsports Complex, a freeway service centre, and two rural residential lots.

The Avalon Airport is subject to its own masterplanning process, and the VPA is not the planning authority for the airport land. Because of this, most of this background report provides information on the two areas either side of the airport land. As per Figure 3, these are Greater Avalon Employment Precinct West (GAEP West) and Greater Avalon Employment Precinct North (GAEP North).

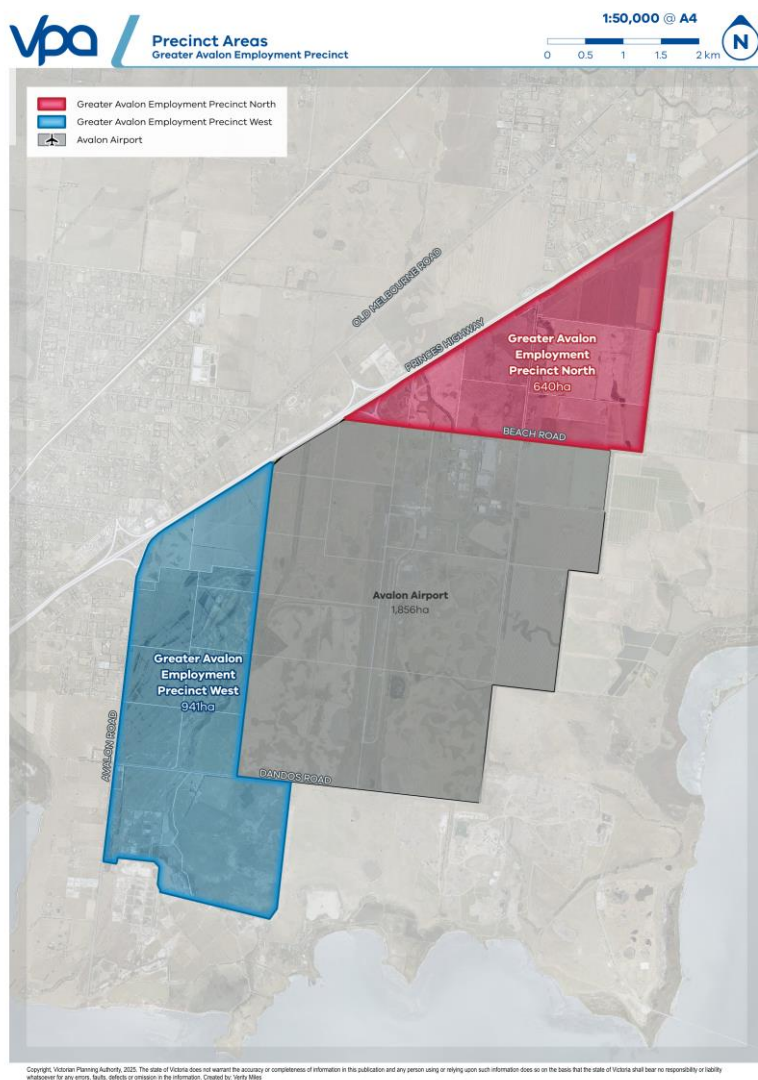


Figure 3 Subject Site

1.4.1 Topography

The precinct is generally flat over a wide area, ranging from 1 to 18 metres above sea level sloping south towards Port Phillip Bay over a large area. A significant section of the western part of the precinct at the former saltworks was terraformed for saltponds, typically 2-4 metres in depth, showing major modification to the existing landscape. There is also a stony rise, which is characterised by basalt rocks and ridges formed from historic lava flows next to Pousties Road in GAEP North.

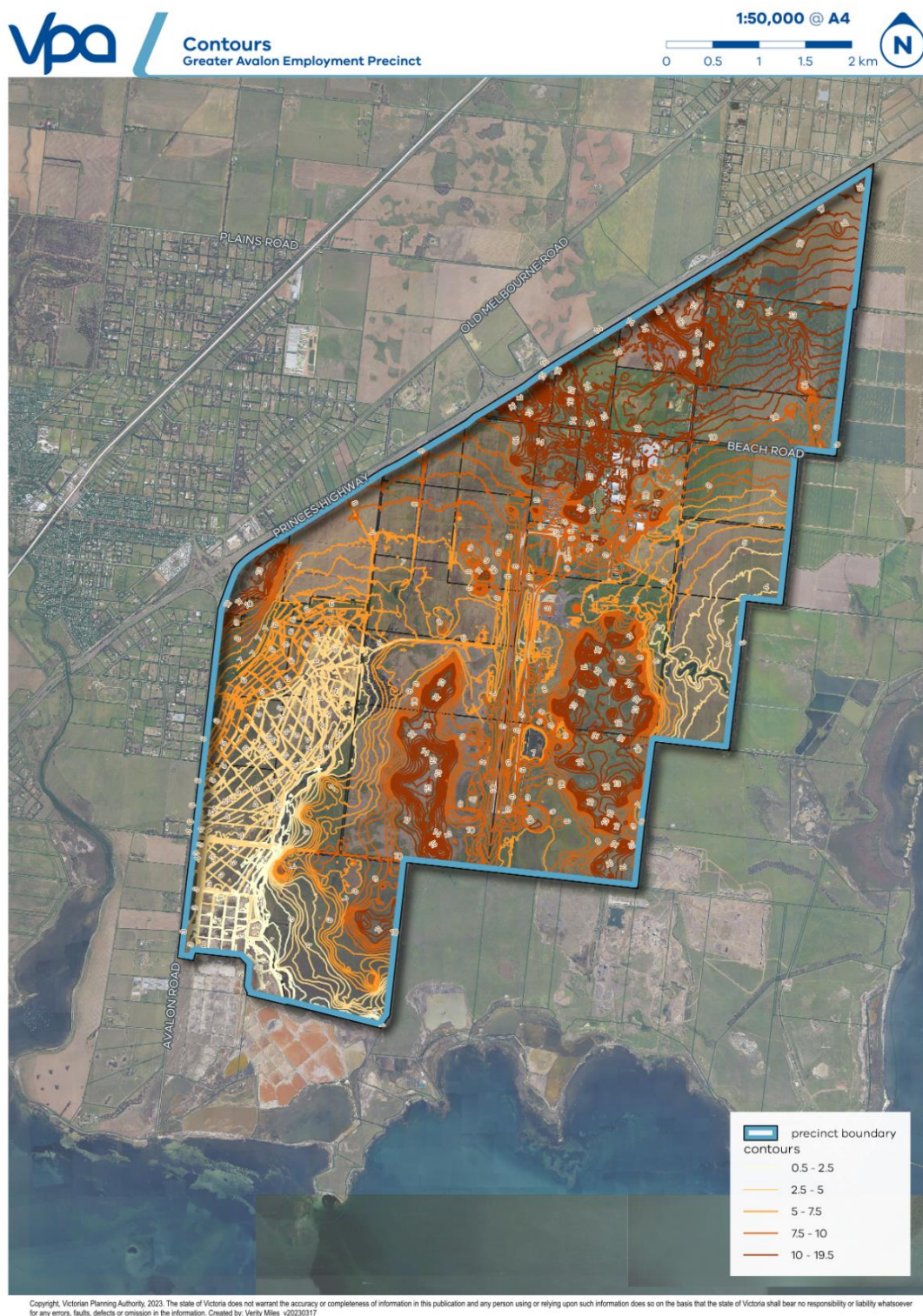


Figure 4 Precinct Topography

1.4.2 Catchments and Waterways

The GAEP is shaped by two major water catchments: Hovells Creek (Lara) and Little River. Both ultimately drain into Port Phillip Bay, positioning the precinct within a coastal receiving environment, which is a body of water near the shore such as a bay that receives water inputs from land including stormwater runoff, river discharge and treated wastewater. GAEP West is within the jurisdiction of the Corangamite Catchment Management Authority (CCMA), and GAEP North is almost wholly within the jurisdiction of Melbourne Water (with a small area in the west in the CCMA catchment).

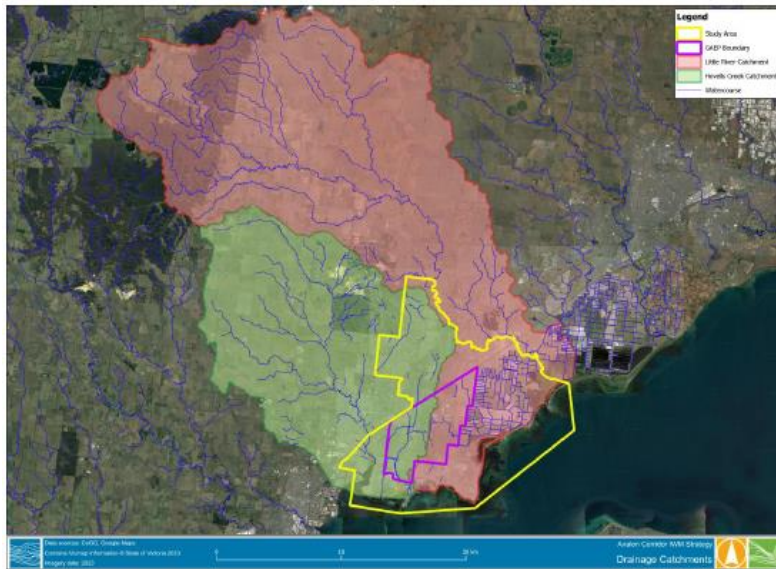


Figure 5 Lara Catchment (Summary Report, Lara Flood Study 2020, Pg 6)

There are no named creeks within the precinct. However, there is an unnamed waterway which flows south through the precinct from Avalon Airport land to Port Phillip Bay through the Avalon Coastal Reserve. There are also several watercourses that run through the precinct.

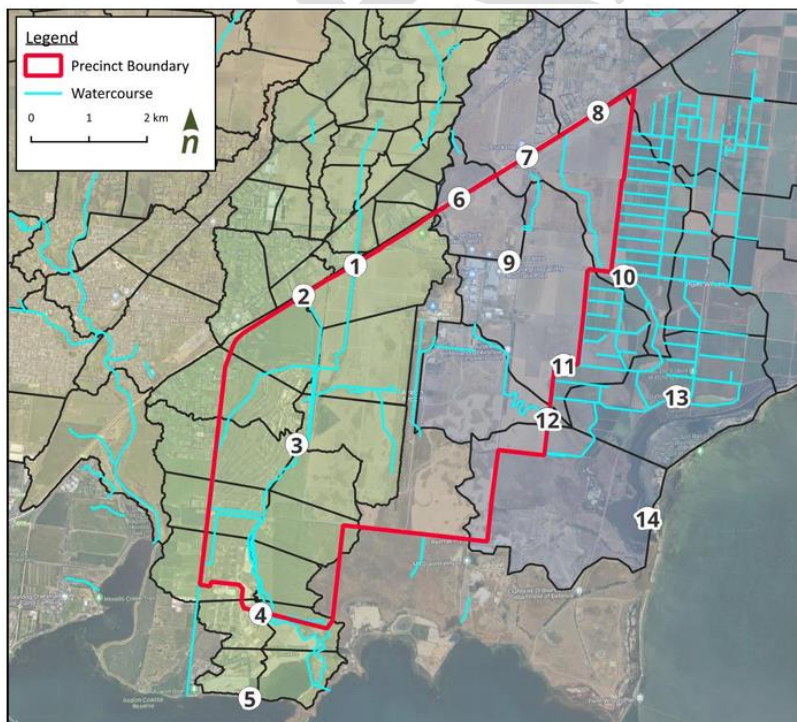


Figure 6 Watercourses (Alluvium Existing Conditions Flood Modelling Report, Pg 15)

1.4.3 Flooding

The below map shows the combined maximum flood depth results for the 1% Annual Exceedance Probability (AEP) flood event with climate change modelled by Alluvium. The flood model shows the probability of a flood event of a particular size or larger happening in any one year. The climate change part of the model is a projected high emissions scenario that predicts sea level rise and more severe frequent droughts. This is the scenario that presents a 'business as usual' approach.

Overall, the results indicate that flooding and water flow are significant constraints for the precinct and will need to be addressed in future drainage designs.

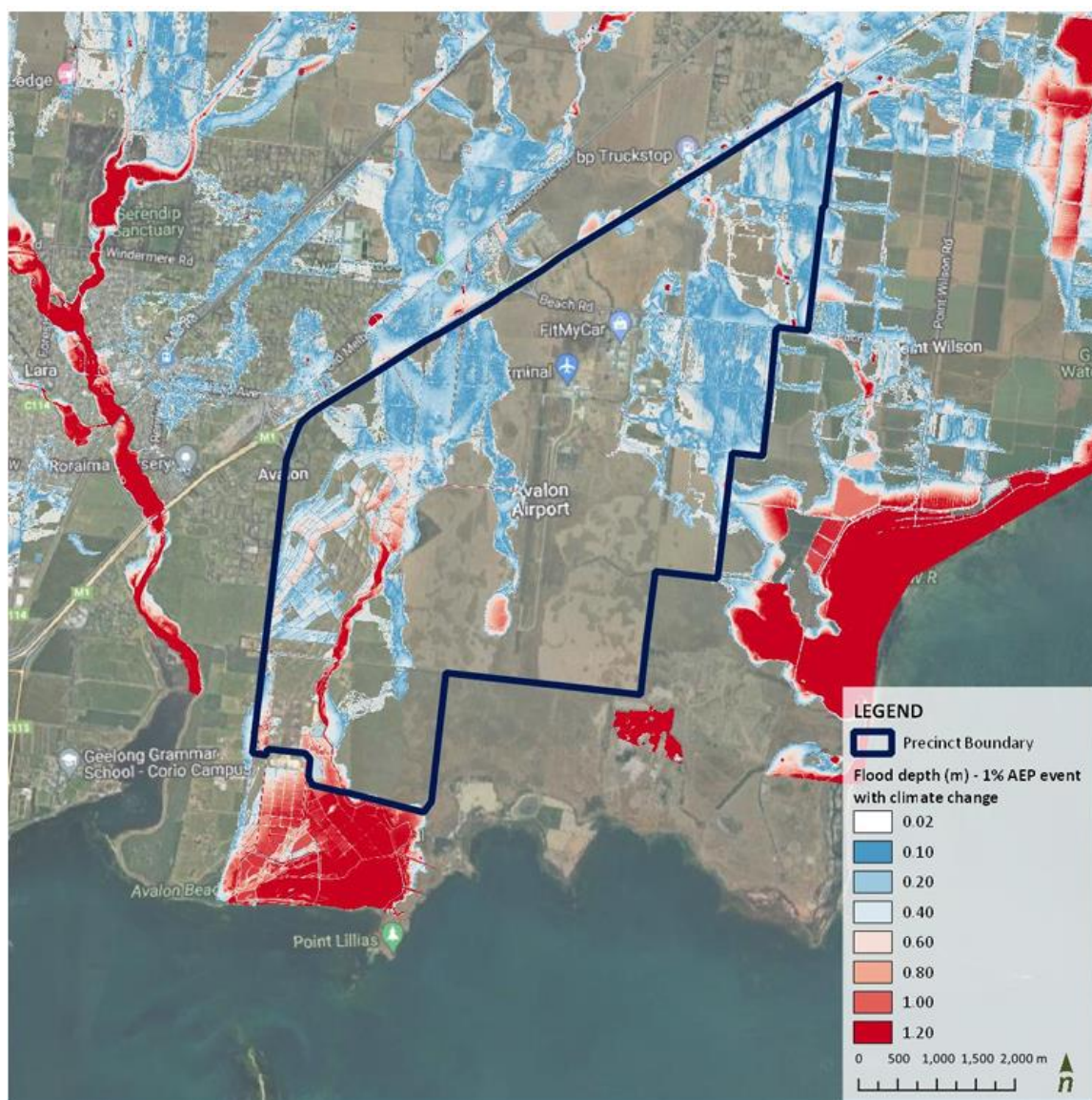


Figure 7 Flood Depth (m) – 1% AEP event with climate change (Alluvium Existing Conditions Flood Modelling Report, Pg 25)

1.4.4 Drainage

The development of an appropriate drainage approach for the GAEP has been a key focus of the planning process, requiring careful consideration of competing drainage, environmental, development, and aviation safety objectives.

Flood Modelling

As the project initially commenced as a PSP, the original intention was to prepare an overall drainage strategy for the precinct. The VPA engaged Alluvium, who prepared flood modelling for the precinct

DPO Schedule and Development Services Scheme

Following Alluvium's investigations and following the Minister for Planning's direction to change the project from a PSP to a different planning pathway, HARC was engaged by the Victorian Planning Authority in August 2025 to assist in drafting the GAEP West Development Plan Overlay schedule from a stormwater, drainage, and hydrological perspective. Planning for the Development Services Scheme (DSS) in GAEP North was formally handed over to Melbourne Water since an overall drainage strategy was no longer being prepared.

HARC undertook a review of previous work and conducted stakeholder engagement to investigate the precinct's developability. They formed the opinion that GAEP West is developable from a stormwater, drainage and hydrological viewpoint. While acknowledging the uncertainty surrounding impacts on environmental values and the complexity of balancing sometimes conflicting priorities, HARC identified a clear pathway forward through detailed Development Plan Overlay requirements.

Melbourne Water's investigations into the DSS for GAEP North currently involve assessing the viability of flow outfalls, and what the approvals pathway would be. GAEP North's drainage context is more complex than in GAEP West as it drains into the Western Treatment Plant, triggering additional EPA and WTP approval processes.

GAEP West Drainage Solution Framework

HARC's Position Paper proposes two primary outfall scenarios for the precinct:

- 1 Outfall the entire site through the Avalon Coastal Reserve following stormwater quality treatment and volumetric flow control
- 2 Outfall flows from Catchment A to the turbid estuarine environment of Hovells Creek (where seagrass is unlikely due to lack of light), while directing quality-treated flows from Catchment B to the existing waterway

HARC identify that the proposed drainage approach for GAEP West should incorporate:

- An indicative drainage layout, particularly in relation to drainage reserves and channels, waterway corridors, indicate water quality treatment locations and retarding basins.
- Determination of the existing environmental and volumetric flows through existing waterway within the Avalon Coastal Reserve. This is important to understand the volume and frequency of flows entering the ACR to sustain the salt marshes. As further salt marshes are restored as a part of the Blue Carbon project the freshwater flows into the site may be greater.
- Confirmation of the volume of extreme event flows (up to and including the 1% AEP flood event) generated on site (in each landholding) and determine how and where the flows should be split and treated for the external flows generated north of the Princes Freeway and west of the site in Avalon Airport.

- Confirm the water quality treatment standards required for the site, considering the question of whether greater than Best Practice treatment is required or will achieving Best Practice Guidelines standards be adequate. This should be guided by evidence or data for the Corio Bay area.
- Confirm the requirements of Avalon Airport regarding waterbodies including wetlands, retarding basins (wet or dry), waterways and sediment ponds.
- Agreement between all landholders regarding where flow paths, drainage lines and waterways will exit and enter the different landholdings and the invert levels that they will be set at. These agreed levels should not be at the detriment to either party.

HARC's work demonstrates that while the drainage challenges identified by Alluvium are real and significant, they are not prohibitive to development. Through coordinated planning between landholders, appropriate water quality treatment, volumetric flow control, and strategic outfall placement, the precinct can be developed while protecting environmental values. The Development Plan Overlay schedule establishes the framework for achieving this balanced outcome, with detailed drainage strategies to be refined through subsequent planning phases in consultation with relevant environmental and water authorities.

1.4.5 Sea Level Rise

GAEP West will be impacted by sea level rise at its southern end. The precinct has incorporated this into its design through appropriately locating conservation reserves and drainage infrastructure to align with the flooding and sea level rise extents.

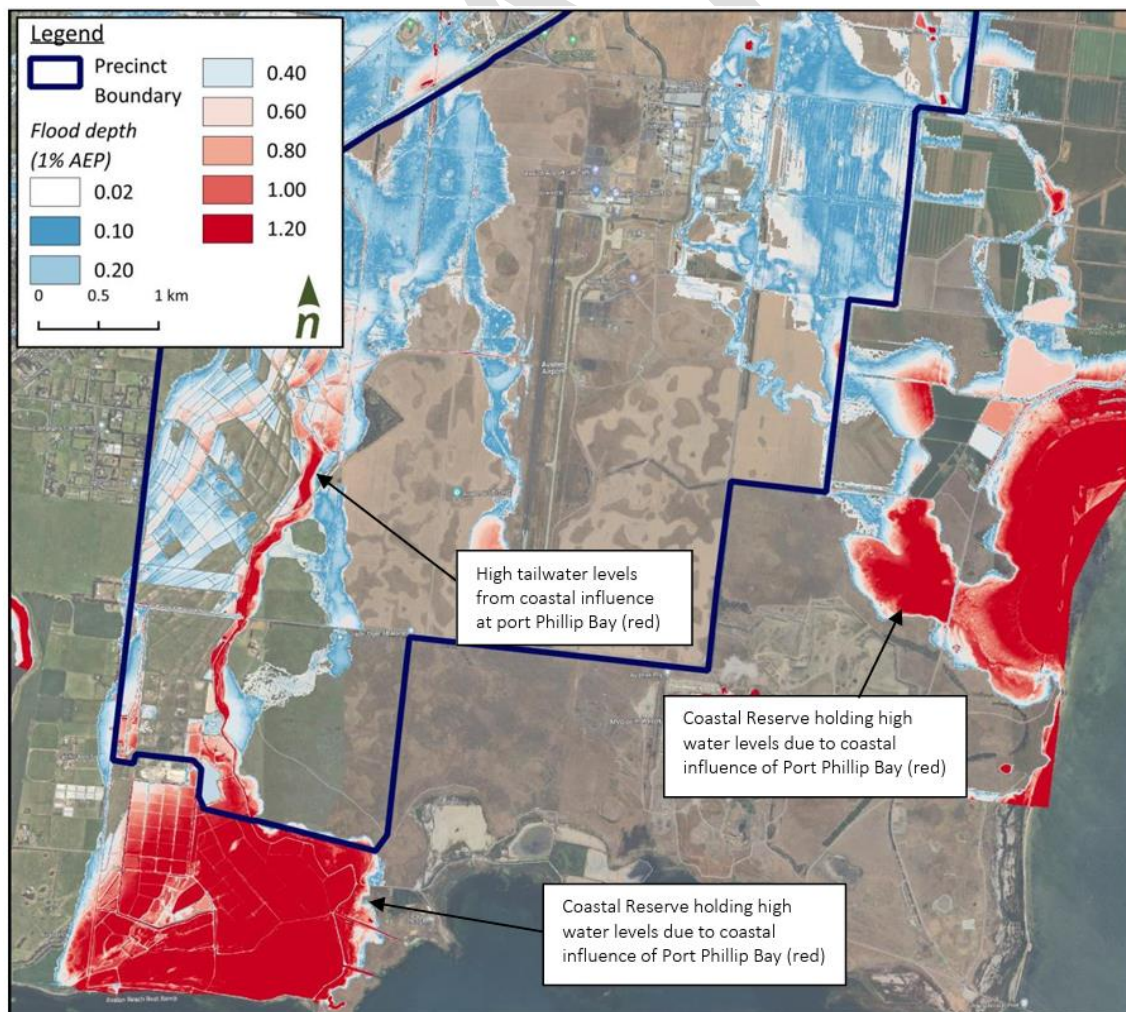


Figure 8 Tailwater Impacts on the GAEP – Existing conditions flood modelling – Alluvium, Pg 30)

1.4.6 Biodiversity and Vegetation

The precinct has eight ecological vegetation classes comprising a total habitat area of 177.40 hectares including 130.57 hectares of saltmarsh. Some of this saltmarsh is degrading over time because the former Cheetham Saltworks, which previously flooded and pumped sea water into its ponds to create salt, have not been operational for several decades which means salinity is declining in some areas.

To the south of the precinct are Ramsar wetlands, an internationally significant habitat for migratory birds. Furthermore, the site has potential habitat for the critically endangered Victorian Grassland Earless Dragon. Key features are shown on the following maps below.

The site and its surrounding roads contain approximately 7,000 trees. A Vegetation Protection Overlay applies to the trees in the Gillets Road unformed road reserve which abuts the western boundary of the airport.

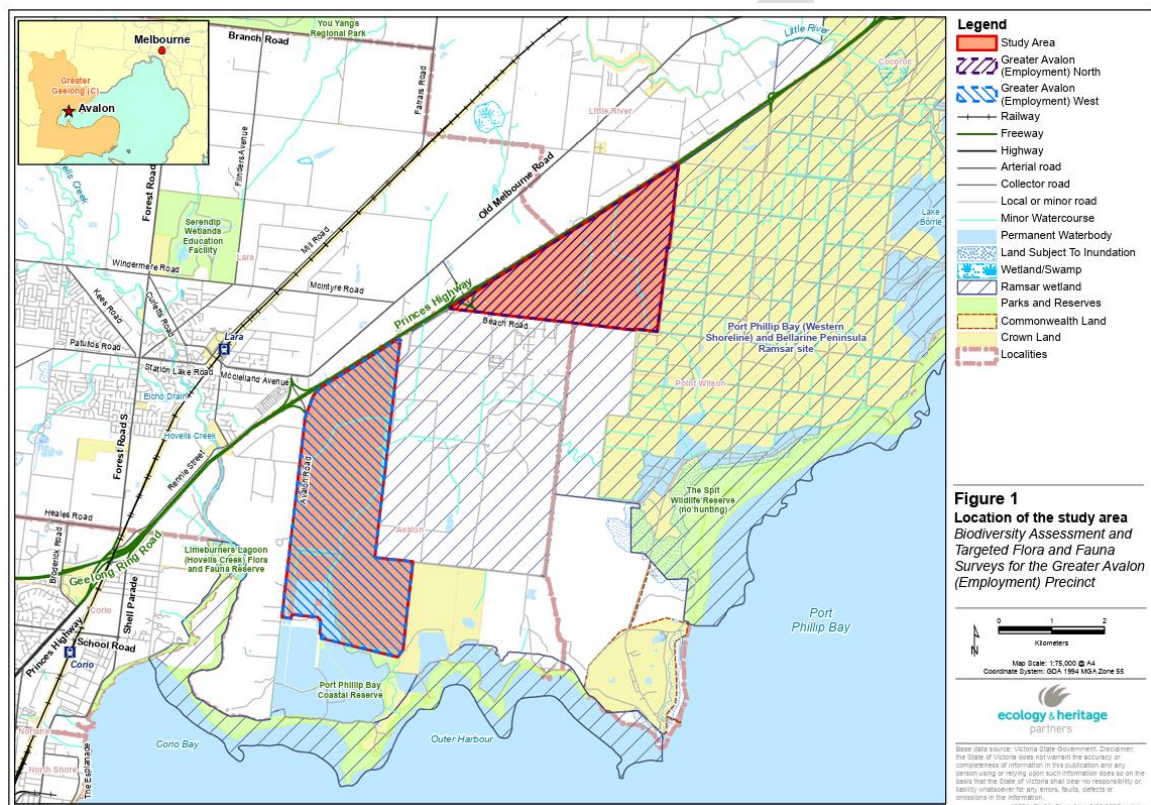


Figure 9 Ramsar wetland boundary (EHP Biodiversity Assessment, Pg 112)

- Addressing any other biodiversity considerations through the DPO schedule for GAEP West and the Framework Plan for the precinct.

The key findings are as follows:

- The area supports habitat for multiple threatened species, including the Growling Grass Frog, Golden Sun Moth, Orange-bellied Parrot, and migratory shorebirds.
- Key ecological communities identified include:
 - Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP)
 - Plains Grassy Wetland, Coastal Saltmarsh, and Brackish Wetlands
- Large parts of the site (retired salt pans) are transitioning to firstly low-quality coastal saltmarsh, and then to native and exotic grassland.
- Sea level rise modelling indicates the need to accommodate inland migration of wetland habitat.
- The recommended RCZ includes buffers:
 - ≥100 m for migratory bird habitat
 - ≥50 m around watercourses for Growling Grass Frog
 - ≥50 m for areas likely affected by sea level rise
- The existing ESO4 extent within GAEP West can be deleted as its objectives are accounted for through the outcomes of the planning scheme amendment. Specific objectives of the ESO responses include:
 - *O1: To prevent a decline in the extent and quality of native vegetation and native fauna habitat of the Victorian Volcanic Plain.*
 - Achieved through the implementation of a Native Vegetation Protection Plan (NVPP). It is proposed through the NVPP that offsets will be achieved on the Victorian Volcanic Plain.
 - *O2: To enhance the environmental and landscape values of the area.*
 - Achieved through the inclusion of a development plan requirement within the DPO for a Landscape Concept Plan and Conservation Management Plan.
 - *O3: To avoid the fragmentation of contiguous areas of native vegetation or native fauna habitat.*
 - The inclusion of the Rural Conservation Zone will facilitate the protection of contiguous sections of native vegetation and habitat.
 - *O4: To ensure that any use, development or management of the land is compatible with the long-term conservation, maintenance and enhancement of the grasslands.*
 - High quality grasslands in the precinct will be protected through the Rural Conservation Zone. There is provision for the long-term conservation, maintenance and enhancement of the grasslands outside of the Rural Conservation Zone to be considered at the permit stage within the Landscape Concept Plans.
 - *O5: To avoid the destruction of habitat for native fauna resulting from the modification of land form and disturbance of surface soils and rocks.*
 - Achieved through the inclusion of a development plan requirement within the DPO for a Conservation Management Plan.

- O6: To enable areas of environmental significance, due to their native vegetation or habitat values, to be identified.
 - Achieved through the inclusion of a development plan requirement within the DPO for a Landscape Concept Plan and Conservation Management Plan.

Having undertaken this work, WSP prepared a Native Vegetation Precinct Plan (NVPP). The NVPP:

- Informs decisions about future development of the precinct through a holistic, landscape-wide approach to native vegetation management.
- Specifies native vegetation to be protected versus vegetation that can be removed, destroyed or lopped.
- Sets out offset requirements for native vegetation removal in accordance with state Guidelines.
- Ensures areas set aside to protect native vegetation are managed to conserve ecological values.
- Streamlines planning approvals process through precinct-wide approach to native vegetation protection.
- Will be listed under Schedule to Clause 52.16 of the Greater Geelong Planning Scheme with 15-year validity.

Further details on the NVPP can be found in section 4 of this report.

1.4.7 Wadawurrung Cultural Heritage and Cultural Values

The precinct is Wadawurrung country, and as such its landscape may feature both tangible and intangible cultural values that demonstrate Wadawurrung peoples' connection to Country.

The Wadawurrung are represented by the Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC). Principles, values and recommendations for the management of Country are set out by WTOAC in *Paleert Tjaara Dja - let's make Country good together 2020-2030: Wadawurrung Country Plan (2020)*.

Regarding tangible cultural features, several Victorian Aboriginal Heritage Register Places are within the PSP area. These places must be managed under the Cultural Heritage Management Plan (CHMP) process in line with S.61 Matters (harm avoidance, minimisation and/or mitigation) and consultation and advice from WTOAC.

The precinct is currently awaiting the completion of a Cultural Values Assessment to determine the intangible heritage values of the area. Some landowners have also commenced the preparation of CHMPs.

1.4.8 Post-Contact Heritage

The Post Contact Heritage Report prepared by Green Heritage identified one Victorian Heritage Inventory Sites within the Precinct: the Pousties Road Stone Enclosure. There are no other sites noted as significant or requiring heritage protection within the precinct.

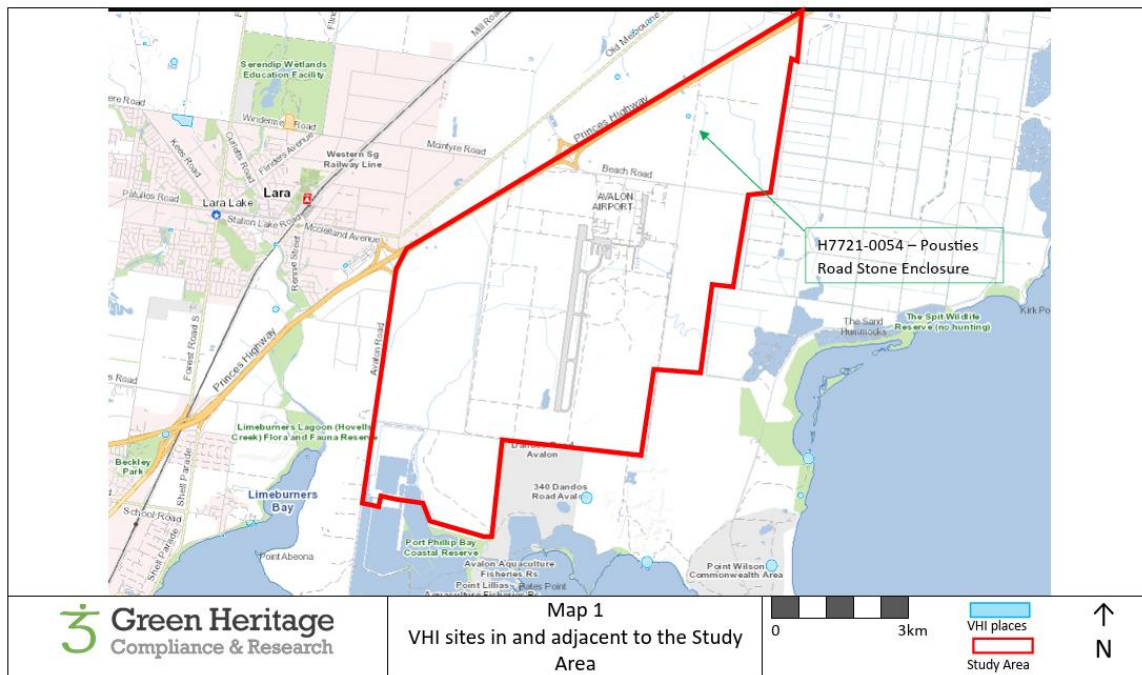


Figure 11 VHI sites in and adjacent to the Study Area (Green Heritage Historical Cultural Heritage Impact Assessment: Desktop Assessment, Thematic Study and Survey, Pg 10)

1.4.9 Utilities

The precinct has access to existing sewer reticulation, potable water supply, electricity supply, gas supply and telecommunications network infrastructure, but the authorities need to further develop their overall strategies and plans for the provision of increased service to this area.

Gas and Oil Infrastructure

Several major pipelines run through the precinct, forming critical pieces of state energy infrastructure. These include both gas transmission pipelines and high-pressure oil pipelines that need to be carefully considered in the planning and design of GAEP.

Gas Pipelines

Two major gas transmission pipelines, owned and operated by APA, are located within an easement that runs parallel to the Princes Highway. This easement varies in width from 10 metres to nearly 25 metres as it passes through the precinct. The two pipelines are:

- **T112 (Brooklyn to Lara):** The larger pipeline, with a diameter of 500mm
- **T024 (Brooklyn to Corio):** The smaller pipeline, with a diameter of 350mm

For most of their length through the precinct, both pipelines run side-by-side within the same easement. However, approximately halfway between Avalon Road and Beach Road, the T112 pipeline changes alignment. From this point heading southwest, the T112 diverts into the Princes Highway Road reserve and continues alongside the highway until it reaches the Hovells Creek substation (which is beyond the GAEP area). The T024 pipeline continues in its original alignment.

Safety Considerations for Gas Pipelines

APA has identified safety requirements that must be considered in planning for the precinct. In the unlikely event of a pipeline rupture, there would be a risk from heat radiation. The Australian Standard AS2885 defines a "Measurement Length" (ML) - essentially a safety buffer zone around the pipeline where heat radiation could pose a risk to people and buildings.

The required safety buffer zones are:

- **T112 pipeline:** 525 metres on each side of the pipeline
- **T024 pipeline:** 297 metres on each side of the pipeline

Because these are radial measurements, they create substantial areas on both sides of the pipelines where certain types of development need to be carefully considered or avoided. APA has provided guidance on which land uses they consider unsuitable within these safety zones, and this will need to be factored into the urban design and land use planning for GAEP.

Oil Pipelines

In addition to the gas pipelines, Viva Energy operates multiple high-pressure oil pipelines that also pass through the site. These pipelines run adjacent to the APA gas pipelines within the same easement corridor that runs parallel to the Princes Freeway.

Avalon Road, Beach Road and Pousties Road currently cross over these oil pipelines. Given the high-pressure nature of these oil pipelines, they will need careful consideration during the planning and urban design phases of the precinct. Special protection measures will be required during any construction activities, and ongoing safeguards will be necessary throughout the precinct's operational life.

Further consultation with Viva Energy will be essential to understand the specific requirements and constraints associated with these oil pipeline assets and to ensure they are appropriately protected and managed.

Future Gas Infrastructure – Vopak Energy Terminal

A temporary floating liquefied natural gas (LNG) import terminal, known as Victoria's Vopak Energy Terminal, is proposed for Port Phillip Bay, approximately 19 kilometres east of Avalon. This terminal is being developed as a short-term solution to address Victoria's gas supply challenges during the transition to renewable energy. The terminal would be moored in the bay for an expected 10 to 20 years, though this timeframe could be extended if needed.

The terminal will require new supporting infrastructure on land, including:

- A gas receiving station
- A nitrogen generation plant
- High-pressure gas pipelines (approximately 19km long) to transport the gas from the terminal
- A new 220kV electricity substation to power the terminal operations
- Underground transmission lines (14-19 kilometres long) running along road reserves to connect the substation to the existing transmission network north of Lara

The exact location of the new 220kV substation has not been finalised, but it is likely to be positioned along Beach Road toward the eastern edge of the GAEP precinct. There is also potential for transmission lines to run through the GAEP site to connect to the Lara terminal station. Further coordination with Ausnet will be necessary to understand how this infrastructure might integrate with or affect the precinct.

The Vopak Victoria Energy Terminal and its associated electrical infrastructure are currently undergoing assessment by both the Commonwealth and Victorian Governments through an Environment Effects Statement process. This process will provide clearer project specifications and a better understanding of any impacts on GAEP.

1.4.10 Transport Network

The key elements of the transport network are as follows:

- **Princes Highway** has six lanes and bounds the north of the precinct. It is the primary vehicular connection between Melbourne and Geelong. It has two interchanges to the precinct at Avalon Road and Beach Road. The Point Wilson Road interchange to the north-east is also used by some vehicles to access the site via Point Wilson and Beach Roads. The Princes Freeway also forms part of Victoria's Principal Freight Network.
- **Avalon Road** is a two lane road that runs north-south forming the precinct's western boundary. It currently carries traffic from the rural-residential land to the west, traffic from Avalon Beach and quarry traffic from Dandos Road.
- **Dandos Road** runs east-west from Avalon Road, closer towards the south of the precinct. Its current primary purpose is to carry traffic from the Point Wilson Quarry to the Princes Highway and provide a perimeter road for the airport land.
- **Beach Road** runs east-west from the Princes Freeway. It carries traffic from the freeway to Avalon Airport as a two lane road. Beach Road is significant because it forms the primary connection to Avalon Airport and its related employment sites.
- **Pousties Road** runs north-south through the GAEP North and airport land. It is two lanes and is paved south of Beach Road and unpaved north of this. There is an informal connection to the freeway service centre at its northern end.
- **Public Transport:** On 10th November 2025, a new #18 bus route was announced linking Avalon Airport to Lara Station. The station is part of the Geelong V-Line service, and is located approximately a 2.4km drive from the precinct.
- **Active Transport:** there is no formal walking or cycling infrastructure located within or surrounding the precinct.

The following map provides an overview of the existing transport network relevant to the GAEP.

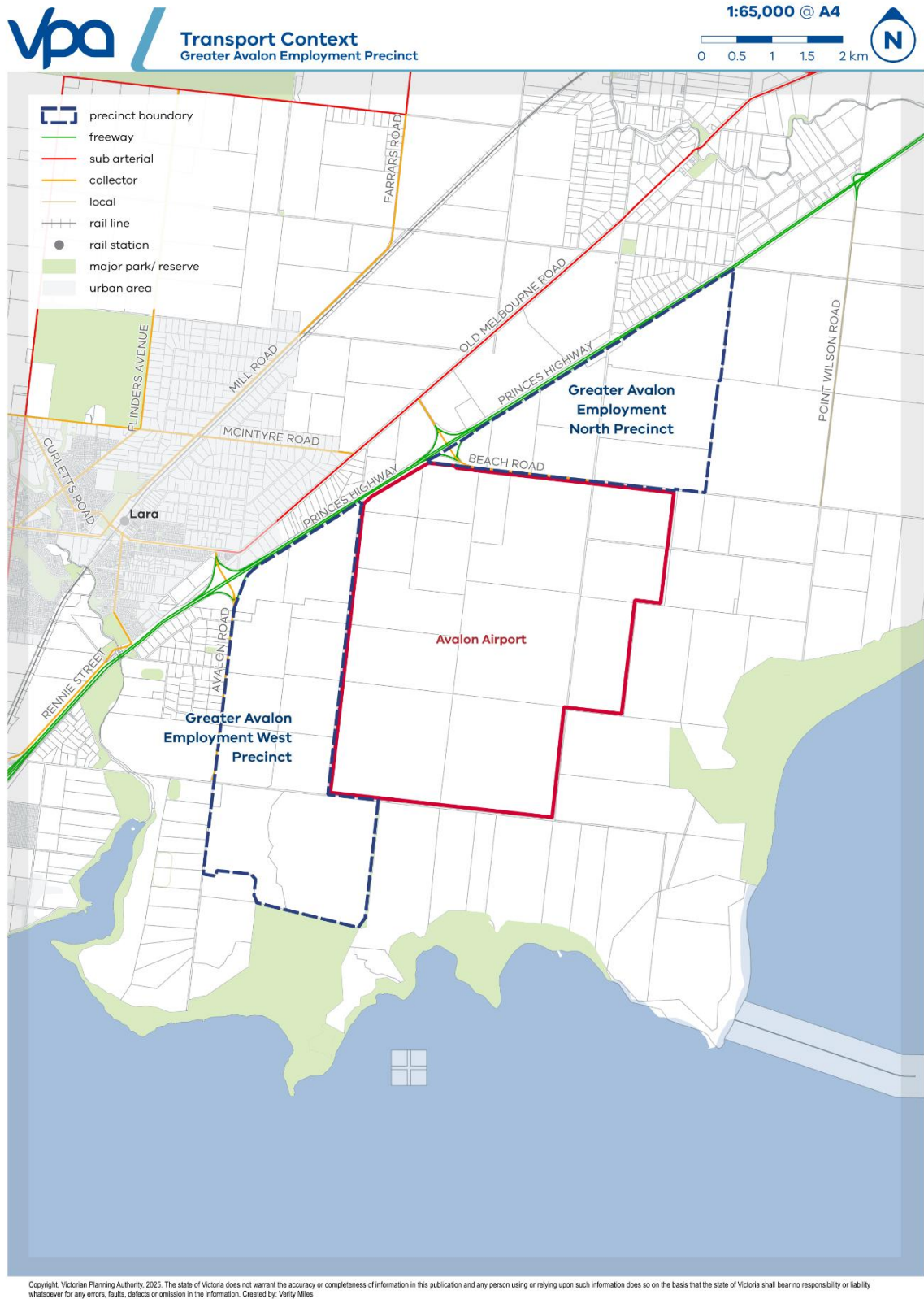


Figure 12 Transport Network

1.5 Policy and Legislation Context

The following section explains the existing federal and state policies and strategies that apply to the area. These include future plans that have already been adopted and existing guidelines and legislation that the precinct will need to align with.

1.5.1 Federal Policy and Strategies

NASF Guidelines

The *National Airports Safeguarding Framework* (NASF) informs land use and development approval processes to protect the safe and efficient operation of all airports in Victoria and aviation infrastructure. Clause 18.02-7S Airports and airfields of the Greater Geelong Planning Scheme identifies the NASF guidelines as a relevant policy document for strategic planning.

Avalon Airport is a civil aviation airport owned by the Department of Defence, and subject to an operational lease with the operator, Avalon Airport Australia Pty Ltd. The DPO schedule for GAEP West requires development plans to include an assessment against the relevant NASF guidelines.

See more: [National Airports Safeguarding Framework principles and guidelines](#)

Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework to protect and manage nationally, and internationally important flora, fauna, ecological communities, and heritage places defined in the EPBC Act as matters of national environmental significance (MNES). The Ramsar wetlands to the south and west of the precinct are protected under the EPBC Act. Furthermore, the EPBC Act lists flora and fauna that is endangered that may either exist or have suitable habitat within the precinct.

Areas within GAEP West have been identified for conservation purposes including to protect EPBC Act species. The DPO will ensure adequate protection of these conservation areas consistent with the EPBC Act.

See more: [Environmental Protection and Biodiversity Conservation Act 1999](#)

1.5.2 State Policy

Plan for Victoria 2025

The GAEP is identified as a key strategic employment area in *Plan for Victoria* on the “Geelong in the Future” map. Its inclusion reflects its importance to the long-term growth of the Geelong region.

While the precinct is not intended for housing, providing jobs close to where Victoria’s housing targets direct significant growth is important. This includes for GAEP, proximity to Melbourne’s western growth corridor, and Geelong that is expected to deliver 128,600 dwellings.

See more: [Plan for Victoria](#)



Figure 13 Geelong in the Future (Plan for Victoria, Pg 60)

Victoria's Economic Growth Statement 2024

The GAEP is highlighted as a key regional site in the Economic Growth Statement, with plans to unlock industrial land and attract business investment. Its strategic location near Avalon Airport and major freight routes position it to support growth in advanced manufacturing, logistics, and the circular economy. The Statement outlines initiatives to fast-track planning, boost local jobs,

and align the precinct with state priority sectors, reinforcing its role in driving regional economic development.

See more: [Victoria's Economic Growth Statement](#)

Victoria's Housing Statement 2024

Victoria's Housing Statement identifies the GAEP as a priority project for regional Victoria. This recognises its strategic role in supporting employment growth alongside the state's housing agenda.

See more: [Victoria's Housing Statement](#)

1.5.3 Regional Plans

Wadawurrung Healthy Country Plan

The *Wadawurrung Healthy Country Plan, or Paleert Thaara Dja – Let's make Country good together 2020-2030*, sets out several values that should be adhered to and threats that should be minimised to achieve the vision of "All people working together to make Wadawurrung Country and Culture Strong".

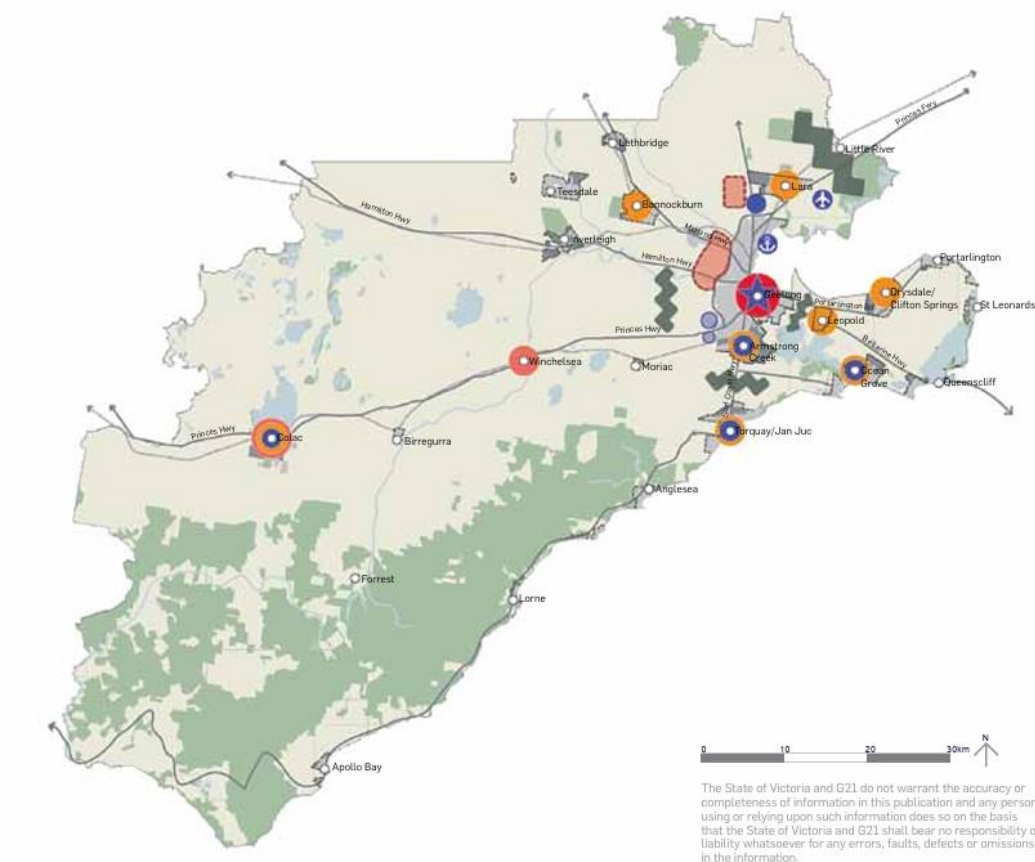
The Healthy Country Plan emphasises several values, including Wadawurrung cultural sites and places, Yulluk (Waterways, rivers, estuaries and wetlands), Inland Country and Native Animals which are of significance to the context of GAEP's features and landscape.

Specifically, the precinct aims to address matters outlined in the plan as being of notable interest to Wadawurrung Country such as urban development, insufficient coordination, insufficient recognition and sea level rise. Development of the precinct aims to integrate and consider these values through its planning and technical work.

G21 Regional Growth Plan, 2007

The *G21 Regional Growth Plan* covers the municipalities of the City of Greater Geelong, Colac Otway Shire, Surf Coast Shire, Borough of Queenscliff and the southern portion of Golden Plains Shire. The plan provides broad direction for directing regional growth of land use and development in the G21 region.

While the Regional Plan does not define the boundary of the precinct as an urban growth area, it does list the area as a key existing/planned employment node, acknowledges the airport as a key economic centre for the region and aims to develop a national transport and logistics precinct within key sections of the corridor (Avalon Airport, GREP and Geelong Port).



★ Reinforcing the role of Central Geelong as a regional city and Victoria's second largest city
Major infill is proposed to support the revitalisation and strengthening of central Geelong.

● Supporting the growth of Geelong with a focus on infill housing opportunities
A focus on infill housing opportunities at targeted activity centres and Key Development Areas as identified in the Greater Geelong Planning Scheme.

● Supporting planned growth and reinforcing the role of district towns
Encourage growth of district towns or centres consistent with existing Structure Plans/Growth Plans. With Armstrong Creek, this will accommodate a further 125,000 people over the next 20 – 30 years. Development of underutilised sites and urban infill is actively recommended within these settlements to ensure a range of housing choice.

● Introducing new targeted growth nodes
Grow Colac to a town of 20,000 and Winchelsea to a town of 10,000. Further strategic work will need to be undertaken for both towns to identify the most appropriate areas for growth and to identify major incentives to support growth. These areas are not anticipated to be required until at least 2030-2040.

● Identification of two Further Investigation Areas in Geelong
Potential development of these areas, is not likely to be required ahead of identified planned growth. They will require further assessment of suitability and capacity for growth and the monitoring of land supply within the region to determine timing. The Lovely Banks area near Lara potentially has a higher priority, given greater connection to Melbourne and links with proposed national transport logistics employment areas.

● Strengthening and protecting the identified existing and planned employment areas (shown on map)
As well as tourism precincts and district town activity centres (not shown on map).

● Maintain productive agricultural areas
Consistent with existing Rural Land Use Strategies and includes opportunities for broadacre cropping and livestock, intensive livestock and horticulture, irrigated agriculture, forestry and emerging agricultural activities.

● Identifying new employment nodes
A new Education, Health and Research Hub at Deakin University, the long term potential employment hub at Warrnambool South, subject to further investigation, and the expansion of industrial employment areas in Colac and Winchelsea, subject to more detailed planning.

● Identification of four key settlement breaks
Discussion provided in section 4.11.

● Designation of settlement boundaries for all towns
The region's other rural and coastal settlements will continue to experience modest growth and play an important tourism and agricultural role to surrounding areas. Growth will be limited to identified structure plan settlement boundaries.

● Maintain and enhance natural assets
Protect and build on our natural assets by maximising key opportunities to link and rehabilitate ecosystems and enable sustainable and planned productive uses. Sustain the health of our natural assets by considering future challenges in the management, planning and development of these assets.

Figure 14 G21 Regional Growth Plan (Pg 27)

G21 Economic Development Strategy, 2014

The *G21 Regional Economic Development Strategy* is the economic strategy for the G21 region, aimed to assist the 2007 regional plan. It has five strategic focus areas:

- Strategic and integrated transport infrastructure.

- Vibrant and active region.
- Coordinated delivery of critical growth infrastructure.
- Learning and innovation.
- Investment ready.

Some of the key outcomes related to the airport are increased local job accessibility initiatives, enabled business investment and jobs, increased investment (private and public), attraction of key strategic businesses to the G21 region and increased domestic and international exposure among others. Initiatives and actions most relevant to the precinct are the development of Avalon (freight and international airport) and a national freight and logistics hub.

Avalon Corridor Strategy, November 2022

Wyndham City Council and the City of Greater Geelong, with input from the VPA, prepared the *Avalon Corridor Strategy* in 2022, a high-level and broad strategy that:

- Sets out the future vision for sustainable growth and land use planning in the landscape between Melbourne and Geelong
- Focuses appropriate commercial and industrial development within and surrounding Avalon Airport, as per the Framework Plan.
- Highlight the ongoing importance of the economic and transport connections between Werribee and Geelong.
- Avoid residential development within the Avalon Corridor.
- Protect areas of acknowledged environmental value including coastline and Ramsar wetlands and grasslands.
- Protect Wadawurrung cultural values and areas of known cultural heritage significance, as well as post-contact heritage sites

The Avalon Corridor Strategy states as future work, a PSP will be developed for the Avalon Airport surrounds.

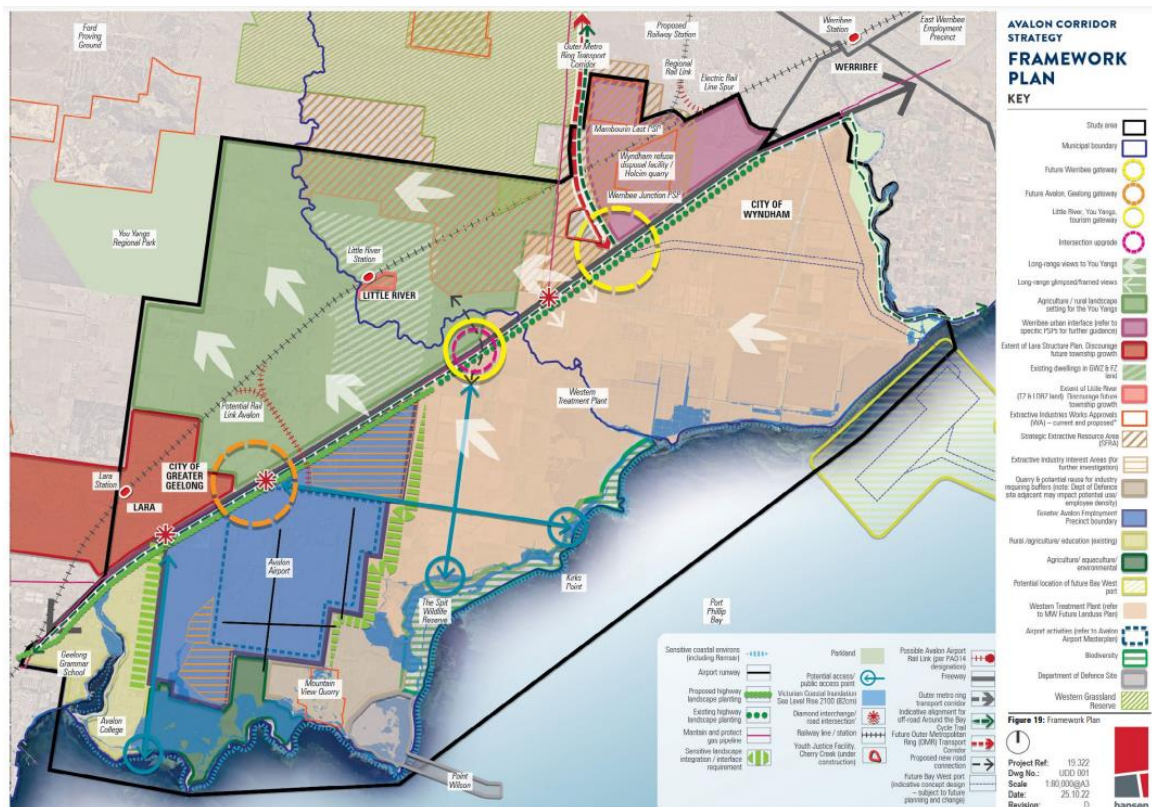


Figure 15 Avalon Corridor Strategy Framework Plan (Pg 119)

Avalon Corridor Strategy Integrated Water Management Plan March 2024

The *Avalon Corridor Strategy Integrated Water Management Plan* will inform future projects in the corridor, such as the GAEP, by examining options for servicing, provide options for managing potential stormwater runoff impacts, review opportunities to enhance environmental and cultural values and align with state government policies and frameworks.

The study determined that:

- The extensive flooding limits the developable area of the precinct.
- The flat topography of the site creates challenges around drainage outfalls.
- Shallow drainage pipes will lead to inefficiencies, such as shallow basins with large retention basins. A pumped alternative would be costly.
- Outfalls at the bay are tidally influenced, which will get worse as climate change worsens.
- Significant upgrades to water/sewerage within the area are expected with the system expected to be pressurised due to the flat terrain, however, some locations may be able to utilise gravity sewer.
- Open water bodies adjacent to open spaces may lead to increased wildlife strike hazard.

The recommended IWM objectives are as follows:

- Protect and enhance the health of receiving environments.
 - Protect and preserve natural waterways, mangrove country and saltmarsh country from pollution (stormwater quality)
 - Protect and preserve natural water flow regime (stormwater quantity)
 - Avoid wastewater discharges to the surrounding sensitive environment

- Enhance habitat for migratory bird population
- Provide secure and sustainable water services:
 - Reduce potable water consumption of future industrial/commercial developments through the use of fit-for-purpose water.
 - Maximise the availability and use available alternative water sources within the GAEP
- Support the liveability of the places we live and work:
 - Enhance amenity and microclimate through the introduction of natural features
 - Minimise the impact of water management assets on existing and future users (e.g. land take, wildlife strike hazards impacting airport operations)

1.5.4 Planning Scheme

The Planning Policy Framework (PPF) contains statewide, regional and local planning policies, which articulate the land use and development outcomes sought by the Greater Geelong Planning Scheme (the Planning Scheme). A detailed summary of the planning policy relevant to the precinct is included as an appendix in this report. Below are the key policy influences that have been considered in planning for the precinct.

Planning Policy Framework

Municipal Framework Plan

The below map in Clause 02.04-1 sets out the spatial vision for Geelong. The Non-Urban Break in green is intended to provide a break between Geelong and Wyndham. The Geelong Settlement Strategy, on which the policy is based, refers to the Avalon Corridor Strategy providing the strategic basis for strengthening protections around airport operations and significant views of the You Yangs in this non-urban break.



Figure 16 Geelong Municipal Framework Plan (Clause 02.04-1 Greater Geelong Planning Scheme)

Settlement and Managing Growth

Clause 11.01-1L-01 (Settlement – Greater Geelong) discourages development outside the Lara settlement boundary to maintain distinct non-urban breaks, protect rural landscapes, and preserve views to the You Yangs. For the GAEP, this means development must not compromise the area's rural setting or limit future agricultural use or airport-related activities.

Clause 11.02-1S (Structure Planning) and Clause 11.02-3S (Sequencing of Development) promote the provision and orderly release of urban land, requiring growth areas like the GAEP to be developed in line with long-term infrastructure planning.

Clause 11.02-3L (Sequencing of Development) ensures that development which occurs outside of established staging must bear the cost of delivering infrastructure.

Development Staging and Coordination

Clauses 11.02-3S and 11.02-3L are central to managing how the GAEP develops. These policies require that land is released in a logical sequence, coordinated with infrastructure delivery. Out-of-sequence development is expected to fund the required community and physical infrastructure, ensuring growth does not impose unplanned costs on local or state authorities. Early planning in the GAEP must ensure that services such as roads, sewer, water and drainage are available to support each stage of development.

Environmental and Landscape Values

Clauses 12.01-1S (Protection of Biodiversity) and 12.01-2S (Native Vegetation Management) require the GAEP to prioritise biodiversity protection. These clauses require that any native vegetation removal follows the 'three-step approach': avoid clearing native vegetation wherever possible, minimise impacts where clearing is unavoidable, and offset the loss with ecological compensation elsewhere. Policies relating to Water Bodies and Wetlands, Clauses 12.03-1S and 12.03-1L, emphasise the importance of preserving the natural hydrology of rivers, wetlands and waterways. For the GAEP, this means maintaining flow connectivity to downstream systems such as Port Phillip Bay and avoiding fragmentation or degradation of local wetland habitat.

Climate Change Impacts

The GAEP must be planned and designed to respond to climate change challenges, both now and into the future. State planning policy (Clauses 13.01-1S, 13.01-2S and 13.01-3S) sets clear directions for how developments should address natural hazards, climate change impacts, coastal risks, and urban heat. Planning for the precinct must take a risk-based approach - this means identifying potential climate-related hazards and designing the area to minimise their impacts. Given the precinct's coastal location and Victoria's changing climate, two key areas require particular attention: coastal risks and urban heat.

Movement Networks

Clause 18.02-7S (Airports and Airfields) recognises Avalon Airport as critical state infrastructure and a principal transport gateway for freight (Clause 18.02-5S). It seeks to protect the airport from encroachment by incompatible uses that may impact safety, amenity, or operational capacity. Clause 18.02-7L (Avalon Airport Rail Link) reinforces the need to preserve the alignment of the proposed Avalon Airport Rail Link within the GAEP. Clause 17.01-1L-01 (Diversified Economy) supports development of aerospace and freight-related industries adjacent to Avalon Airport, reinforcing the precinct's strategic role in the regional economy.

Infrastructure

Clauses 19.03-1S and 19.03-2S guide infrastructure planning within the GAEP to ensure it is delivered efficiently and cost-effectively. The Infrastructure Design Manual, referenced in Clause 19.03-2L, should be applied to ensure consistent infrastructure outcomes across the municipality. Clause 19.03-3S supports integrated water management within the GAEP, requiring coordination of stormwater, drainage, and wastewater systems. This supports flood mitigation, protects

downstream waterways, and improves water quality in receiving environments such as Port Phillip Bay.

Together, these policies guide the transformation of the GAEP into a well-served, environmentally responsible and strategically located employment precinct that supports long-term regional growth.

GAEP West is subject to the following overlays:

- Land Subject to Inundation Overlay (LSIO 2 Coastal inundation hazard) – This will be retained.
- Vegetation Protection Overlay (VPO 1 Significant Roadsides and linear reserves) – This applies to vegetation along the Gillets Road reservation and will be retained.
- Environmental Significance Overlay (ESO2 High Value wetlands and associated habitat protection, ESO4 Grasslands within the Werribee plains hinterland) – The existing ESO4 that applies to GAEP West will be removed as a Native Vegetation Precinct Plan will apply to the land instead. ESO2 will be retained.

GAEP North is subject to the following overlays:

- Land Subject to Inundation Overlay (LSIO2 Coastal inundation hazard)
- Environmental Significance Overlay (ESO4 Grasslands within the Werribee plains hinterland)
- Public Acquisition Overlay (PAO14 Railway) – This overlay is intended to create a rail spur transport link to the airport.

1.5.5 Ministerial Directions

The Minister for Planning issues direction to planning authorities for the preparation of planning schemes and amendments. Below are several directions relevant to the GAEP.

Ministerial Direction 1 – Potentially Contaminated Land

This direction contains requirements for amendments which allow land to be used for a sensitive use, such as residential (which will not be provided for in this employment precinct) or childcare (which could be developed in the precinct).

The Direction also contains requirements for amendments which allow land to be used for agriculture or public open space. Where these uses are allowed on 'potentially contaminated land', the planning authority must satisfy itself that the land is or will be suitable for that use.

Through preparing the Land Capability Assessment, Jacobs, April 2025, several sites within the precinct have been as having a medium to high potential for land contamination. All sites with high potential contamination are in GAEP North. 4 land holdings with medium potential for contamination about the Avalon airport in GAEP West.

The VPA has satisfied itself as the responsible authority that potentially contaminated land within the precinct does not present a significant issue in accordance with Planning Practice No. 30 and can be suitably remediated if the land is contaminated. Appropriate controls and requirements to address the risk from new development on the potentially contaminated land have been incorporated into the precinct.

See more: [Ministerial Direction 1 – Potentially Contaminated Land](#)

Ministerial Direction 11 – Strategic assessment of amendments

The precinct has been assessed against Ministerial Direction 11. The Amendment will implement the objectives of planning in Victoria by providing for the fair, orderly, economic and sustainable use of land identified for urban purposes. This is discussed in detail within the explanatory report that accompanies the proposed amendment. Throughout the development of the precinct, the VPA has considered the potential impacts of new planning provisions on resourcing and administration for the City of Greater Geelong. The VPA have minimised increasing administrative burden through producing a well-considered precinct using only planning controls necessary to achieve satisfactory planning outcomes.

See more: [Ministerial Direction 11 – Strategic assessment of amendments](#)

Ministerial Direction 13 – Managing coastal hazards

The purpose of this Direction is to set out the general requirements for consideration of the impacts of climate change within coastal Victoria as part of an amendment which would have the effect of allowing non-urban land to be used for an urban use and development.

In preparing an amendment which would have the effect of rezoning non-urban land for urban use or development, a planning authority must demonstrate in the explanatory report how the proposed amendment:

- Is consistent with the planning policies, objectives and strategies for coastal Victoria as outlined in state planning policies (including regional planning policies) in the Planning Policy Framework.
- Addresses the current and future risks and impacts associated with projected sea level rise and the individual and/or combined effects of storm surges, tides, river flooding and coastal erosion.
- Is based on an evaluation of the potential risks and presents an outcome that seeks to avoid or minimise exposing future development to projected coastal hazards.
- Ensures that new development will be located, designed and protected from potential coastal hazards to the extent practicable and how future management arrangements will ensure ongoing risk minimisation.
- Considers the views of the relevant floodplain manager and relevant Victorian Government department.

See more: [Ministerial Direction 13 – Managing coastal hazards](#)

Ministerial Direction 19 – Amendments that may result in impacts on the environment, amenity and human health

The purpose of this direction is to require planning authorities to seek the views of the Environment Protection Authority (EPA) in the preparation of planning scheme reviews and amendments that could result in use or development of land that may result in significant impacts on the environment, amenity and human health due to pollution and waste.

Throughout the planning process for the precinct, the VPA has consulted with the Environmental Protection Authority to raise and discuss any potential environmental issues and how they should be addressed.

See more: [Ministerial Direction 19 – Amendments that may result in impacts on the environment, amenity and human health](#)

Ministerial Direction 22 – Climate Change Consideration

Ministerial Direction 22 is a mandatory requirement that ensures climate change is properly considered when preparing any planning scheme amendment. This direction requires the planning authority to assess two key areas: how the amendment will reduce greenhouse gas emissions, and how it will respond to climate change impacts on natural hazards.

The first requirement is to consider how the GAEP planning scheme amendment will minimise greenhouse gas emissions. This assessment must focus on measures that are relevant at the strategic and precinct scale, rather than individual building-level responses.

For GAEP, this means considering how the overall layout, design, and infrastructure of the precinct can support Victoria's emissions reduction targets.

The second requirement is to consider how climate change will affect natural hazards in the area, and ensure that the development envisioned by the planning scheme amendment will be resilient to these impacts.

For each relevant hazard, the planning authority must consider both the current risk and how climate change may increase or alter that risk over time. The amendment must then demonstrate how the planned use and development of the precinct will be resilient - meaning it can withstand, adapt to, and recover from these climate-impacted hazards.

See more: [Ministerial Direction 22 - Climate Change Consideration](#)

1.5.6 Local Strategic Documents

Our Community Plan 2025-2029

The *COGG Our Community Plan* is a strategic document that was led by the councillors following the last council elections. It contains six strategic objectives, of which the three most relevant to the precinct are:

- Core and Critical Infrastructure: Plan, deliver, manage and optimise core and critical infrastructure across the region
- Economic Development: Lead efforts to strengthen our diverse economy and workforce to enhance prosperity across our community
- Environment and Circular Economy: Protect and enhance our unique natural environment and surrounds.

Stormwater Quality Strategy, October 2015

The *Stormwater Quality Strategy* was developed by the City of Greater Geelong to protect the council's foreshores, natural waterways and Ramsar wetlands, all directly relevant to the precinct by providing objectives and guidance around Water Sensitive Urban Design.

Regarding future urban development, the Stormwater Quality Strategy demonstrates it is essential that new developments must avoid mistakes of the past by implementing robust stormwater management processes from the outset. In the context of the precinct, it is important that the Avalon Coastal Reserve and Ramsar wetlands are protected from contaminants.

Open Space Network Report 2020-2023

The *Open Space Network Report* looks at the open space network over a three year time period specifically relating to active open space, passive open space and conservation. One of the actions to come out of the report was for the city to explore the "immediate application of 5% open space requirement under the Subdivision Act for all non-residential zoned subdivision.

Planning scheme adoption may be required". While no action has occurred now, it is worth noting that this is greater than the 2% minimum currently typically required for subdivision in industrial amendment to update the flood related planning overlays (SBO, LSIO & FO) within the precinct areas.

Lara Flood Study (2020, Watertech)

The *Lara Flood Study* was undertaken to produce detailed flood mapping for the region, undertake definitive flood investigations for the floodplain reaches and to build on previous flood studies completed. The study indicates that a significant portion of the precinct that falls within the 1% AEP Riverine Flood Model predictions. The study recommends a planning scheme Planning Scheme Amendment C339ggee was prepared to implement this, and following Council's consideration of submissions, the part of the Amendment relating to the Lara Flood Study was abandoned.

Urban Forest Strategy 2015-2025

The *Urban Forest Strategy* was developed with the aim of cooling and greening the city of Geelong. While the Airport area was not specifically analysed, the western side of Hovells Creek was shown to have a high thermal image value. This means that planting additional street trees, incorporating other forms of vegetation, where possible, and integrating open space planning with urban forest planning, should be considered in the planning of the precinct, where possible. This is not a statutory document. It should also be noted that species selection must align with the current Avalon Airport Wildlife Hazard Management Plan to ensure that selected species to do not increase risk of birdstrike.

Integrated Comprehensive Transport Plan 2015

The *Integrated Comprehensive Transport Plan* exists to guide cohesive and land use planning for the City of Greater Geelong. Some of the issues Geelong experiences relating to transport within the region are: demand for skilled jobs exceeding supply, missing pedestrian and cycle links to key destinations, and mode share (types of transport) being car dominant. Some of the ambitions are to increase mode share in other transport types and reduce the need for workers in Geelong to commute to Melbourne by improving local job creation. Key transport linkages and modes of transport have been considered throughout the creation of the precinct.

1.6 Surrounding Precincts and Structure Plans

1.6.1 Northern and Western Geelong Growth Areas (NWGGA)

The NWGGA is the largest growth project in regional Victoria, transforming current farmland to predominantly residential land. The precincts will be predominantly residential with limited employment, namely at the south-west corner of the northern growth area (corner of Bacchus Marsh Road and the Geelong Ring Road). NWGGA will add approximately 40% more people to Geelong's current population and will likely house many of the precinct's future employees. Creamery Road and Elcho Road East will be short-term PSPs to address current demand with the rest of NWGGA being progressed at later dates.

1.6.2 Geelong Ring Road Employment Precinct

The Geelong Ring Road Employment Precinct (formally known as the Heales Road Industrial Estate) is subject to a Development Plan Overlay, guiding the industrial development at the land in Lara. The precinct is generally bound by the Lara Township to the North, the Princes Freeway to the South and Bacchus Marsh Road to the West.

1.6.3 Avalon Airport Masterplan 2015

This masterplan was prepared to guide development of the airport land into the future. The plan provides for increasing the total number of runways from one to three and the construction of a new terminal. There will also be additional industrial development, some of which will have airside access, and retail and commercial to the north-west of the site, abutting the freeway.

An updated masterplan is currently being prepared by Avalon Airport and will supersede existing 2015 version.

DRAFT

2 PLANNING PROCESS

2.1 Pitching Sessions and Workshops

2.1.1 Pitching Sessions

The VPA hosted pitching sessions between December 2022 and February 2023 to engage key stakeholders in shaping the vision and planning for the GAEP. The sessions provided a platform to raise opportunities, challenges and policy considerations at an early stage of the planning process.

Participants included state and local government agencies, Avalon Airport, infrastructure providers, private developers and Traditional Owners. Engagement occurred through individual meetings and written submissions.

Key Emerging Themes

Four core themes emerged, summarised as follows:

- **Employment and Land Use**
The GAEP will provide for commercial, industrial, and airport-related businesses. Flexible land use outcomes will support future advancements in industries, and local hubs will be provided for workers and visitors.
- **Transport**
The precinct will leverage major transport assets, including Avalon Airport, the Princes Freeway, and planned infrastructure such as the Avalon Rail Link and Outer Metropolitan Ring Road. Priorities include freight access, intersection and road upgrades, and improved public transport and active transport connections.
- **Water, Environment and Heritage**
Integrated water management will be critical, especially due to proximity to Ramsar wetlands and coastal hazards. Planning will protect biodiversity and cultural heritage values, and address flood and sea level rise risks.
- **Design and Innovation**
GAEP offers a unique opportunity to showcase innovative design, circular economy practices, and climate-resilient infrastructure. Built form will respond to airport constraints while enabling high-quality industrial typologies and sustainable service delivery.

2.1.2 Vision and Purpose Workshop

The Victorian Planning Authority (VPA) hosted a vision and purpose workshop on 21 March 2023 as a key step in the planning process for the precinct. The workshop built on previous stakeholder pitching sessions and contributed to shaping the emerging vision, key themes, and future planning directions. These elements were further refined in the co-design workshop; refer to the following section for the vision that was further refined in the co-design phase.

Purpose and Participation

The workshop aimed to:

- Update stakeholders on project progress
- Test and refine a shared vision for GAEP
- Capture innovative and place-based ideas
- Identify constraints and technical investigation needs

Participants included landowners, Avalon Airport, local and state government agencies, utility providers, and community stakeholders. The workshop was facilitated online using interactive tools such as Mural and Mentimeter.

2.1.3 Co-design Workshop

The VPA, in partnership with CoGG, held the co-design workshop on 17 August 2023 to inform the spatial plan preparation for the GAEP.

The workshop involved collaboration and input from various stakeholders including landowners, State Government agencies, CoGG, and the VPA. The workshop provided a clear direction for the development of the PSP, highlighting alignments and key issues and opportunities to be addressed for the precinct.

The purpose of the co-design workshop was to:

- Note what was previously heard during the vision and purpose workshop.
- Provide an update on the status of the project and summarise the background technical studies.
- Provide an opportunity for key stakeholders and landowners to visually map out key constraints, opportunities, features, transport connections and land uses.
- Encourage innovative ideas in determining the urban structure for GAEP.
- Provide strong, transparent, and inclusive consultation opportunities.
- Collaboratively develop and inform preparation of a conceptual place-based plan.
- Outline the next steps for the GAEP.

Key issues and outcomes from the Co-Design workshop included:

- Establishing a clear role for the precinct, ensuring synergy with Avalon Airport, and enabling 24/7 activation for economic growth.
- Supporting industrial and employment uses while protecting biodiversity, wetlands, and managing sensitive interfaces.
- Prioritising freight movement, road upgrades, public transport links, and active transport infrastructure to support accessibility.
- Ensuring essential utilities, innovative drainage solutions, and climate resilience measures are integrated into planning.
- Refining the place-based plan, incorporating stakeholder feedback, finalising technical studies, and aligning with the Avalon Airport Masterplan.

The following emerging vision initially prepared as part of the vision and purpose workshop process was further refined in the co-design workshop:

The Greater Avalon Employment Precinct (GAEP) is part of Wadawurrung Country and will integrate elements of intangible and tangible cultural heritage in partnership with Traditional Owners

The GAEP is a state significant employment precinct centred around Avalon Airport. The precinct will be an attractor for national, state and regionally significant economic investment including in manufacturing, freight and logistics industries, and in promoting a circular economy. The precinct will be designed to facilitate a wide range of industries adaptive to future trends in employment uses, and will include an innovation hub. Workers will be supported with community infrastructure and services that provide amenity and convenience. The GAEP will prioritise connections with the

activities of Avalon Airport via coordination of complimentary land uses, transport and infrastructure connections, and will protect ongoing safe airport operations. Because Avalon Airport is a hub for enabling tourism, a component of the GAEP will be to enable a visitor economy precinct.

A multi nodal transport network will facilitate the movement of people and vehicles. The street network within the precinct will be designed facilitate access and safe movement. This may include likely upgrades to intersections on the Princes Freeway to facilitate access to the precinct, and enhancements to the existing road network and new road connections including connections into Avalon Airport. Public transport will be fundamental to the access and movement strategy and will connect to key public transport hubs within the site as well as external networks, such as to Lara Train Station. The transport network will deliver active transport outcomes, enabling affordable and sustainable transport options for future precinct users. Infrastructure will also be provided for sustainable transport modes such as electric and hydrogen vehicles.

The GAEP will balance employment development reaching its full potential with the need to protect existing high value flora and fauna habitat and communities, important viewlines, significant trees and the internationally significant Ramsar Wetlands. This will be achieved through nature based design solutions including dedicated conservation areas and open spaces that protect key features and provides for appropriate land use interfaces. Supporting the delivery of the precinct will be an innovative drainage system informed by effective integrated water management strategies that protect development and biodiversity values from flooding and sea level rise.

The GAEP will be an attractive place for future users. Built form will be appropriate to its location within the precinct including rural-residential interfaces, highway frontages and gateway sites, and heights responding to the airport flight paths. The planning controls will encourage flexible and innovative outcomes such as diverse and adaptable building designs and leading-edge sustainability outcomes. The precinct will include a network of passive open space and take advantage of conservation areas to provide amenity to future users. Access points to the precinct will be developed as attractive gateways, requiring the implementation of specific landscaping treatments and other measures which will promote GAEP as a high amenity place to work in and visit.

2.1.4 Place-based Plan Refinement Workshop

The VPA held a place-based plan refinement workshop on 8 May 2024 to build on the work that was undertaken in the previous workshop in August 2023.

Involving the same previous stakeholders, the workshop aimed to further explore some of the key topics raised in the co-design workshop, highlighting alignments and key issues and opportunities to be addressed for the precinct.

The purpose of the place-based plan refinement workshop was to:

- Get stakeholder feedback around biodiversity, conservation and open space features.
- Get stakeholder feedback around traffic and accessibility.
- To further inform the drainage study.

2.1.5 Conclave Workshops

The VPA hosted 4 in person conclave workshops between 22-28 May 2025 to address the following themes of state significance:

- Biodiversity

- Drainage
- Transport
- Airport Operations

The workshops involved key decision makers from agencies to resolve issues raised during agency validation and determine solutions with the involvement of all parties. These issues raised have continued to be worked through as the project has progressed and the VPA continues to be committed to reaching agreement from all stakeholders where possible.

DRAFT

3 PLANNING PATHWAY

3.1 Changes to the GAEP Planning Pathway

The project initially commenced seeking to prepare a precinct structure plan (PSP). Following a review of a selection of the VPA's Housing Statement "priority planning projects for growing suburbs", an alternative planning pathway was identified for GAEP. The VPA, in consultation with the Department of Transport and Planning (DTP), the City of Greater Geelong (CoGG), and key agency stakeholders, agreed to progress the GAEP in two separate parts: GAEP North and GAEP West.

The project now involves preparing a framework plan for the whole precinct, and rezoning GAEP West to the Industrial 1 Zone and Rural Conservation Zone. The project will also apply the Development Plan Overlay and Design and Development Plan Overlay and Native Vegetation Precinct Plan to GAEP West. This approach allows the VPA and stakeholders to provide for the staging of the precinct, and to formally recognise the differences between each part of the precinct (including the separate drainage authority catchment areas).

The Minister for Planning formally acknowledged and supported this approach in correspondence dated 12 December 2024. The letter recognises the need for strategic differentiation between the east and west precincts within a unified amendment pathway. This will help to make sure that land is used effectively and infrastructure, including roads and drainage, is coordinated properly across the precinct.

Strategic reasoning for precinct staging:

- **Staging of transport infrastructure:** The GAEP will make use of the existing capacity of the Avalon Road interchange as part of the GAEP West development. Avalon Airport and Point Wilson will continue to use the Beach Road interchange. GAEP North will also need to use the Beach Road interchange when developed. Avalon Airport and Point Wilson will make use of the existing capacity of the Beach Road interchange. The Beach Road interchange to be upgraded to support the full development of the Airport, Point Wilson and GAEP North with the extra traffic generated. The Commonwealth Government has provided funding for DTP to prepare a study to determine the ultimate design and cost of the intersection for this purpose. This work is progressing concurrent to this amendment.
- **Land supply:** The SGS economics modelling (see Section 4) supports GAEP West, GAEP North, and the Airport ability to contribute a significant proportion of the region's industrial land supply over the next few decades. The modelling shows that by taking a staged approach the precinct will provide industrial land to the 2080s. With several decades of land supply available across the entire GAEP (including the airport land), a staged approach will enable development to be coordinated with infrastructure provision and upgrades over time.
- **Drainage:** The GAEP is split across two drainage authority catchments – Melbourne Water (north) and CCMA (west). Splitting the precinct will enable Melbourne Water to prepare a Development Services Scheme for GAEP North on a timeline that allows for further investigation into the viability of the drainage options and the resolution of the approvals process, which will require consideration of EPBC Act approvals and works approvals for discharges into the Western Treatment Plant.
- **Biodiversity:** Access was gained to 99% of GAEP West properties, allowing for data to be collected that has guided the approach to biodiversity. As access was not gained to all GAEP North properties, the approach to biodiversity will require further investigation. The initial drainage concepts for GAEP North indicate the need to construct drainage assets in the south-eastern low point on properties where data is not available.

Strategic justification for alternative planning pathway:

- **Employment-focused land use:** The core functions of GAEP are industrial, commercial, and airport-related land uses only with no residential land proposed. The Development Plan Overlay allows for a more appropriate strategic response to these land use types. This approach is underpinned by the recognition that PSPs are tailored predominantly for creating new communities with residential-led development and are structured around the provision of housing, schools, parks and community infrastructure. These elements are not central to the GAEP, which is intended to function as a significant industrial and employment precinct.

3.2 Matters of state interest

The following matters of state interest have been identified for the precinct:

- Safeguarding of Avalon Airport and ensuring future development is compatible with the airport's operations. This includes functions associated with Point Wilson to the south that require access to the Avalon Airport as a strategic Commonwealth asset.
- The capacity of state transport infrastructure and the need for any upgrades.
- Protection of environmental and biodiversity values, including native grassland and habitat for threatened species such as the Victorian Grassland Earless Dragon.
- Protection of Ramsar wetlands, coastal saltmarsh, and the Western Treatment Plant from stormwater runoff from proposed development areas.

The following section explains how these have been addressed in the revised planning pathway approach.

3.2.1 Airport Operations

Avalon Airport is on Commonwealth-owned land, which is leased by a private company and operates as Victoria's second major passenger and freight airport. The airport is curfew-free and anticipates substantial passenger growth to 2056 and beyond. The precinct must support the airport's operations and future expansion rather than constrain them.

How this is addressed

Protected Airspace and Heights

DPO50 requires Development Plans to include an Avalon Airport Impact Assessment Report addressing the National Airports Safeguarding Framework and the airport masterplan. This report identifies the Protected Airspace configuration (Obstacle Limitation Surfaces and PANS-OPS surfaces) and determines maximum heights for buildings and landscaping.

DDO53 reinforces this at the permit stage, requiring aviation impact reports demonstrating height compliance for all buildings and works. The combination ensures no development penetrates protected airspace.

Wildlife Strike Management

Wildlife strike is a collision between a moving aircraft and a wildlife animal. Managing wildlife strike risk while protecting environmental values requires integration across multiple technical areas. DPO50 addresses this by requiring:

- The Drainage and Stormwater Management Strategy to manage "birdstrike risk on Avalon Airport operations associated with stormwater quality treatment measures, particularly those that utilise permanent standing water".

- The Landscape Concept Plan to assess impacts on airport safety and ensure species selection doesn't attract excess wildlife.
- Integration with the Avalon Airport Wildlife Hazard Management Plan.

This approach resolves the tension between effective stormwater treatment and airport safety (which requires avoiding permanent water bodies that attract birds).

Land Use Compatibility

The Framework Plan (Clause 11.03-6L-06) supports "key industry sectors which complement Avalon Airport including freight and visitor economy uses such as car hire, service stations, and accommodation". The Industrial 1 Zone prohibits residential use, preventing noise conflicts and reverse sensitivity issues.

Staging for GAEP North

The Framework Plan includes staging criteria, ensuring GAEP North only proceeds on the basis of the "Beach Road interchange being upgraded to provide additional capacity to meet the needs of Avalon Airport, and that any necessary additional freeway and interchange capacity is available or can be constructed". This prevents the precinct from constraining the airport's growth trajectory.

3.2.2 Biodiversity

Detailed ecological investigations by Ecology and Heritage Partners between July 2023 and June 2024 identified 177.40 hectares of native vegetation across eight Ecological Vegetation Classes within the precinct. This includes nationally significant Natural Temperate Grassland of the Victorian Volcanic Plain (3.91 hectares), state-significant Western (Basalt) Plains Grassland Community (29.95 hectares), and 130.57 hectares of saltmarsh communities.

The site supports threatened species including Golden Sun Moth (critically endangered), Growling Grass Frog (vulnerable), and Spiny Rice-flower (endangered), with potential habitat for Victorian Grassland Earless Dragon. The adjacent Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site are sensitive to changes in stormwater quality and hydrology.

How this is addressed

Permanent Statutory Protection

Approximately 256 hectares will be zoned Rural Conservation Zone Schedule 16 (RCZ16). Schedule 16 is tailored for GAEP with earthworks controls protecting hydrology, and a conservation values statement specifically referencing protection of high ecological value areas and threatened ecological communities.

The RCZ boundaries were determined by WSP's advice incorporating high-value habitat, 100m buffers around migratory bird habitat, 50m buffers around watercourses for Growling Grass Frog, and 50m buffers for sea level rise adaptation.

Strategic Vegetation Management

The Native Vegetation Precinct Plan for GAEP West (incorporated at Clause 52.16) maps all vegetation comprehensively, identifies priority retention areas, establishes removal and offsetting frameworks, and streamlines the assessment processes.

Detailed Environmental Requirements

DPO50 requires environmental protection to be demonstrated throughout the development planning process for GAEP West as follows:

- **EPBC Report** demonstrating Commonwealth environmental law compliance
- **Conservation Management Plan** (prepared in consultation with DEECA) addressing long-term stewardship and habitat protection
- **Construction Environmental Management Plan** (as a permit condition) protecting conservation values during construction through erosion control, vegetation protection, and weed management
- **Landscape Concept Plan** addressing fauna impacts, vegetation retention, conservation interface treatments, and ecological restoration
- **Integrated Water Management Plan** addressing stormwater impacts on ecological values

The Site Master Plan required under DPO50 must show open space networks retaining high and moderate value trees and the retention of native vegetation consistent with the Native Vegetation Precinct Plan, with conservation areas aligned with RCZ16.

Climate Change Adaptation

The RCZ16 boundaries include 50m buffers for sea level rise, allowing habitat migration as seas rise. The EPBC Report must address long-term asset management considering climate change, and drainage planning must model future climate scenarios.

Further Biodiversity Investigations

The Framework Plan identifies that further biodiversity investigations will be required for GAEP North in recognition that access was not available to all properties.

Environmental Effects Statement

In addition to the above requirements, future development may require an environmental effects statement to be prepared. An Environmental Effects Statement (EES) is Victoria's most rigorous assessment process for proposed developments with potentially significant environmental impacts, requiring the proponent to describe the project, its effects on the environment, alternatives, and proposed management measures to minimize adverse impacts. Initiated by the Minister for Planning after a referral, the process includes public and stakeholder consultation, a public review period, and assessment by an independent Inquiry and Advisory Committee to provide clear, transparent information for decision-makers.

Environmental Protection and Biodiversity Conservation Act 1999 Referral

The EPBC Act requires approval at a federal government level for actions that may significantly impact national environmental values, such as World Heritage properties, threatened species, and marine areas. The precinct will require a referral under this act. Because of this, the planning policies prepared for biodiversity are modelled to ensure that the precinct is prepared to be referred under this act and be appropriate.

An EPBC Act referral is the formal submission of a proposed action to the federal Environment Minister to determine if it will likely have a significant impact on a nationally significant environmental matter, such as world heritage sites or threatened species. It is the first step in the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) process, which requires approval for such "controlled actions" to ensure their environmental protection. The

referral triggers a decision-making process where the public can provide comments before the Minister decides if the action needs formal assessment and approval.

3.2.3 Drainage, Flooding and Water Quality

The precinct is located on low-lying land (1-18 metres AHD) with minimal gradient, making drainage management complex. The precinct experiences flooding from multiple sources including riverine flooding, coastal inundation, and overland flow. The 1% Annual Exceedance Probability flood event with climate change affects large portions of the precinct, particularly former Cheetham Saltworks areas.

Sea level rise modelling for 1.1m rise plus 19% storm surge shows significantly expanded coastal inundation and increased tidal influence on drainage outfalls. The precinct's flat topography makes gravity drainage difficult and expensive, while high groundwater tables and potentially saline conditions add complexity.

Stormwater discharge to the Port Phillip Bay Ramsar site and Avalon Coastal Reserve requires high-quality treatment to protect internationally significant habitats, particularly seagrass meadows vulnerable to sedimentation and nutrient loading. The existing unnamed waterway flowing south through the precinct contains saltmarsh habitat dependent on specific salinity and inundation patterns that must be maintained.

How this is addressed

Comprehensive Drainage Framework

DPO50 requires the preparation of the following water management documents:

- **Integrated Water Management Plan** (prepared to the satisfaction of Council and Corangamite CMA, in consultation with Parks Victoria, Barwon Water and DEECA) addressing:
 - Whole water cycle approach including stormwater treatment/storage/reuse, wastewater management, and potable water offsetting
 - Sustainable water use for industrial operations
 - Future ownership and long-term maintenance of water infrastructure
- **Drainage and Stormwater Management Strategy** (prepared to the satisfaction of Corangamite CMA and Council, in consultation with Parks Victoria, Barwon Water and DEECA) addressing:
 - Stormwater treatment approach managing impacts on ecological values of receiving environments
 - Location of discharge points (outfalls) with appropriate water quality treatment to protect Ramsar wetlands, Avalon Coastal Reserve, and Hovells Creek
 - Management of upstream flows maintaining hydrological regime in existing watercourses
 - Protection of saltmarsh habitat along the western boundary requiring specific freshwater-saltwater balance
 - Integration of birdstrike risk management (avoiding permanent water bodies near the airport while achieving high-quality treatment)
 - Sea level rise and climate change impacts on drainage system functionality
 - Groundwater levels and salinity management

The strategy must be guided by the HARC DPO Position Paper, Alluvium Existing Conditions Flood Modelling Report, Infrastructure Design Manual, Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan, Avalon Coastal Reserve Conservation Action Plan, and Avalon Airport Wildlife Hazard Management Plan.

- **Flood Impact and Risk Assessment** (prepared to the satisfaction of Corangamite CMA and Council) must include flood modelling for all events to 1% AEP with climate change, addressing both riverine and coastal flooding.

Permit Conditions and Design Requirements

DPO50 includes permit conditions requiring:

- Stormwater management plans implementing the IWM Plan recommendations
- Development lots located outside 1% AEP flood extent
- Detailed civil construction plans

The Site Master Plan must show drainage management consistent with the Drainage Strategy, with indicative locations of retarding basins, treatment assets, and outfall points shown on the DPO Concept Plan.

RCZ16 Protection of Drainage Corridors

Many RCZ16 areas align with natural drainage lines, low-lying flood-prone areas, and coastal zones affected by sea level rise. The earthworks controls in RCZ16 (permits required for earthworks changing water flow or increasing saline groundwater discharge) protect hydrology that both drainage infrastructure and ecological communities depend on.

Infrastructure Funding

Section 173 Agreements (required before subdivision/development permits are granted) must specify shared drainage infrastructure items, triggers and staging for delivery, itemised costings, responsible delivery agencies, cost apportionment between benefiting landowners, and maintenance arrangements. This ensures drainage infrastructure is funded and delivered as development proceeds.

3.2.4 Transport

The precinct's location adjacent to the Princes Freeway provides excellent transport connectivity to the Port of Geelong (7km), Port of Melbourne (55km), and freight rail networks. However, traffic modelling to 2056 identified infrastructure capacity constraints requiring staged development and coordinated upgrades.

Transport Modelling Outcomes

Transport modelling examined multiple scenarios to 2056:

- **Avalon Road** (serving GAEP West): Requires duplication between freeway interchange and first connector street; projected daily volumes 17,000-19,000 vehicles per day
- **Beach Road** (serving Avalon Airport, Point Wilson and GAEP North): Strong need for duplication between freeway interchange and airport entry; projected daily volumes 23,000-42,000 vehicles per day

Volume/capacity analysis shows both interchanges approaching or exceeding capacity under full development scenarios (GAEP West + North + Airport at 100% passenger forecasts) without upgrades. The Beach Road interchange, in particular, requires major upgrades.

How this is addressed

Staging for GAEP North

The Framework Plan (Clause 11.03-6L-06) includes staging criteria ensuring GAEP North proceeds contingent on the "Beach Road interchange being upgraded to provide additional capacity to meet the needs of Avalon Airport, and that any necessary additional freeway and interchange capacity is available or can be constructed."

By adopting this staging approach, Beach Road interchange upgrades can be planned and delivered so as to coordinate infrastructure with demand.

Development Plan Assessment

DPO50 requires an Integrated Transport Management Plan (prepared to the satisfaction of Council and Head, Transport for Victoria) addressing:

- Traffic generation and impact on adjoining road network including the State transport system
- Integration with Avalon Airport Master Plan and consideration of impacts on future GAEP North development
- Identification of required upgrade works on the road network including staging and timing
- Conceptual traffic access plans showing intersections, crossovers, and street frontages
- Bus-capable road network and integration with broader public transport network
- Active transport network including pedestrian and cycling links (both internal and external connections)
- Road network operation during major events such as the Avalon Airshow

Infrastructure Funding

Section 173 Agreements must specify key transport infrastructure items, triggers and staging for delivery based on traffic generation, itemized costings, responsible delivery agencies, and cost apportionment. This ensures fair cost-sharing between benefiting landowners and coordinates transport infrastructure delivery across multiple developments.

4 PLANNING SCHEME AMENDMENT C477GGEE

4.1 Planning scheme amendment

Draft Amendment C477ggee seeks to facilitate detailed planning of the Greater Avalon Employment Precinct (GAEP) through amending the Planning Policy Framework to include the GAEP Framework Plan. The GAEP Framework Plan seeks to set out the future vision for the whole precinct and rezoning of GAEP West to Industrial 1 Zone (INZ1) and Rural Conservation Zone (RCZ) with the application of a Design and Development Overlay and Development Plan Overlay.

The draft Amendment also seeks to provides for protection of native vegetation within the precinct through a Native Vegetation Precinct Plan (NVPP) for GAEP West. Additional changes to the Planning Policy Framework and operational provisions of the Greater Geelong Planning Scheme are also required to facilitate development of the precinct.

The following sections explains the key elements of the amendment.

4.1.1 Clause 11.03-6L-06 and the Framework Plan

The GAEP Framework Plan is a high-level strategic plan for the entire precinct (both GAEP North and West) that will be inserted at a new Clause 11.03-6L-06 (Greater Avalon Employment Precinct).

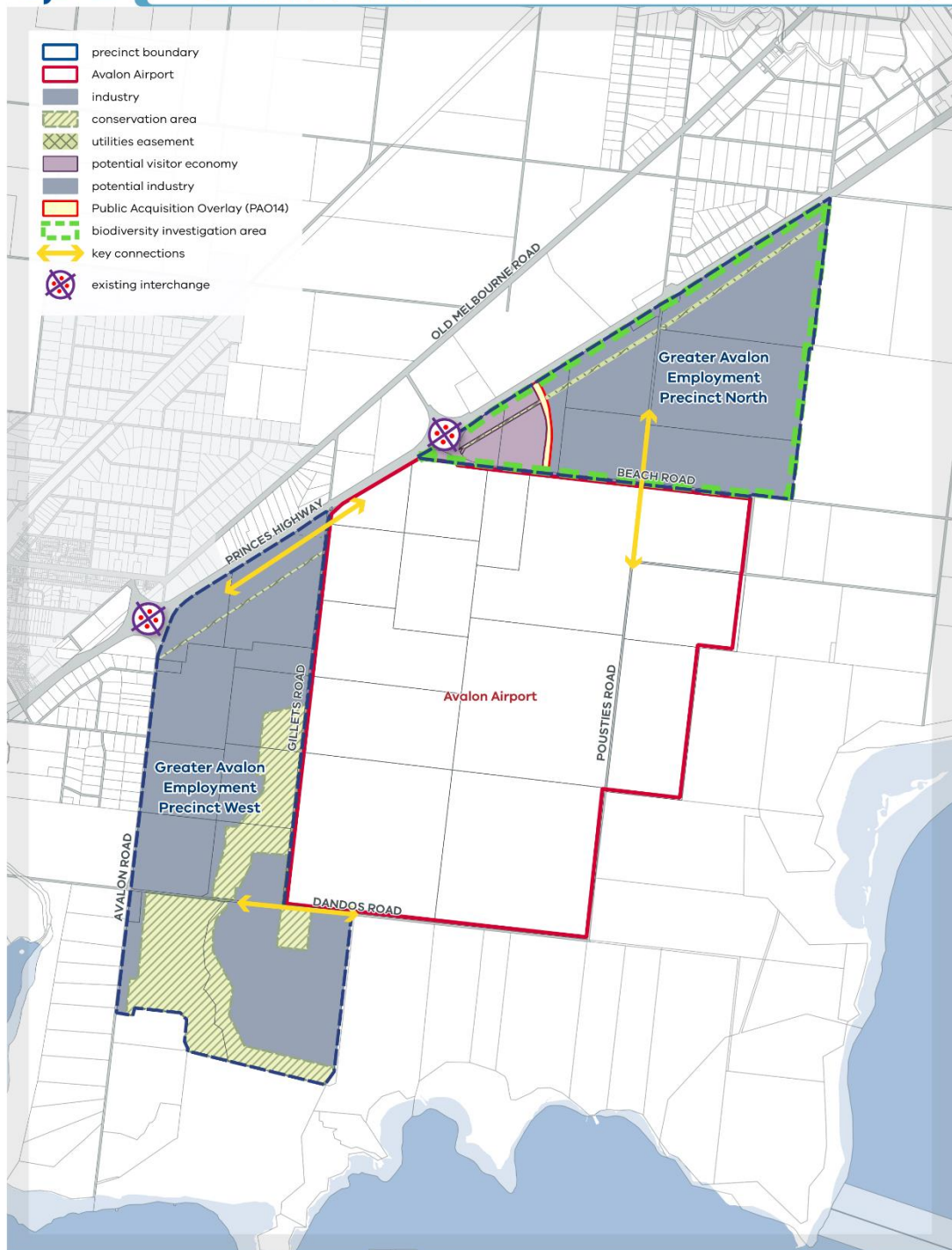
The Framework Plan and accompanying policy:

- Define preferred land uses across the precinct
- Identify key elements of integrated infrastructure networks (transport and drainage)
- Identify significant biodiversity and environmental assets
- Provide staged implementation approach

The policy also establishes staging criteria for GAEP North. These must be met before GAEP North can be rezoned:

- 1 Beach Road interchange upgraded to provide additional capacity for Avalon Airport, with any necessary additional freeway/interchange capacity available or able to be constructed
- 2 Confidence in ability to deliver a drainage development service scheme including obtaining relevant environmental approvals under state and federal legislation
- 3 Arrangements in place to construct utility infrastructure to service GAEP North
- 4 Strategic justification demonstrating need for additional employment land to contribute to regional supply
- 5 Preparation of a Precinct Structure Plan or other suitable strategic plan

This staged approach allows GAEP West to proceed immediately while ensuring GAEP North only develops when supporting infrastructure is ready and the need for additional employment land is demonstrated.



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Figure 17 GAEP Framework Plan

4.1.2 Development Plan Overlay

The draft amendment proposes a new **Schedule 50 to Clause 43.04 (Development Plan Overlay) (DPO50)** for GAEP West. The Development Plan Overlay requires the preparation of a development plan before permits can be granted for use, development or subdivision.

Objectives

DPO50 has four objectives that address the following:

- Facilitate coordinated sustainable development of GAEP West
- Ensure development doesn't conflict with Avalon Airport and provides appropriate interfaces
- Protect Ramsar Wetlands, Avalon Coastal Reserve and biodiversity values
- Facilitate a high amenity precinct supported by ancillary services, and a high-quality open space network for workers and visitors.

The Concept Plan

DPO50 includes a Concept Plan showing conservation areas (to be zoned RCZ16), developable areas (to be zoned IN1Z), strategic transport connections, indicative drainage corridors, interface treatment areas, and potential sites for emergency services facilities. Development Plans must be "generally in accordance with" this Concept Plan, providing flexibility for detailed design while ensuring key strategic elements are delivered.

Development Plan Requirements

Development Plans must include a Site Analysis Plan (understanding site features and constraints), a Site Master Plan (detailed design response), and supporting technical reports addressing:

- Commonwealth environmental compliance (EPBC Report)
- Infrastructure servicing (Site Servicing Report)
- Airport operations (Avalon Airport Impact Assessment Report)
- Water management (Integrated Water Management Plan, Drainage and Stormwater Management Strategy, Flood Impact and Risk Assessment)
- Transport (Integrated Transport Management Plan)
- Staging (Staging Plan coordinating development and infrastructure)
- Site-specific matters (Geotechnical Report, soil management plans, Bushfire Management Plan)
- Design quality (Landscape Concept Plan, Conservation Management Plan, ESD Assessment)

Many reports must be prepared "to the satisfaction of" or "in consultation with" specified agencies including Council, Head Transport for Victoria, DEECA, Corangamite CMA, and Parks Victoria, ensuring coordination across jurisdictions.

Permit Conditions

DPO50 includes mandatory permit conditions for subdivision or earthworks, including requirements for stormwater management plans, development outside flood areas, soil management plans, construction environmental management plans, wildlife management plans, bushfire management plans, and contaminated land assessment for identified properties.

Approval Process

The Minister for Planning is the responsible authority for approving Development Plans under DPO50.

4.1.3 Design and Development Overlay

Schedule 53 to Clause 43.02 (Design and Development Overlay) (DDO53) applies to all of GAEP West and operates at the planning permit stage to ensure quality built form and design outcomes.

Objectives

DDO53 aims to facilitate GAEP West as a high amenity industrial area, ensure high visual amenity from major transport routes and surrounding areas, provide high amenity for workers and visitors, and promote sustainable design.

Key Requirements

DDO53 includes detailed requirements for:

- Site layout protecting key view lines and avoiding pedestrian-vehicle conflicts
- Building design addressing street frontages with varied materials and articulation, avoiding blank walls, and integrating service equipment
- Landscaping in front setbacks and along sensitive boundaries using low-maintenance species
- Sustainable design including stormwater quality measures, covered loading bays, and ESD provisions (renewable energy, electric vehicle charging, material reuse)
- Subdivision providing footpaths both sides of streets, generous street tree planting, and underground services
- Car parking to be sealed and landscaped appropriately

Applications must include aviation impact reports demonstrating compliance with Protected Airspace heights and addressing wildlife strike risk.

4.1.4 Native Vegetation Precinct Plan

The Greater Avalon Employment West Native Vegetation Precinct Plan will be incorporated at Clause 52.16, providing strategic vegetation management across the precinct.

The NVPP maps all areas of native vegetation, identifies priority retention areas (aligning with RCZ16), establishes removal and offsetting frameworks for developable areas, and streamlines assessment for removal consistent with strategic objectives.

This approach provides certainty for landowners about vegetation removal expectations, faster assessment processes, and clear offset obligations, while ensuring strategic protection of highest-value vegetation and appropriate offsetting for removal.

4.2 Section 173 Agreements

Rather than using a Development Contributions Plan Overlay, landowners in GAEP West will enter into Section 173 Agreements with Council and the Department of Transport and Planning for infrastructure delivery.

DPO50 requires Section 173 Agreements be entered into before permits are granted for subdivision or development (unless otherwise agreed). These agreements must specify:

- Net developable area for each property
- Development catchment areas
- Methodology for calculating levies
- Shared infrastructure items (drainage and key transport upgrades)
- Triggers and staging for infrastructure delivery
- Itemised costings
- Responsible delivery agencies
- Cost apportionment between benefiting landowners

Section 173 Agreements provide flexibility to tailor infrastructure obligations to specific developments, certainty about contributions before development proceeds, efficiency by delivering infrastructure as needed, fairness through explicit cost-sharing for shared infrastructure, and coordination across fragmented ownership.

This approach ensures infrastructure is funded and delivered as development proceeds, without burdening Council or ratepayers with precinct infrastructure costs, while providing certainty for landowners about their obligations.

4.3 Background Reports and Technical Studies

The background reports and technical studies listed below provide specific detail on the key elements outlined in this background report and identifies key site and context issues that the precinct design must response to. A summary of the reports is at section 5 and the full reports are available on the VPA's [website](#).

Arboricultural Assessment

Biodiversity Assessment

Bushfire Assessment

Economics Assessment

Existing Conditions Flood Modelling Report

HARC Position Paper (on drainage)

Land Capability Assessment

Landscape and Visual Impact Assessment

Post Contact Cultural Heritage Report

Safety Management Study – Gas

Transport Assessment Report

Transport Modelling Report

Utility Assessment Report

5 APPENDICES

TECHNICAL REPORT SUMMARIES

ABORIGINAL CULTURAL VALUES ASSESSMENT (UNDER PREPARATION)

ARBORICULTURAL ASSESSMENT

Arboriculture Assessment and Report, Tree Logic, September 2023

What is the purpose of the report?

The purpose of the Arboricultural Assessment is to provide information on tree species, origin, health, structure and retention value. It also provides recommended distances for Tree Protection Zones (TPZ) to guide future development planning to preserve significant trees.

What do we know so far?

The report surveyed approximately 7,000 trees. 181 were surveyed as groups but 242 trees were individually assessed across both precincts. Three trees were deemed to be of high value while a further 32 trees and 10 groupings were deemed moderate A value. River Red Gums were the only indigenous species found within the study area, consisting of six individual trees and two groupings. It is recommended that:

- Trees rated high to moderate are generally most suitable for retention while low value trees should not compromise reasonable design intent. Low rated trees with health or structural deficiencies and very low rated trees should generally be removed or retained as habitat stumps.
- Trees which have a life expectancy of >40 years present best options for established landscape issues while those with 21-40 years as part of the medium to long term. Trees with shorter life expectancy may require remedial input, ongoing monitoring and/or maintenance.

What does this mean for the Greater Avalon Employment Precinct?

The Development Plan Overlay schedule for GAEP West requires retention of high and moderate value trees.

Note: Access was not granted to all of the properties. Trees were observed from the closest accessible vantage point for neighbouring properties and for properties where site access was not granted.

BIODIVERSITY

Biodiversity Assessment for the Greater Avalon Employment Precinct, Avalon, Victoria, Ecology and Heritage Partners Pty Ltd, October 2025

What is the purpose of the report?

The purpose of the Biodiversity Assessment is to evaluate the ecological and biodiversity values within the PSP. The report informs future planning and development in the PSP by identifying significant habitats, native vegetation, and presence of fauna. The report provides recommendations for ecological protection, including 'avoid and minimise' principles and outlines relevant legislative compliance under the Environment Protection and Biodiversity Conservation (EPBC) Act and Flora and Fauna Guarantee (FFG) Act.

What do we know so far?

- The GAEP contains important biodiversity values, including native vegetation, threatened ecological communities and habitat for multiple nationally and state significant species.
- Four matters of National Environmental Significance (NES) have been confirmed:
 - Natural Temperate Grassland of the Victorian Volcanic Plain
 - Golden Sun Moth (*Synemon plana*)
 - Spiny Rice-flower (*Pimelea spinescens* subsp. *spinescens*)
 - Blue-winged Parrot (*Neophema chrysostoma*)
- The precinct is located adjacent to the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site, highlighting the importance of avoiding off-site ecological impacts.
- Retained ecological values should be enhanced and protected through sensitive urban planning measures including habitat corridors, urban greening, water-sensitive urban design, and restrictions on uncontrolled public access.

Significant ecological communities

- 1 EPBC Act listed areas of nationally significant ecological communities were found in the study area.
 - 4.75 ha of *Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP)*.
- 2 areas of state significant ecological communities were found within the study area.
 - 31.77 ha of *Western (Basalt) Plains Grassland Community*.
 - 0.13 ha of *Western Basalt Plains (River Red Gum) Grassy Woodland*.

Fauna

- Five nationally significant fauna species are known or likely to be present:
 - Golden Sun Moth (*Synemon plana*)
 - Growling Grass Frog (*Litoria raniformis*)
 - Blue-winged Parrot (*Neophema chrysostoma*)
 - Curlew Sandpiper (*Calidris ferruginea*)
 - Common Greenshank (*Tringa nebularia*)
 - Sharp-tailed Sandpiper (*Calidris acuminata*)
- Three state-significant fauna species were recorded:
 - Tussock Skink (*Pseudemoia pagenstecheri*)
 - Fat-tailed Dunnart (*Sminthopsis crassicaudata*)
 - Little Eagle (*Hieraaetus morphnoides*)
- Potential habitat exists for the Victorian Grassland Earless Dragon (*Tympanocryptis pinguicolla*), though presence was not confirmed.

Flora

- One EPBC Act-listed flora species was recorded:

- *Spiny Rice-flower* (*Pimelea spinescens* subsp. *spinescens*) – 8 specimens found in the GA(E)W southeast road reserve
- Targeted but not recorded nationally significant species (habitat present):
 - *Large-headed Fireweed* (*Senecio macrocarpus*)
 - *Matted Flax-lily* (*Dianella amoena*)
 - *River Swamp Wallaby Grass* (*Amphibromus fluitans*)
 - *Button Wrinklewort* (*Rutidosia leptorhynchoides*)
- State significant flora species recorded or likely to occur:
 - *Lawrenzia spicata* (Salt Lawrenzia)
 - *Juncus revolutus* (Creeping Rush)
 - *Atriplex paludosa* subsp. *paludosa* (Marsh Saltbush)
 - *Salsola tragus* subsp. *pontica* (Coastal Saltwort)
 - *Triglochin mucronata* (Prickly Arrowgrass)
 - *Tripogonella loliiformis* (Rye Beetle-grass)
 - *Comesperma polygaloides* (Small Milkwort)
 - *Rhagodia parabolica* (Fragrant Saltbush)
 - *Dianella longifolia* var. *grandis* (Arching Flax-lily)
 - *Cullen parvum* (Small Scurf-pea)
 - *Cullen tenax* (Tough Scurf-pea)

No flora species listed under the FFG Act were recorded.

The recommendations that EHP have provided include:

Precinct design principles:

- Retain areas of high conservation value, including:
 - Habitat for NES species and associated buffer areas
 - Patches of native vegetation
 - Large and scattered trees
- Protect large areas of native vegetation as habitat nodes
- Provide a variety of flora and fauna habitats to promote and retain biodiversity
- Create habitat through waterways, drainage corridors and revegetation zones
- Provide linear corridors for vegetation and fauna movement along paths and drainage lines
- Integrate water-sensitive urban design while avoiding off-site impacts
- Incorporate drainage lines into habitat corridors and open space networks
- Interpret and educate on grassland values through signage
- Control feral pests and invasive plant species

- Retain native trees in urban open spaces (active and passive)
- Prefer multiple smaller connected water features to one isolated basin
- Interconnect habitat through open space links
- Rehabilitate and protect significant native vegetation
- Design stormwater systems that also provide habitat
- Increase canopy cover in public and private realm for urban greening
- Ensure biodiversity sites are clearly delineated and separated from development areas

Best practice mitigation measures include:

- Require the preparation and implementation of Construction Environmental Management, Kangaroo Management and Conservation Management Plans prior to construction activities.

Specific mitigation measures:

- Protect retained ecological values by restricting public access to clearly defined shared community facilities and discouraging access to other high value areas.
- Creating conservation reserves and biolinks.
- Revegetation and enhancement.
- Habitat creation.

What does this mean for the Greater Avalon Employment Precinct?

The report broadly recommends retaining or enhancing ecological values to create a diverse, connected and resilient natural environment and for these areas to not be undermined. The planning scheme amendment identifies a large conservation area within GAEP West where the Rural Conservation Zone will be applied. A Native Vegetation Precinct Plan will also be prepared for GAEP West.

Note to agencies: The findings of the Biodiversity Assessment were considered in the drafting of the Native Vegetation Precinct Plan (NVPP).

Greater Avalon Employment Precinct West Native Vegetation Precinct Plan, WSP, 2025

What is the purpose of the report?

The Native Vegetation Precinct Plan (NVPP):

- Informs decisions about future development of the precinct through a holistic, landscape-wide approach to native vegetation management.
- Specifies native vegetation to be protected versus vegetation that can be removed, destroyed or lopped.
- Sets out offset requirements for native vegetation removal in accordance with state Guidelines.
- Ensures areas set aside to protect native vegetation are managed to conserve ecological values.
- Streamlines planning approvals process through precinct-wide approach to native vegetation protection.
- Will be listed under Schedule to Clause 52.16 of the Greater Geelong Planning Scheme with 15-year validity.

What do we know so far?

Vegetation for Retention:

- **256.486 hectares** within Rural Conservation Zone (RCZ) comprising:
 - Coastal Saltmarsh (EVC 9): 179.340ha
 - Plains Grassy Wetland (EVC 125): 8.882ha
 - Brackish Wetland (EVC 656): 9.135 ha
 - Plains Grassland (EVC 132): 10.438 ha
 - Brackish Grassland (EVC 934): 4.257 ha
 - Plains Grassy Woodland (EVC 55): 0.210 ha
- Three RCZ areas based on:
 - At least 100m corridor for migratory shorebirds and waders
 - 50m buffer for Growling Grass Frog aquatic habitat
 - 50m buffer for 82cm sea level rise + 19% storm surge
 - Inclusion of saline retired salt-pans likely used by migratory birds
 - High quality Natural Temperate Grassland (NTGVVP) along Gillets Road
 - Exclusion of channelized watercourses to be included in future drainage strategy

Vegetation for Removal:

- **66.748 hectares** of native vegetation is identified for potential removal comprising:
 - Coastal Saltmarsh (EVC 9): 36.618ha (largest component)
 - Plains Grassland (EVC 132): 24.517ha
 - Plains Sedgy Wetland (EVC 647): 4.465 ha
 - Brackish Wetland (EVC 656): 0.385 ha
 - Plains Grassy Woodland (EVC 55): 0.645 ha
 - Tall Marsh (EVC 821): 0.111 ha
- 0 large trees to be removed.

Threatened Species Present:

- **EPBC Act listed birds:** Latham's Snipe, Red Knot, Great Knot, Greater Sand Plover, Curlew Sandpiper, Common Greenshank (Critically Endangered/Endangered/Vulnerable species)
- **Orange-bellied Parrot** (Critically Endangered) and **Blue-winged Parrot** (Vulnerable)
- **Growling Grass Frog** (Vulnerable) - observed during surveys along central watercourse
- **Golden Sun Moth** (Vulnerable) - habitat confirmed north and south of Dandos Road
- **Fat-tailed Dunnart** (FFG Vulnerable) - larger grassland tracts
- **Spiny Rice-flower** (Critically Endangered) - along eastern boundary in unnamed paper road
- **Natural Temperate Grassland of Victorian Volcanic Plain** (EPBC Critically Endangered) - 2.91 ha present

Offset Requirements:

- **General habitat units:** 5.076 units with minimum Strategic Biodiversity Value score of 0.377
- **Large trees:** 0 required
- **Species habitat units:** Substantial requirements for four FFG Act species:
 - Little Tern: 28.015 units
 - Fairy Tern: 26.504 units
 - Creeping Rush: 19.600 units
 - Prickly Arrowgrass: 20.113units\
- **Vicinity:** Corangamite CMA or Greater Geelong City LGA
- General habitat units readily available through accredited brokers; species offsets will need to be established (currently none available on Native Vegetation Credit Register)

What does this mean for the Greater Avalon Employment Precinct?**Planning Scheme Integration:**

- The NVPP will be incorporated into Schedule to Clause 52.16 of Greater Geelong Planning Scheme.
- The NVPP replaces Environmental Significance Overlay Schedule 4 (ESO4) as ongoing ESO4 objectives are satisfied by combination of NVPP, RCZ, and DPO requirements.
- Native vegetation removal is allowable without planning permit if conditions are met and are in accordance with NVPP.

Development Requirements:

- All DPO requirements under Industrial 1 Zone Schedule 1 (INZ1) must be fulfilled, including:
 - **Conservation Management Plan** to identify and conserve ecological values
 - **Landscape Concept Plan** to demonstrate avoidance and minimization of impacts
- **Statement of intention** must be provided to responsible authority before any vegetation removal, including:
 - Purpose of removal
 - Evidence offset secured (security agreement, credit extract, or other compliant evidence)
- **Protection fencing** required around all retained vegetation (minimum 2m from vegetation) before any removal or works commence.

Offset Obligations:

- Developers/proponents responsible for securing offsets via **accredited brokers** before vegetation removal.
- For patches split across property boundaries: proportional splitting of offset obligations based on area percentages (detailed in Table 4.2).
- If partial removal occurs within single parcel, **full offset obligation still applies**.
- First party offsets possible within precinct across retained vegetation areas (proponent responsibility to investigate).

Critical Conditions:

- Only vegetation identified for removal in NVPP may be removed.
- Removal must align with NVPP purpose (industrial/employment development).
- Native vegetation appearing after NVPP approval must be assessed at permit stage and added to offset requirements.
- Construction stockpiles, fill, machinery must be 30m+ from native vegetation and drainage lines.
- No vehicular/pedestrian access, trenching, or storage within vegetation protection areas.
- Earthworks must minimize soil erosion per EPA standards.

Special Considerations:

- Terrestrial fauna grassland habitat outside RCZ (Golden Sun Moth, Tussock Skink, Fat-tailed Dunnart habitat) slated for industrial development requires further assessment at permit stage for values not covered by NVPP.
- Channelized watercourses considered Growling Grass Frog dispersal habitat require assessment at permit stage.
- Potential expansion of Ramsar site across southern precinct should be considered.
- Risk of indirect impacts from hydrological changes must be considered and mitigated.
- Water run-off design must not compromise retained vegetation.

EPBC Act Matters:

- NVPP does not cover EPBC Act Matters of National Environmental Significance or Commonwealth offsets - separate approval process required.

The NVPP provides a strategic landscape-scale approach to native vegetation management that balances industrial development with protection of significant ecological values, while streamlining the approvals process through pre-determined removal areas and offset requirements.

BUSHFIRE

Bushfire Development Report, Terramatrix, November 2025

What is the purpose of the report?

The Terramatrix Bushfire Development Report assesses the bushfire hazard within and around the Greater Avalon Employment Precinct to inform how the precinct can be safely developed in accordance with Clause 13.02-1S Bushfire Planning in the Greater Geelong Planning Scheme. The report identifies appropriate bushfire protection measures that should be incorporated into the Development Plan Overlay (DPO) to ensure development achieves acceptable bushfire safety standards while prioritizing protection of human life.

What do we know so far?

The precinct is partially within a designated Bushfire Prone Area (BPA) but is not covered by the Bushfire Management Overlay (BMO), indicating a low-moderate risk landscape (Landscape Type 2). Classified vegetation hazards include Grassland (cropping and pasture to the west and south), Forest (tree plantings on Avalon Airport land), and potentially Shrubland or Woodland in future conservation and drainage reserves within the precinct.

The topography is benign from a bushfire perspective—essentially flat coastal plain with no significant slopes. The most credible large-scale bushfire scenario would originate from the You Yangs Regional Park (5+ km to the north-west), but would approach the precinct through grassland, reducing fire intensity. The nearest existing low-risk location (not in BPA) is the urban area of Lara to the west. Upon completion of development, much of the precinct itself is likely to become low-threat and eligible for BPA excision.

What does this mean for the Greater Avalon Employment Precinct?

Buildings must be setback from classified vegetation to ensure radiant heat flux does not exceed 12.5 kW/m². Required setback distances depend on vegetation type and slope: 19-22 m from Grassland or Shrubland, 33-41 m from Woodland, and 48-57 m from Forest. These setbacks can be achieved through a combination of building placement, perimeter roads, and managed low-threat zones.

The DPO should incorporate bushfire protection requirements including: minimum building setbacks from classified vegetation (both external to and within the precinct); provision of perimeter roads where appropriate; multiple egress routes away from the bushfire interface; compliance with fire service access requirements; reticulated hydrant system for firefighting water supply; and maintenance of vegetation on private property in a low-threat condition (grass generally less than 100 mm height during fire danger period).

For staged subdivisions, a Bushfire Site Management Plan should be required to ensure interim management of undeveloped land until it is rendered permanently low-threat through urban development. As development progresses, areas meeting BPA excision criteria (generally 60 m from Grassland, 300 m from Forest/Woodland) should be identified for removal from the BPA.

ECONOMICS ASSESSMENT

Economic & Scoping Study and Planning Framework, SGS Economics, November 2025

What is the purpose of the report?

The purpose of the Economic and Scoping Study is to provide the economic and property market research that will inform the preparation of a Planning Framework and ultimately the precinct.

What do we know so far?

It is estimated that the GAEP (not including the Airport) will support 17,963 jobs.

SGS modelled two scenarios as illustrated below.

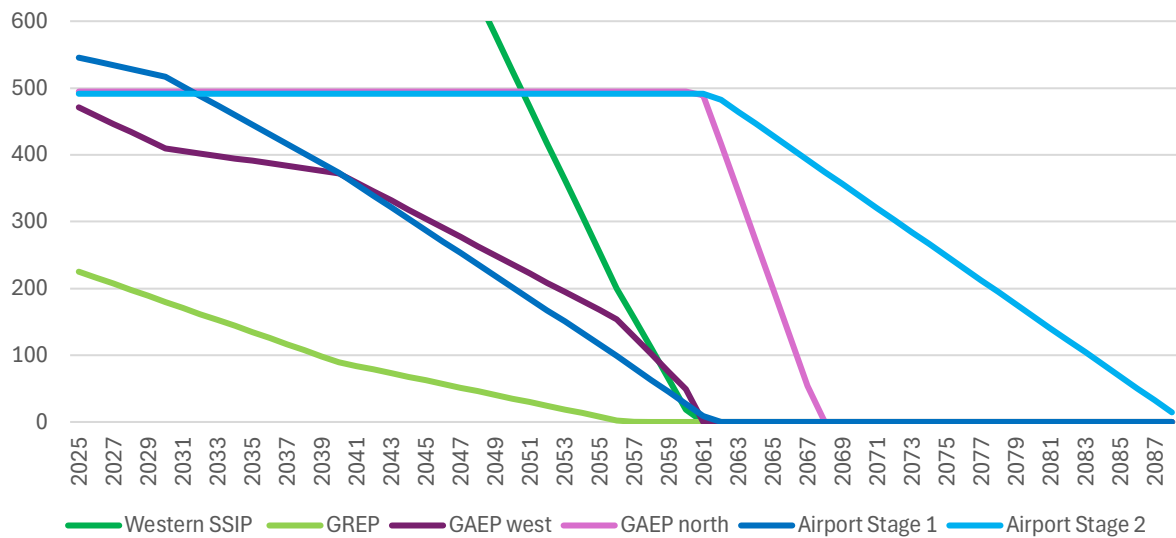


Figure 18 Take up of industrial supply, scenario 1 (SGS Economic Assessment)

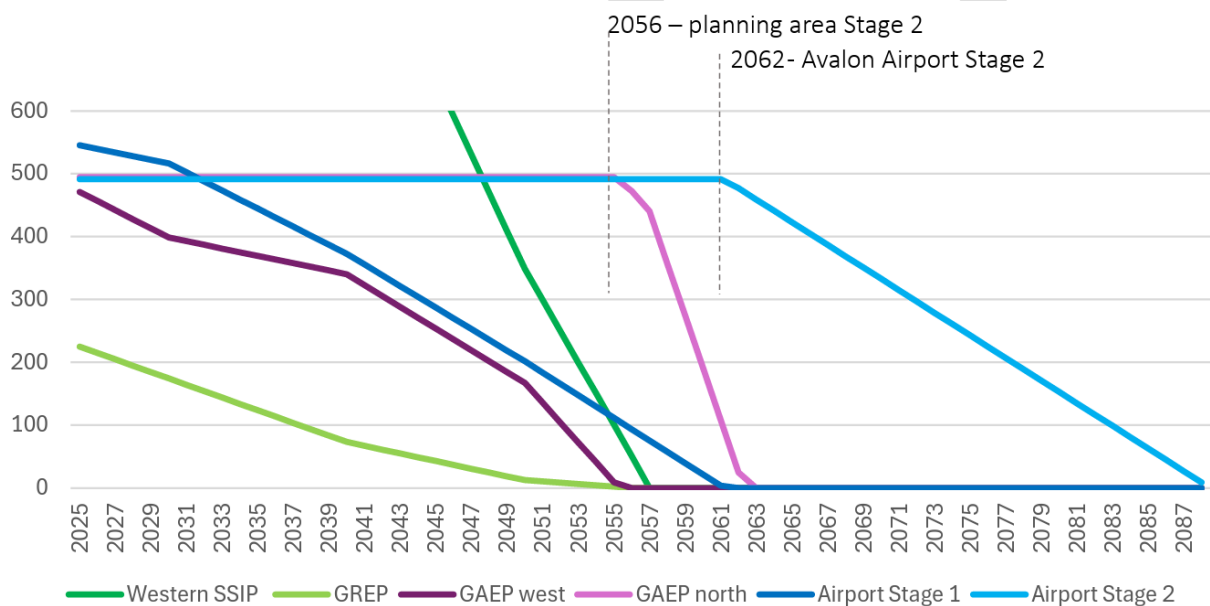


Figure 19 Take up of industrial supply, scenario 2 (SGS Economic Assessment)

The swot analysis determined:

Strengths:

- Transport and access to the M1, Port of Melbourne (delivery time, not distance), western rail link and Melbourne-Geelong passenger train .
- Location close to the growing south-west corridor and Geelong.
- Typically large and unfragmented land ownership.

Weaknesses:

- Large increases in supply and competition with the airport also providing land.
- Lack of established infrastructure servicing the precinct.
- The potential of a lower-skilled workforce.

Opportunities:

- Competitive advantage with the ability to provide large lots in comparison to the GREP
- Industrial trends such as product innovation and freight and logistics.

Constraints:

- Environmental risks such as flooding, Ramsar wetlands, biodiversity, rural living to the west and north of the highway and airport buffer requirements.

What does this mean for the Greater Avalon Employment Precinct?

The findings suggest that due to the significant length of time it will take the precinct to be built out in its entirety, that staging of the rezonings should occur. Worker service hubs will be planned for across the precinct to help create an inviting urban environment. Lastly, the precinct will contain limited retail.

FLOODING AND DRAINAGE

Existing Conditions Flood Modelling Report, Alluvium, January 2025

What is the purpose of the report?

The Alluvium flood modelling report establishes the baseline flood behaviour across GAEP under existing conditions. The report combines two previously approved flood studies (the WTP flood mapping project covering the eastern catchment and the Lara flood study covering the western catchment) to understand current flood risks before development occurs. Using hydrologic (RORB) and hydraulic (TUFLOW) modelling, the assessment determines existing peak flows, flood extents, depths and velocities across a range of storm events (20%, 10%, 5%, 2%, and 1% AEP), including climate change scenarios with sea level rise. The modelling outputs will inform strategic locations for future drainage infrastructure including retarding basins, constructed wetlands and waterways.

What do we know so far?

The GAEP is divided into two major catchments managed by different authorities: the western catchment (Corangamite CMA) outfalls south through the Avalon Coastal Reserve, while the eastern catchment (Melbourne Water) outfalls southeast through the Western Treatment Plant into the Spit Nature Conservation Reserve. Both outfall locations are Ramsar-protected coastal wetlands.

Modelling reveals that significant external catchment runoff flows through GAEP from upstream areas north of the Princes Freeway. These external flows are conveyed through existing drains and waterways but overflow during larger storm events and sheet flow through the precinct. The coastal reserves create substantial tailwater effects throughout GAEP due to their direct connection to Port Phillip Bay, with high water levels held in the reserves during flood events propagating back through the development area.

What does this mean for the Greater Avalon Employment Precinct?

Future drainage strategies must address both internal precinct runoff and significant external flows passing through the site. The high tailwater influence from Port Phillip Bay represents a major constraint on drainage

design, requiring careful consideration of outfall locations, detention storage and flood-resilient development planning.

GAEP West Development Plan Overlay Position Paper, HARC November 2025

What is the purpose of the report?

The HARC position paper informs the development of the GAEP West DPO schedule by outlining the requirements for managing stormwater, drainage and hydrological impacts. It clarifies that it is not a drainage strategy but provides high level direction for what a future drainage strategy must achieve. The Position Paper aims to support a coordinated approach among landholders and agencies while addressing environmental sensitivities, including impacts on the Avalon Coastal Reserve (ACR), surrounding Ramsar wetlands. It also addresses hazards associated with wildlife strike and asset ownership and maintenance.

What do we know so far?

The Position Paper identifies that GAEP West is developable from a stormwater, drainage and hydrological perspective. Two main catchments exist for the precinct: Catchment A (west side of existing waterway) and Catchment B (east side of existing waterway). Environmental flows into the ACR are important, but the volume and required quality remain uncertain.

Preliminary drainage layouts have been proposed by property owners/developers MAB and LIVV, featuring conservation reserves, linear drainage corridors, wetlands, and retarding basins. Avalon Airport's wildlife hazard buffer restricts the use of permanent open water bodies near the airport. Existing stormwater strategies prepared by developers must align between landowners, with shared responsibility for flow paths and invert levels.

What does this mean for the Greater Avalon Employment Precinct?

A balanced and integrated, site-wide drainage strategy is needed to manage environmental values, development needs, and aviation safety. Exact stormwater outfall locations should be determined through environmental risk assessment and stakeholder consultation (including with DEECA and Parks Victoria).

Future drainage strategies must incorporate adaptive management and collaborative planning between landowners. In particular, wetlands and treatment assets must be appropriately designed and sited to meet environmental goals without creating wildlife hazards. Consideration of Wildlife Hazard Management and Drainage Asset Staging Plan will be essential to guide implementation of drainage assets.

HISTORIC POST CONTACT HERITAGE

Historic Cultural Heritage Impact Assessment, Green Heritage, March 2025

What is the purpose of the report?

This report identifies the historic cultural values for the precinct identified from background research and a ground survey. The assessment catalogues existing heritage places and provides recommendations on the heritage values and management, including whether heritage controls should be applied to protect any sites of significance.

What do we know so far?

The assessment identified the following two sites as having potential heritage characteristics; both are or were listed on the Victorian Heritage Inventory (VHI):

- Site 1: Former Cheetham Saltworks (Former VHI reference H7721-0096, now delisted)
- Site 2: 19th Century Agricultural Settlement: Pousties Road Stone Enclosure (H7721-0054)

Site 1 is the former Cheetham Saltworks which was established in 1951 and operated until 2009. The remains of the saltworks are in good condition however, have since been subject to 15 years of weathering and vegetation regrowth with low archaeological significance. The site contains no refinery or residential buildings and any remaining evaporation pans are in a state of disrepair, this is contrasted by the saltworks at Maloop and Laverton which are considered excellent historical examples of salt harvesting. The site is considered to have a low archaeological heritage value and Green Heritage states that *"The Cheetham Saltworks is one of the largest archaeological listings in the state without demonstrable archaeological values that would meet the current threshold for inclusion on the VHI. Consultation with HV [Heritage Victoria] is required to determine whether Cheetham Saltworks should be removed from the VHI."* The site was delisted from the VHI in February 2025.

Site 2 is the remnants of a stock enclosure that is likely related to the 19th century Austin Estate period of colonial occupation. The site is now in a deteriorated state and consists of a roughly oval-shaped enclosure composed of a dry-stone wall made from basalt boulders, which run 31 meters north-south and 19 meters east-west, there are numerous gaps within the wall, and the highest rise of the wall is two courses of boulders. Green Heritage's findings state that the site is in a state of advanced deterioration and is considered to be of low archaeological significance in addition to the site being considered of low local historical significance.

There were no places found within the study area that are listed on the Victorian Heritage Register or within the City of Greater Geelong Planning Scheme Heritage Overlay. The report also concludes that there are no additional places that meet the threshold for Heritage Overlay protection.

What does this mean for the Greater Avalon Employment Precinct?

There are no existing places in a Heritage Overlay, nor are there any newly identified heritage places that require Heritage Overlay protection.

LAND CAPABILITY

Land Capability Assessment, Jacobs, April 2025

What is the purpose of the report?

The purpose of the Land Capability Assessment (LCA) is to identify environmental constraints within the precinct, focusing on issues such as contamination and the hydrology, groundwater, geology, and geomorphology conditions of the precinct. This ensures that future residential and commercial developments within the precinct are informed by the environmental conditions of the site. The LCA includes a desktop review and site inspections to guide safe and sustainable development.

What do we know so far?

The report highlights several findings:

- Contamination: Sites of high, medium, and no contamination risk were identified within the GAEP site boundary. Four properties have been identified as posing the potential for high contamination risk: an active service station with fuel storage on premises; and three neighbouring properties which were the site of the White Oil Pipeline Leak (WOPL) leak that occurred in 2004. Cleanup has been completed to a practicable extent but residual contamination in the soil and groundwater may pose contamination potential within the boundary of the site.

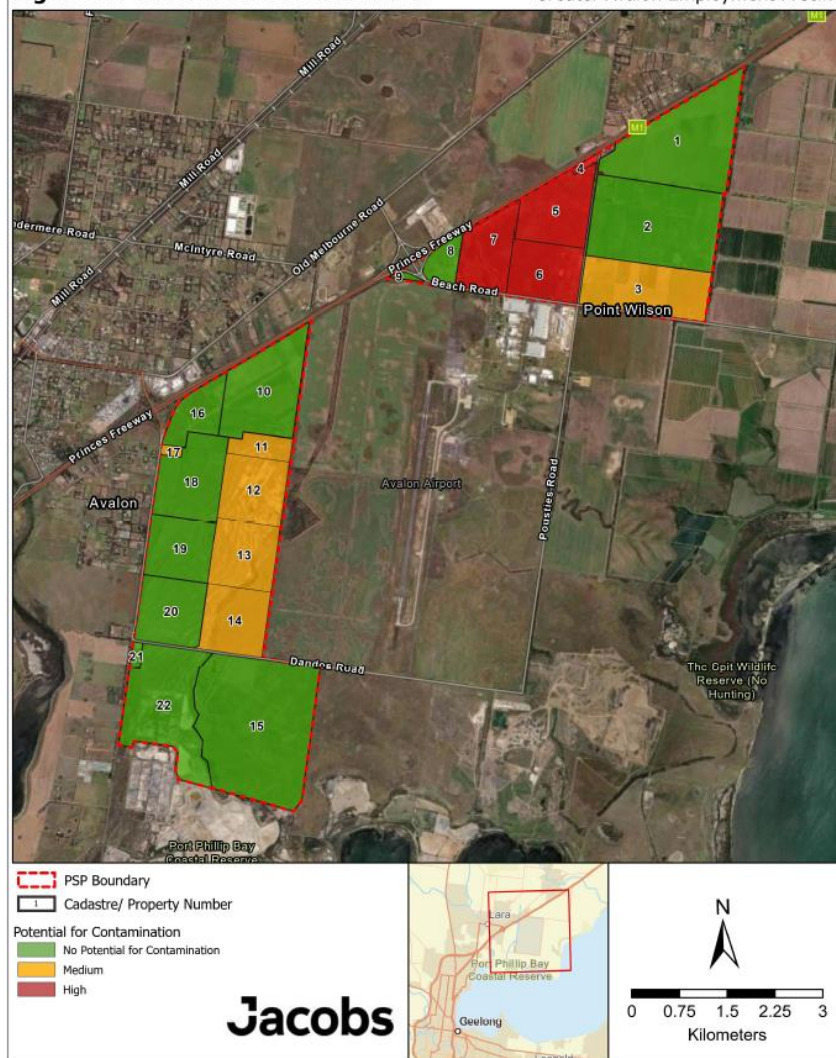
- Six properties have been identified as presenting the potential for medium contamination risk: two properties in which stock dips were observed, these features for livestock treatment have the potential for contamination of soil and groundwater; and four properties located adjacent to the western edge of the Avalon Airport in which PFAS has been detected in the soils and groundwater.
- In the case of sensitive uses forming a part of future development on the site of high contamination risk properties, Jacobs recommends undertaking Preliminary Risk Screening Assessments (PRSA) be completed to inform undertaking further Environmental Audits if deemed necessary. Furthermore, it is recommended that stockpiles and dumped materials/waste observed onsite may be present at some locations are disposed on a site-by-site basis during future development.
- Geotechnical: The precinct is likely underlain by swamp, coastal lagoon soils and basaltic residual soils from underlying basalt bedrock. Sodic soils with a dispersive nature are present within the precinct and could lead to erosion of drainage channels and problematic for construction materials. Subsurface issues may present a critical issue and testing for this sodic and acidic soils should occur. Further geotechnical assessments need to be undertaken. It is recommended that geotechnical investigations with sampling occur at a site-by-site basis during the building permit application process.
- Hydrogeology: Shallow groundwater is likely to occur over large portions of the precinct area, and many areas would likely be subject to waterlogging due to poor sub-soil drainage. Site specific groundwater impact assessments will be required for works near these groundwater receptors. Groundwater extraction has the potential to negatively impact on the ecological health of these groundwater receptors. Groundwater hydraulic testing may be undertaken to assess aquifer properties. Several existing investigation and observation bores in the vicinity of the GAEP may be used to verify groundwater conditions; however, the development of new investigation bores may be necessary due to the lack of pre-existing investigation bores within the GAEP.
- Hydrology: As the precinct is within a floodplain and at risk of sea level rise, the site requires a detailed flood study to inform the development. It is recommended that early consultation with flood authorities should occur. Additionally, future proponents of land development within the GAEP are recommended to provide detailed flood modelling, consultation with flood authorities in relation to design criteria and drainage schemes, and to seek relevant construction permits.
- Geomorphology: The precinct is located on soils that have formed from weathering of the new volcanic basalt rock, quaternary alluvium and coastal deposits. Topsoils have better structural stability, but subsoils may be more prone to erosion where topsoil has been removed. Further site investigation, sampling, and analysis is recommended to determine the characterisation of soils in order to determine erosion risk and to develop a plan to stabilise soils if necessary.

What does this mean for the Greater Avalon Employment Precinct?

Contaminated sites will require investigation, remediation, and possibly environmental audits before the land can be developed. Geotechnical hazards like ground movement and shallow groundwater will also require specific engineering solutions. Sodic and acid sulphate soils will be dealt with by developers at the development plan and permit application stage. These considerations are reflected in the GAEP West DPO schedule.

Figure 3. Potential for Contamination

Greater Avalon Employment Precinct



Note: Some sites within the precinct were not surveyed.

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Landscape and Visual Impact Assessment, Frank Hanson Urban Design, September 2024

What is the purpose of the report?

The Landscape and Visual Impact Assessment analyses the key landscape and visual characteristics of the precinct. The report provides guidance on the precinct's landscape and visual response as it transitions from a rural to an employment character. Several key objectives are identified within the report which allow for the retention, preservation, and enhancement of the landscape character within the GAEP precinct. These will help establish a sense of place, protect and enhance key views to significant landmarks such as the You Yangs, provide landscape connections between character elements, and retain vegetation to help protect the landscape character of the precinct.

What do we know so far?

Findings

- The Landscape Character Areas study identifies three predominant features within the study area, these are the airport, the former saltworks, and the agricultural plains.
 - The Agricultural Plains area is an expansive low-lying terrain which covers a large portion of the study area, due to the nature of its size it is a defining feature of the landscape and the wider region. The topography is consistently flat with a low degree of change as it levels into Port Phillip Bay, it contains sparse vegetation which is generally clustered along road reserves or property edges, although occasional trees and patches of native grasslands are also present across the topography. Field boundaries within the plains are generally post and wire fencing and transmission lines are present within the character area but are of low intrusion. The Princes Freeway and Melbourne–Geelong rail line cross the character area from the north-east to the south-west. Small dwellings and miscellaneous agricultural structures are located throughout the area, their form and density provide limited impact and is in keeping with the rural character of the area. This sparsely occupied low-lying terrain allows for open views towards the regionally significant highpoint of the You Yangs.
 - The Airport is distinctive within the character area due to its scale of built form, which is comprised of airport hangers, sheds, and the style of built form which is generally corrugated steel with a pale grey tone. While there are generally no hard defining boundaries between the airport and the surrounding agricultural fields, the airport buildings themselves create a significant change in landscape character. Airport infrastructure including the runway, car parks, and roadways are not visible from outside the airport. The topography is a flat continuation of the Agricultural Plains, contains sparse vegetation, and has property boundaries that are defined by mesh and post and wire fencing. The airport is visible from Flinders Peak, the high point of the You Yangs.
 - The Former Cheetham Saltworks is located between the Agricultural Plains and the Coastal Fringe, it has a flat topography that is similar to the Agricultural Plains but has been significantly modified for the salt works. Hollows of former salt pans are clearly visible and are wrapped by scrubby vegetation that is recolonising the hollows. There is no canopy vegetation within the Former Cheetham Saltworks, all vegetation is limited to low growing scrubby shrubs, grasses, and ground covers which are tolerant of high saline conditions. The landscape is partially inundated by Port Phillip Bay. The flat topography provides open and expansive views both inland to the You Yangs, to the coast of Port Phillip Bay, and the Bellarine Peninsula.

Recommendations

The report identifies interface characteristics, landscape and view lines within and external to the precinct. Key views to significant landscape features are recommended to be retained in the design of the precinct development. Some of the recommendations include:

- **Design considerations (Road and Airport interfaces):** Consideration of the residential amenity opposite, maintaining continuity of major remnant exotic and indigenous vegetation, consideration of bushfire attack separation requirements, creation of a linear open space with shared walking and cycling trails, enhance active surveillance opportunities, incorporate WSUD treatment on edge, and allow of acoustic treatment if required.
- **Development at M1 Princes Freeway interface:** Development at the freeway interface should take advantage of the exposure of the precinct to the high volume of traffic along this edge while providing visually responsive/appropriate design solutions.
- **Development at Avalon Road interface:** Development at this road upgrade interface should protect the rural residential character to the west.

- **Development at Avalon Airport interface:** There are two key interface treatments that need to be considered for the airport: Where development directly abuts airport land as shown below and also where development interfaces with a road with airport industrial/commercial development on the other side (e.g. Beach Road). Development at these interfaces should protect airport operations from encroachment both physically and visually.
- **Development at Western Treatment Plant (WTP) interface:** Protect WTP operations from encroachment.
- **Development at wetland and coastal interface:** Protect environmental values and incorporate as a place making element.
- **Development at watercourse interface:** Allow ease of overland flow while utilizing the space created to highlight key views such as those to the You Yangs.
- **Built form heights - airport related:** Consider the Avalon Airport Protection of Visual Operations – Obstacle Limitation Surfaces (OLS) which will be determined in the Airport Master Plan.
- **Protecting aviation facilities - Communication, Navigation and Surveillance (CNS):** Ensure development complies with the National Airports Safeguarding Framework (NASF) Guideline G.
- **Cut and fill:** Consider the visual factors for areas of fill.
- **Lot sizes:** A key consideration for development in this area will be the requirement for increased tree canopy cover, site permeability and other climate responsive techniques. This will require an approach to lot layout and design which allows for these elements. Larger built form envelopes may require larger “offset” areas (raingardens, increased permeability, canopy cover etc.) to accommodate runoff at the lot level prior to discharge into the precinct level stormwater system.
- **Sight lines:** The line of sight to the You Yangs and in particular to Flinders Peak should be shown on each application plan for reference.
- **Investigations and actions required as part of the planning process:** Include the preparation of design guidelines to address factors such as site coverage and landscape requirements.

What does this mean for the Greater Avalon Employment Precinct?

The site interfaces and key view lines within the precinct are shown on the DPO concept plan for GAEP West. The DPO includes requirements for the development plan to respond to the LVIA. Future Development Plans will be informed by the recommendations made by the LVIA report, these recommendations ensure:

- Preservation of site lines to key features in the area.
- Retention of vegetation that is significant to the site’s character.
- Consideration of height limitations during development that may impact Avalon Airport’s operation.
- Protection of adjacent significant sites, such as the Western Treatment Plant.
- Consideration for development of interfaces to watercourses and roads.

The LVIA identifies character areas and provides recommendations for design that is responsive to the existing landscape and will allow for a respectful transition of the precinct into an employment precinct.

SAFETY MANAGEMENT STUDY – GAS

Safety Management Study Report, Delphi Risk Management Consulting Pty Ltd,
November 2024

This report addresses the safety requirements for two existing APA Group High Pressure Gas Pipelines (T112 Brooklyn-Lara and T024 Brooklyn-Corio) that run through the Greater Avalon Employment Precinct under Australian Standard AS2885.

What is the purpose of the report?

The Safety Management Study (SMS):

- Assesses risks associated with construction of GAEP and future operation and maintenance of the gas pipelines in compliance with AS2885.6:2018.
- Reviews all possible threats to safe operation and maintenance of the pipelines.
- Ensures threats that cannot be mitigated by design or procedures are risk assessed and confirmed to be As Low As Reasonably Practical (ALARP).
- Determines appropriate buffer areas and controls to protect both the pipelines and future precinct users.

What do we know so far?

- Two major gas transmission pipelines traverse the precinct:
- T112 pipeline (500mm diameter): Measurement Length of 525m, with 85m buffer for credible hole size
- T024 pipeline (350mm diameter): Measurement Length of 297m, with 57m buffer for credible hole size
- Both pipelines confirmed as "No Rupture" under AS2885 standards for credible excavator threats in the area (maximum credible hole size 50mm).
- Location Class upgraded from R1/R2 (rural) to T1 (typical suburban development) with Industrial (I) secondary classification.
- SMS Workshop assessed 44 threats across both pipelines:
- 4 negligible risk threats
- 2 low risk threats per pipeline
- No intermediate risk threats
- T024 pipeline has coal tar enamel coating which is brittle and sensitive to vibration, requiring special management during construction.
- 23 actions identified requiring close-out before works can commence, covering design, construction management, and ongoing maintenance requirements.

What does this mean for the Greater Avalon Employment Precinct?

- Buffer areas must be applied to the precinct plan: 85m either side of T112 pipeline and 57m either side of T024 pipeline to prevent Sensitive Land Uses (such as childcare centres) within these zones.
- If Sensitive Land Uses must be positioned within buffer areas, developers will need to pay for concrete or HDPE slabbing over the pipelines to APA's requirements.
- All actions raised by the SMS must be closed out to APA's satisfaction prior to any works commencing.
- Future development plans, road crossings, and utility installations must be reviewed and approved by APA before construction.
- A Construction Management Plan will be required for all works, including pipeline awareness sessions for construction contractors.

- Standard crossing designs must be applied to all new road and utility crossings, including use of slabbing and marker tape.
- APA's Easement Landscaping Guidelines must be incorporated into planning permit conditions to maintain pipeline visibility and prevent root damage.
- The DPO schedule for GAEP West includes requirements to address gas pipeline interfaces and mitigation measures.

SAFETY MANAGEMENT STUDY – OIL

Viva Energy Australia Pty Ltd (Viva Energy) Response to “Greater Avalon Employment Precinct Planning Scheme Amendment” – Safety Management Study

What is the purpose of the report?

Viva Energy Australia Pty Ltd (Viva Energy) prepared a safety management study on the 9th of December 2024. The SMS assessed the impacts of the GAEP on The SMS assessed the impacts of the Greater Avalon Employment Precinct (GAEP) Planning Scheme Amendment to the Viva Energy Australia owned and operated White Oil Pipeline (WOPL or Pipeline Licence 7), Black Oil Pipeline (BOPL or Pipeline Licence 8) and Western – Altona – Geelong Pipeline (WAG or Pipeline Licence 65) within the vicinity of Greater Avalon Employment Precinct.

This SMS report is a document internal to Viva Energy only and has not been made publicly available or presented to the VPA. Viva Energy have informed the VPA that retaining these documents internally is standard practice.

What do we know so far?

The SMS findings were that the WAG and the BOPL pipelines both require concrete slab protection for the entire length of both pipelines (PL8 and PL65) where the route is through the Greater Avalon Employment Precinct Area. This means a concrete slab of specifications prescribed by Viva Energy needs to be installed below ground and above the pipeline to create a physical barrier to protect the pipelines from external threats.

In addition, any location where a road or rail will be constructed above the pipeline, the pipeline will need to be recoated, and concrete slab protection installed. When further detailed design is available, there may be a need to relocate or lower either pipeline if the additional loads from road and rail cannot be otherwise mitigated sufficiently to meet the AS2885 design criteria.

TRANSPORT

Greater Avalon Employment Precinct - Transport Modelling Assessment, Jacobs, 5 November 2025

What is the purpose of the report?

The Strategic Transport Modelling Assessment:

- Examines traffic impacts of the proposed GAEP development using the Victorian Integrated Transport Model (VITM24).
- Assesses future transport planning requirements for the precinct by 2056.

- Tests different development scenarios combining various levels of GAEP West, GAEP North, and Avalon Airport development.
- Provides recommendations for infrastructure upgrades and internal precinct road networks.

What do we know so far?

Traffic Generation: The full development scenario (Option 1B) generates significant traffic:

- Approximately 26,350 total jobs across GAEP West (7,900), GAEP North (10,000), and Avalon Airport (8,400)
- Approximately 82,100 daily vehicle movements comprising:
 - 24,100 daily trips from air passengers
 - 17,800 daily trips from airport employees
 - 15,600 daily trips from GAEP-West employees
 - 24,500 daily trips from GAEP-North employees

Princes Freeway Impacts:

- Traffic forecast to more than double from 72,000 vehicles per day (vpd) (2019) to 143,000-154,000 vpd (2056)
- This growth is primarily driven by background growth connecting fast-growing Wyndham and Geelong councils, with GAEP and airport being additional contributors
- Current 3-lane configuration will be inadequate; comparable volumes in Victoria only occur on 4-5 lane freeways
- Additional lanes and ramp metering will likely be required

Five Development Scenarios were modelled:

- **2056 Base:** No GAEP development, Airport at full build-out (43,200 daily trips)
- **Option 1A:** Full GAEP (West + North), Airport at 50% air passenger forecasts (69,900 daily trips)
- **Option 1B:** Full GAEP (West + North), Airport at 100% air passenger forecasts (82,100 daily trips)
- **Option 2A:** GAEP-West only, Airport at 50% air passenger forecasts (46,500 daily trips)
- **Option 2B:** GAEP-West only, Airport at 100% air passenger forecasts (58,900 daily trips)

Critical Infrastructure Constraints:

- **Avalon Road / Princes Freeway interchange:** Overcapacity in all development scenarios except for Base Case
- **Beach Road / Princes Freeway interchange:** Heavily congested in base case, overcapacity in most scenarios in both peaks
- Both interchanges are one-lane in each direction full diamond configurations
- Point Wilson Road is either approaching or at capacity in scenarios that don't include GAEP North

What does this mean for the Greater Avalon Employment Precinct?

Internal Road Network:

- Proposed internal road network is largely appropriate for projected traffic volumes

- **Avalon Road:** Requires duplication between freeway interchange and first connector street (17,000-19,000 vpd projected)
- **Beach Road:** Strong need for duplication between freeway interchange and airport entry (23,000-42,000 vpd projected)
- **Dog Leg Connector:** Not critical to the network (only 800 vpd between GAEP-West and GAEP-North), however can be retained to provide resilience to the network and provides for a more direct route for bus routes and emergency services
- **Dandos Road:** Should be retained if possible (carries up to 3,300 vpd) as it provides good connectivity and avoids freeway interchange congestion; uncertainty exists around potential severance by future runway extensions

Staging Implications:

- **GAEP-West alone** may be deliverable without upgrading Avalon Road freeway interchange if Avalon Airport does not develop further, but this requires additional modelling to isolate impacts
- **GAEP-North** could be delivered without upgrading Beach Road interchange only if Avalon Airport does not develop further (as it can use Point Wilson Road interchange), but significant airport development is anticipated therefore major upgrades are required

External Infrastructure Requirements:

- Both Avalon Road and Beach Road freeway interchanges will require investigation and likely upgrades by Department of Transport and Planning
- Ramp metering and widening need to be considered for both crossings
- Additional freeway lanes will be required on Princes Freeway

Public Transport:

- Bus routes proposed providing connectivity through precinct, to Avalon Airport, and to Lara train station
- Further enhancements including bus priority infrastructure could reduce vehicle numbers
- Airport passengers and employees are good candidates for public transport with appropriate routes and timing
- However, manufacturing-dominated employment precincts typically generate low public transport usage due to dispersed layouts

Greater Avalon Employment Precinct – Transport Assessment Memo, Jacobs, November 2025

What is the purpose of the report?

The Transport Assessment Memo reviews the background policy and existing conditions of the Greater Avalon Employment Precinct (GAEP) and provides recommendations to guide the effective integration of the proposed development with the existing and planned transport network. The memo works iteratively alongside the Development Plan Overlay (DPO) schedule to identify transport-related issues and opportunities, supporting the development of a fully developed, integrated multi-modal precinct.

What do we know so far?

The GAEP is located approximately 20 km north-east of Geelong and 55 km south-west of Melbourne CBD, adjacent to Avalon International Airport. The precinct comprises GAEP-North (640 ha) and GAEP-West (941 ha), with projected generation of approximately 26,000 jobs supporting the City of Greater Geelong's growth targets of 400,000 population and 190,000 jobs by 2041.

Current transport conditions reveal significant challenges: approximately 87% of workers in surrounding areas commute by private vehicle (2021 data excluding work-from-home), with only 4% using public transport and 1.4% using active transport. The Princes Freeway is the primary arterial road carrying 75,000 vehicles per day (8% heavy vehicles). Existing public transport is limited to Skybus service to Werribee/Melbourne CBD and three regional bus routes near Lara Station. The closest rail stations (Lara, Little River, Corio) are 2-4 km from precinct boundaries, providing V/Line regional connections requiring interchange to access metropolitan Melbourne.

Active transport infrastructure within the precinct is limited to—no dedicated cycling paths or pedestrian footpaths exist outside Avalon Airport land. A Strategic Cycling Corridor has been identified connecting to Lara via Avalon Road. Road safety analysis (2014-2024) identified 57 crashes within the study area, with 81% occurring on Princes Freeway and 61% resulting in serious injuries, highlighting existing safety concerns that will be amplified by increased traffic volumes.

What does this mean for the Greater Avalon Employment Precinct?

A hierarchical street network is proposed featuring arterial roads (Avalon Road and Beach Road, both requiring duplication), collector roads for intermediate distribution, and local streets prioritizing low-speed internal movements. Traffic modelling for 2056 scenarios projects significant volume increases: Avalon Road south of the freeway interchange will increase from under 200 vehicles per day (vpd) (2018) to 16,900-19,100 vpd depending on development and airport passenger scenarios. Beach Road east of the freeway interchange will increase from 5,300 vpd (2018) to 22,800-42,400 vpd across scenarios.

The precinct presents key opportunities including:

- Greenfield advantage for designing sustainable multi-modal transport from the ground up
- Strategic location leveraging airport and Port of Geelong connectivity for multimodal freight operations
- Potential to drive mode shift away from car dependency through targeted public and active transport investment
- Alignment with the Avalon Corridor Strategy's integrated transport and land use planning framework.

Critical actions include:

- Upgrading Avalon Road and Beach Road Interchanges
- Duplicating Avalon Road between the freeway interchange and first connector street
- Duplicating Beach Road between the freeway interchange and airport entry
- Developing dedicated off-road active transport corridors including the identified Strategic Cycling Corridor
- Enhancing public transport connectivity beyond the limited existing Skybus service
- Proactively addressing road safety concerns at Princes Freeway interchanges and high-speed sections
- And ensuring the DPO incorporates requirements for integrated, sustainable transport infrastructure that balances efficient freight and worker access with safe internal movements.

UTILITY SERVICING

Greater Avalon Employment Precinct Utility Assessment Report, Spiire Australia Pty Ltd, November 2025

What is the purpose of the report?

The Utility Assessment Report:

- Identifies the location of existing utility infrastructure within and around the precinct.
- Discusses how utility services may be provided to facilitate development of the 3,437 hectare precinct (1,581ha non-airport land).
- Investigates sewer reticulation, potable water supply, gas reticulation, electricity supply and telecommunications infrastructure requirements.
- Informs the servicing requirements for the state-significant employment precinct.

What do we know so far?

Sewer Reticulation (Barwon Water):

- No existing sewers service the precinct; current airport facilities use on-site wastewater systems (package plants).
- The proposed concept involves:
 - Pressure sewer system internally (suited to flat terrain with high water table)
 - Rising main to pump to Heales Road gravity main in Lara
 - Two pump stations: SPS1 on Avalon Road for GAEP, SPS2 for Avalon Airport
 - Duplicated rising main: RM1 (25L/s for first 10 years) and RM2 (65L/s for ultimate development), combined capacity 90L/s
 - Catchments extending ~3km from each pump station
 - Developers responsible for design, funding and delivery of all necessary infrastructure including external connections.

Potable Water Supply (Barwon Water):

- Limited existing infrastructure: DN225 main in Beach Road feeds airport, DN300 main in Dandos Road recently constructed.
- Three-stage strategic approach:
 - **Stage 1 (2024-2028):** DN300 in McClelland Avenue Lara to address capacity constraints
 - **Stage 2 (~2028):** DN300 from McClelland Avenue to Dandos Road via Avalon Road
 - **Stage 3 (as required):** DN600 feeder from Lara via Canterbury and Cozens Road
- Ultimate design involves ring main around Avalon with DN600, DN450 and DN300 mains.
- Large feeder mains will be built only after demand triggers are met to avoid water quality issues from low turnover.

Electricity Supply (Powercor):

- Two existing 22kV overhead feeder lines: FNS022 (north/west) and FNS032 (south/east), both from Ford North Shore Zone Substation.
- No current or forecast limitations 2024-2028; FNS032 recently extended along Avalon Road and Dandos Road.
- Typical industrial development requires:
 - One or two new zone substations (66kV to 22kV), ~1.1 hectares each, ~50 MVA capacity each
 - Each facility may require 2-10 MVA (or more) connection
 - 66kV sub-transmission powerlines
 - Likely upgrades at Geelong Terminal Station
- **Special consideration:** AI and data centres would require substantially more capacity with new transmission assets (220kV or above) and transmission terminal station.
- Underground infrastructure (kiosk substations, cables, pits, conduits, public lighting) required throughout development at developer cost.

Gas Supply (APA/Ausnet):

- **APA Transmission Pipelines:** Two major high-pressure pipelines in easement parallel to Princes Highway:
 - T112 Brooklyn-Lara (500mm diameter, Measurement Length 525m)
 - T024 Brooklyn-Corio (350mm diameter, Measurement Length 297m)
 - Safety concerns require careful land use planning within Measurement Lengths
- **Ausnet Reticulation:** Single existing main connects to transmission pipeline at Beach Road, extends 920m east to feed airport maintenance facilities.
- Proposed: New connections at Beach Road and Avalon Road interchanges with extension south along Avalon Road.
- Note: Victorian Government has phased out gas for residential but commercial/industrial may require gas depending on usage.

Telecommunications (NBN Co):

- Portion of precinct within NBN Fixed line footprint using FTTX and FTTP technologies.
- No current plans to extend unless customer initiated, highly unlikely need for new key infrastructure.
- New infrastructure would connect via FAN site at 79-81 Station Lake Road, Lara (large capacity).
- New build would connect via Beach Road/Old Melbourne Road at northern end.
- NBN interested in trench sharing opportunities and additional freeway/waterway crossings.
- Mobile coverage: All three major operators (Telstra, Optus, Vodafone) provide 4G coverage; Optus and Vodafone have greater 5G coverage.

Major Pipelines (Viva Energy):

- Multiple high-pressure oil pipelines adjacent to APA gas mains within same easement parallel to Princes Freeway.
- Avalon Road and Beach Road have existing crossings.
- Require significant protection during construction and ongoing usage.

Vopak Victoria Energy Terminal:

- Floating LNG terminal proposed 19km east of Avalon in Port Phillip Bay.
- Associated infrastructure includes new 220kV substation likely along Beach Road toward eastern GAEP boundary.
- Potential for transmission lines to run through site to connect to Lara terminal station.
- Project undergoing Environment Effects Statement process.

What does this mean for the Greater Avalon Employment Precinct?**Staging and Development Sequencing:**

- Logical staging is to commence near Beach Road or Avalon Road interchanges with Princes Highway (closest to existing infrastructure).
- All utilities support staged development approach.
- Out-of-sequence development may incur additional bring-forward charges from authorities.
- Location of trunk infrastructure should minimise impact to high ecological value areas.

Developer Responsibilities:

- Developers are responsible for design, funding and delivery of almost all utility infrastructure.
- This includes connections extending outside site boundaries to reach existing networks.
- Larger trunk infrastructure funded under authority capital works programs (triggered by demand).
- Underground electrical infrastructure (kiosks, cables, pits, lighting) to be provided by developers.

Critical Constraints:

- APA gas transmission pipeline Measurement Lengths (297m and 525m) require careful land use planning - certain sensitive uses should be avoided within these buffers.
- Viva Energy oil pipelines require adequate protection and consultation.
- Flat terrain with high water table necessitates pressure sewer system.
- Need to coordinate with Avalon Airport masterplanning for road and service connections through airport land.
- Potential impact from Vopak Victoria Energy Terminal infrastructure (220kV substation and transmission lines).

ESD Considerations: The report emphasizes Ecologically Sustainable Development opportunities including:

- Protecting and enhancing conservation areas
- Solar and alternative energy provisions
- Sustainable water treatment and reuse
- Electric vehicles and machinery
- Efficient pavement designs and low-carbon materials
- Water harvesting and recycling aligned with Avalon Corridor IWM Plan

Key Infrastructure Needs by Service:

- **Sewer:** Dual rising mains, 2 pump stations, pressure sewer reticulation
- **Water:** Three-stage trunk main construction, ring main network
- **Electricity:** 1-2 zone substations, 66kV sub-transmission lines, underground reticulation
- **Gas:** Extensions from Beach Road and new connection at Avalon Road
- **Telecommunications:** Pit and pipe infrastructure, connection via Beach Road

The DPO schedule for GAEP West requires preparation of a Site Servicing Report as part of the development plan to address infrastructure and utilities servicing requirements, with indicative locations for above-ground utilities where needed.

PLANNING SCHEME

Clause 02 – Municipal Planning Strategy

Clause 02 states the context of the Municipality of Geelong and its vision for the future which also includes several strategic directions that seek to guide the development of the area to achieve the overall vision.

Council's overarching vision for Greater Geelong is:

"Geelong, coast, country and suburbs, is the best place to live through prosperity and cohesive communities in an exceptional environment."

The key land use and development aspirations that support this vision are to facilitate:

- A prosperous economy that supports jobs and education opportunities.
- A fast, reliable and connected transport network.
- Sustainable development that supports population growth and protects the natural environment.
- An inclusive, diverse, healthy and socially connected community.
- A destination that attracts local and international visitors."

Avalon Airport is noted as a significant opportunity for economic growth in the Clause 02.03-1 (Settlement).

"The Geelong Ring Road Employment Precinct, Avalon Airport and nearby land provide significant opportunities for employment and economic growth."

Clause 11 – Settlement

Clause 11 Settlement sets out the policy for directing growth in Victoria. The GAEP will assist the facilitation of major growth in Geelong as identified on the Victoria Settlement Framework plan at Clause 11.01-S.

Clause 11.01-R sets regional policy in accordance with the Growth Plan, consistent with State Policy. The GAEP is not identified as the regional growth plan predates the Avalon Corridor Strategy.

While Clause 11.01-1L Settlement – Greater Geelong, states *"protection of agricultural land, particularly to the north of Lara and aquaculture or intensive agricultural production activities adjacent and complementary to Avalon Airport"*, Clause 11.01-3L Lara, states that the land surrounding the Airport's opportunities and constraints to be investigated.

Other relevant Settlement Policy being considered by this draft Amendment include:

- Clause 11.02-1S Supply of urban land
- Clause 11.02-2S Structure planning
- Clause 11.02-3S & 3L Sequencing of development
- Clause 11.03-2S Growth areas
- Clause 11.03-4S Coastal settlement
- Clause 11.03-5S Distinctive areas and landscapes

Clause 12 – Environmental and Landscape Values

Clause 12 Environmental and Landscape Values sets out broad policy that aims to protect, restore or enhance biodiversity and conserve areas with environmental and landscape values. Relevant environmental and landscape values being considered by this draft amendment include:

- Clause 12.01-1S & 1L Protection of biodiversity
- Clause 12.01-2S Native vegetation management
- Clause 12.02-1S Protection of the marine and coastal environment
- Clause 12.02-1L Protection of coastal areas
- Clause 12.03-1S River and riparian corridors, waterways, lakes, wetlands and billabongs.
- Clause 12.03-1R Waterways of the West
- Clause 12.03-1L River corridors, waterways, lakes and wetlands
- Clause 12.05-1S Environmentally sensitive areas
- Clause 12.05-2S Landscapes

Clause 13 – Environmental Risks and Amenity

Clause 13 Environmental Risks and Amenity states that 'planning should strengthen the resilience and safety of communities by adopting a best practice environmental management and risk management approach' by appropriate land use and development compatibility and effective controls to prevent or mitigate significant impacts. Relevant clauses being considered by this draft amendment include:

- Clause 13.01-1S Natural hazards and climate change.
- Clause 13.01-2S Coastal inundation and erosion.
- Clause 13.02-1S Bushfire planning.
- Clause 13.03-1S & 1L Floodplain management.
- Clause 13.04-1S Contaminated and potentially contaminated land
- Clause 13.04-3S & 3L Salinity
- Clause 13.05-1S Noise management
- Clause 13.06-1S Air quality management
- Clause 13.07-1S Land use compatibility
- Clause 13.07-2S Major hazard facilities

Clause 14 – Natural resource management

Clause 14 Natural resource management aims to preserve and enhance natural resources such as water, land, energy and extraction. Clauses considered by this draft amendment include:

- Clause 14.02-1S Catchment planning and management
- Clause 14.02-2S Water quality
- Clause 14.03-1S Resource exploration and extraction

Clause 15 – Built environment and heritage

Clause 15 Built Environment and Heritage focuses of best practice built environment to achieve high amenity while balancing character outcomes and both cultural and post-colonial heritage. Clauses considered by this draft amendment include:

- Clause 15.01-1S Urban design
- Clause 15.01-2S Building design
- Clause 15.01.2L Environmentally sustainable development
- Clause 15.01-6S Design for rural areas
- Clause 15.03-1S Heritage conservation
- Clause 15.03-2S Aboriginal cultural heritage

Clause 16 – Housing

Clause 16 Housing was considered somewhat due to the surrounding housing stock that could be supported by jobs being created by the precinct. It was not considered heavily due to the GAEP being entirely non-residential.

Clause 17 – Economic development

Clause 17 Economic Development states planning to help contribute to economic welfare by providing land, facilitating decisions and resolving land-use conflicts to help achieve the economic potential of the region. Relevant clauses considered by this draft Amendment include:

- Clause 17.01-1S Diversified economy
- Clause 17.01-1R Diversified economy – Geelong G21
- Clause 17.01-1L-01 Diversified economy – Greater Geelong
- Clause 17.01-2S Innovation and research
- Clause 17.02-1S Business
- Clause 17.02-2S Out-of-centre development
- Clause 17.02-2L Out-of-centre development
- Clause 17.03-1S Industrial land supply
- Clause 17.03-1L Industrial land supply
- Clause 17.03-2S Sustainable industry
- Clause 17.03-2L Sustainable industry in Greater Geelong

Clause 18 - Transport

Clause 18 Transport states that planning should ensure a safe, integrated and sustainable transport network. Relevant clauses considered are:

- Clause 18.01-1S Land use and transport integration
- Clause 18.01-2S Transport system
- Clause 18.01-2R Transport system – Geelong G21
- Clause 18.01-3S Sustainable and safe transport
- Clause 18.02-1S Walking
- Clause 18.02-2S Cycling
- Clause 18.02-3S Public transport
- Clause 18.02-4S Roads
- Clause 18.02-5S Freight
- Clause 18.02-5R Freight links – Geelong G21
- Clause 18.02-5L Freight links
- Clause 18.02-7S Airport and airfields

Clause 19 - Infrastructure

Clause 19 Infrastructure aims to set strategy around the timely, efficient and effective delivery of infrastructure, and ensuring adequate levels are provided. Relevant clauses considered are:

- Clause 19.01-1S Energy supply
- Clause 19.01-2S Renewable energy.
- Clause 19.01-3S Pipeline infrastructure
- Clause 19.02-6S & 6L Open space
- Clause 19.03-1S Development and infrastructure contributions plans
- Clause 19.03-2S Infrastructure design and provision
- Clause 19.03-2L Infrastructure planning, design and construction
- Clause 19.03-3S & 3L Integrated water management

GLOSSARY OF TERMS

TERM	DEFINITION
Area of cultural values	An area of Aboriginal cultural values identified in the Cultural Heritage Interpretation Strategy [or technical studies] for this PSP
Biodiversity Conservation Strategy (BCS)	The <i>Biodiversity Conservation Strategy for Melbourne Growth Corridors</i> (State Government of Victoria, 2013).
Canopy tree cover	The total area of a tree's foliage (which comprises of the layer of leaves, branches, and stems) that covers the ground when viewed from above.
Canopy tree	A tree which has an average potential canopy of foliage of 6.4m in diameter or greater at maturity in the summer months.

Development services scheme (DSS)	A development services scheme is a master plan for drainage in a specific catchment area. It guides the standards that need to be met for flood protection, water quality and waterway health.
Encumbered land	Land that is constrained for development purposes, including easements for power/transmission lines, sewer, gas, waterways/drainage; retarding basins/ wetlands; landfill; conservation, protected vegetation and heritage areas. This land may be used for a range of activities (e.g. walking trails, sports fields) and is not credited. However, regard is taken to the availability of encumbered land when determining the open space requirement.
Frontage	The road alignment at the front of a lot. If a lot abuts two or more roads, the one to which the building, or proposed building faces
Gateway character	An area delineating the transition between two areas – characterised by an articulated environment with high quality landscaping and built form
Gross developable area	Total precinct area excluding encumbered land, arterial roads and other roads with four or more lanes.
Infrastructure	Basic facilities and networks (e.g. buildings, roads, and utilities) needed for the functioning of a local community or broader society. Infrastructure can be provided by the private sector (local roads, childcare, shopping centres), or by Government (Kindergartens, schools, railways).
Linear open space network	Corridors of open space, mainly along waterways that link together to form a network.
Native Vegetation Precinct Plan (NVPP)	A plan, as specified in Clause 52.16 of the Victorian Planning Provisions, relating to native vegetation within a defined area that may form part of the precinct structure plan. Native vegetation precinct plans are incorporated into local planning schemes and listed in the schedule to Clause 52.16. A native vegetation precinct plan can form part of a precinct structure plan.
Net developable area (NDA)	Land within a precinct available for development. This excludes encumbered land, arterial roads, railway corridors, government schools and community facilities and public open space. It includes lots, local streets, and connector streets. Net developable area may be expressed in terms of hectare units (i.e. NDHa).
Passive open space	Open space that is set aside for parks, gardens, linear corridors, conservation bushlands, nature reserves, public squares and community gardens that are made available for passive recreation, play and unstructured physical activity including walking, cycling, hiking, revitalisation, contemplation and enjoying nature.
Principal public transport network	Incorporated document <i>Principal Public Transport Network 2017</i> (Victorian Government, 2017), and <i>Principal Public Transport Network Area Maps</i> (Victorian Government, August 2018).
Public open space	Land that is set aside in the precinct structure plan for public recreation that incorporates active and passive open space.
Riparian revegetation	Riparian revegetation is comprised of a suitable local EVC to be revegetated along waterways and waterbodies made up of trees, shrubs, grasses, and groundcovers, functioning to stabilise the waterway or waterbody and provide amenity, treatment and supporting ecosystems. Riparian revegetation may or may not contain remnant vegetation and resemble Forest, Scrub or another classifiable vegetation type. However, due to the proposed small shape and area of these revegetation patches, the fire authority has agreed that a 19m Grassland setback from riparian revegetation is appropriate for BAL-12.5 development.

	This revegetation may pose a bushfire hazard and therefore, is not excludable as low threat vegetation for the purposes of determining a Bushfire Attack Level (BAL).
Unencumbered	Land that is not constrained by uses required to enable development (including easements for power/transmission lines, sewer, gas, waterways/drainage; retarding basins/wetlands; landfill; conservation protection vegetation and heritage areas).
Water sensitive urban design	A sustainable water management approach that aims to provide water quality, flood management and green landscapes. Key principles include: • minimising water-resistant areas • recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground • encouraging onsite reuse of rain and incorporation of rain gardens • encouraging onsite treatment to improve water quality, and removing pollution and using temporary rainfall storage (retarding basins/wetlands) to reduce the load on drains.

Greater Avalon Employment Precinct
Background Report

November 2025