(source Apple Maps)

Greater Avalon Employment Precinct

Landscape and Visual Impact Assessment Report

For the Victorian Planning Authority

September 2024

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Executive Summary

This report presents a Landscape and Visual Impact Assessment (LVIA) for the Greater Avalon Employment Precinct Structure Plan (GAEP). The GAEP, located around Avalon Airport, is 20 km from Geelong and 55 km from Melbourne's Central Business District.

The purpose of this LVIA is to analyse the key landscape and visual characteristics of the precinct, identify significant views, and provide recommendations to retain these views and accommodate future development. The assessment will guide the preparation of the GAEP, providing a robust landscape and visual context analysis, and assist with setting out the PSP's future strategic requirements and guidelines.

Key objectives include establishing a sense of place, protecting and enhancing views to significant landmarks, assisting with the development of an open space network, considering sensitive interface treatments, and retaining significant vegetation.

The Landscape Character Assessment (LCA) prepared by Hansen Partnership in 2021 informed the Avalon Corridor Strategy (ACS). Key findings from this assessment include the concentration of landscape character and visual values in the northern portion of the Avalon Corridor, key view corridors along the Princes Freeway and Melbourne-Geelong rail line, and the presence of an Environmental Significance Overlay in much of the western portion of the Avalon Corridor.

The assessment process of this report combines objective measurements and professional interpretations, with methodology based on findings of the ACS, the Landscape Character Assessment (2021), and other relevant documents.

The report concludes with a series of recommendations to help guide the PSP in achieving these objectives. The study explores a visual and landscape response that enables a respectful transition of the precinct from its predominantly existing rural character to an employment and industrial character focussed on Avalon Airport.

Key Recommendations:

1. **Development at M1 Princes Freeway interface:** Maximize visual exposure of the gateway approaches and entry sequences to the precinct while maintaining a high level of visual amenity.
2. **Development at Avalon Road interface:** Protect the rural residential character to the west.
3. **Development at Avalon Airport interface:** Protect airport operations from encroachment.
4. **Development at Western Treatment Plant (WTP) interface**: Protect WTP operations from encroachment.
5. **Development at wetland and coastal interface:** Protect environmental values and incorporate as a place making element.
6. **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.
7. **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.

8. **Protecting aviation facilities - Communication, Navigation and Surveillance (CNS):** Ensure development complies with this guideline.
9. **Cut and fill:** Accommodate the effects of future sea level rise.
10. **Lot sizes:** Accommodate the requirement for increased tree canopy cover, site permeability, and other climate responsive techniques.
11. **Investigations and actions required as part of the PSP process:** The PSP process is an iterative design and planning process. The background investigations provide a sound evidence-based multidisciplinary approach. Additional recommendations are provided.

1. Introduction

This Landscape and Visual Impact Assessment has been prepared to inform the preparation of the Greater Avalon Employment Precinct Structure Plan (GAEP).

The findings will promote a unified approach to landscape planning, design and management effectively linking recommendations for landscape character and visual amenity to existing planning policies to help influence future planning policy and subsequent development.

The GAEP is in Avalon around the Avalon Airport. It is located 20 km from the City of Geelong and 55 km from the Melbourne Central Business District.
In the future, the GAEP PSP area is estimated to accommodate 18,500 jobs within the state significant employment precinct (i.e. the study area) of the wider precinct.

The PSP area is defined in the Avalon Corridor Strategy (ACS). This document provides strategic planning direction for the corridor between the Geelong and Werribee settlements. It identifies the GAEP as a strategic opportunity to leverage from planned expansion of the Avalon Airport. The ACS was formally adopted by the City of Greater Geelong in December 2022.

The ACS was supported by a Landscape Character Assessment.

The Landscape Character Assessment identified the significant landscape qualities of the site and views to and from the site through rigorous desktop and site analysis. It informed the ACS Framework Plan, being the key plan of the ACS. The findings in this assessment, as they have been translated into the ACS, provide the basis for the GAEP Landscape and Visual Impact Assessment (LVIA).

1.1 Purpose

The purpose of this assessment is to:

- analyse key landscape and visual characteristics of the precinct
- identify significant views to, from and within the precinct
- provide recommendations to retain significant views
- provide recommendations to accommodate future development, while maintaining a high-quality landscape and establishing a strong ‘sense of place’

It is not the purpose of this report to assess the Avalon Airport landholding.

This landscape and visual impact assessment helps critically guide the preparation of GAEP by providing a robust landscape and visual context analysis. The study also helps set out the PSP’s future strategic requirements and guidelines. The study explores a visual and

landscape response that will enable a respectful transition of the precinct from rural to an employment and industrial character.

1.2 Key Objectives

Several key objectives have been identified to facilitate the retention, preservation and enhancement of the landscape character of the GAEP Precinct and establish a strong sense of place:

1. Help establish a sense of place by retaining and enhancing key features/characteristics of the Agricultural Plains landscape character type.
2. Protect and enhance panoramic and long-distance views to significant landmarks, such as the You Yangs.
3. Develop an open space network which helps protect and enhance the significant landscape elements of the specific character types.
4. Provide linear landscape connections between character elements.
5. Develop interface treatments which are sensitive to the prevailing edge conditions.
6. Retain significant vegetation to help protect the landscape character of the precinct.

A series of recommendations have been developed to guide the PSP in achieving these objectives.

1.3 Assumptions

A number of assumptions and limitations are associated with this assessment.

These include:

- The report is based on the information available for the project at the time of writing, August 2024.
- The assessment process aims to describe the landscape factually. However, this type of assessment requires a series of qualitative (subjective) judgements to be made about landscape character and visual qualities. The conclusion of this assessment combines both the objective measurements and professional interpretations.
- The methodology has been based on findings of the “Avalon Corridor Strategy” (2022) Hansen Partnership (ACS), the “Landscape Character Assessment” (2021) – Hansen Partnership (LCA), “Existing Conditions Report, Flora and Fauna” (2021) – Ecology & Heritage Partners and “Cultural Values Assessment” (2021) – Unearthed Heritage and Wadawurrung Traditional Owners Aboriginal Corporation with reference to “Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting and design” and “Landscape Character Types of Victoria – with frames of reference for scenic quality assessment” by Mike Leonard and Richard Hammond.

1.4 Methodology/Assessment Criteria

It is noted that there is no legislated guidance or formalised methodology in Victoria for the assessment of landscape character. The assessment for this study has been based on the method for landscape visual assessment and planning outlined in ‘Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting and design’, and other local and international visual assessment methodologies including the “Landscape Character Types of Victoria – with frames of reference for scenic quality assessment” (1984 Leonard and Hammond). It also includes an assessment of and includes elements derived from the “Landscape Character Assessment (2021) which was prepared by Hansen Partnership in 2021 to inform the Avalon Corridor Strategy.

The methodology used in the development of this report has also included:

- An assessment of the site's context
- A desktop review of relevant published documents in relation to landscape conditions and visual amenity at a state, regional and local level
- A desktop review of photographic records based on aerial photographs, and Google street view imagery
- Site inspections and field analysis and on-site photographic inventory of the precinct
- Preparation of existing landscape conditions plans
- A site analysis and descriptions of landscape characters in reference to "Landscape Character Assessment" (2021) – Hansen Partnership
- A review of key views and view lines
- A review of edge conditions
- A summary of opportunities and constraints
- Review of relevant local case studies which have successfully incorporated desired visual character elements into an urban/edge context
- Development of recommendations and objectives for requirements and guidelines for inclusion into the PSP to achieve the objectives.

1.5 Landscape Character Assessment, Hansen Partnership (LCA 2021)

A background Landscape Character Assessment was prepared by Hansen Partnership in 2021 to inform the Avalon Corridor Strategy.

1.5.1 Key findings from the LCA (2021) desktop assessment:

The LCA determined that:

> "*The concentration of landscape character and visual values are located within the northern portion of the Avalon Corridor, including FZ and GWZ zoned agricultural areas, the You Yangs Regional Park and the concentration of dry stone walls around Little River.*
>
> *Key view corridors exist along the Princes Freeway, Melbourne-Geelong rail line, a number of minor roads around Wurdi Youang (the You Yangs) and from the edge of the Urban Growth Boundary (UGB) in WCC.*
>
> *Much of the western portion of the Avalon Corridor is covered by an Environmental Significance Overlay (ESO). While the intention of the ESO is primarily to protect environment and habitat, areas deemed significant enough to require environmental protection often also provide valuable landscape character.*
>
> *Identified landscape character and visual values are relatively limited within the southern portion of the Avalon Corridor* **[The study area for this report]***, though include a significant stretch of coastline as a Public Conservation and Resource Zone (PCRZ), some areas of Rural Conservation Zone (RCZ) and a Heritage Overlay (HO) associated with Geelong Grammar."* (LCA, 2021)

The South West Victoria Landscape Assessment Study (DELWP, 2013) previously considered a portion of the Avalon Corridor and identified two landscape character areas of note in the study area:

> ***"Western Volcanic Plain****: "Volcanic activity has shaped much of South West Victoria's landscape. This extensive Character Type is formed by a flat to undulating basaltic plain scattered with volcanic features including stony rises, old lava flows, numerous volcanic cones and old eruption points which together create a unique visual landscape. This is a place of big skies, long views with volcanic rises that punctuate the horizon. Shelterbelts of cypress and pine were planted to protect crops and livestock from the winds that sweep the plain and are now a defining*

characteristic of the Type. Many paddocks and roadsides are edged with beautifully formed dry stone walls that were created when early pastoralists cleared the land of rocks for agricultural purposes."

***"The You Yangs Regional Park** is also identified as a state significant landscape, defined as: "the designation of a particular landscape as special or important arising from its cultural landscape values, including aesthetic values (both visual and non-visual) historic, environmental, scientific, social or other values."* (DELWP, 2013)

The Avalon Corridor contains several landscape character areas, including:

- Agricultural Plains
- Township
- Rural Dwelling
- Airport
- Former Salt Works
- Active Industry
- Wastewater Treatment
- Education
- Coastal Fringe

This plan which has been derived from the ACS, shows the three main Landscape Character Areas which are found in the study area are:

- Agricultural Plains
- Airport
- Former Salt Works

These are described in detail later in the report in Section 5.

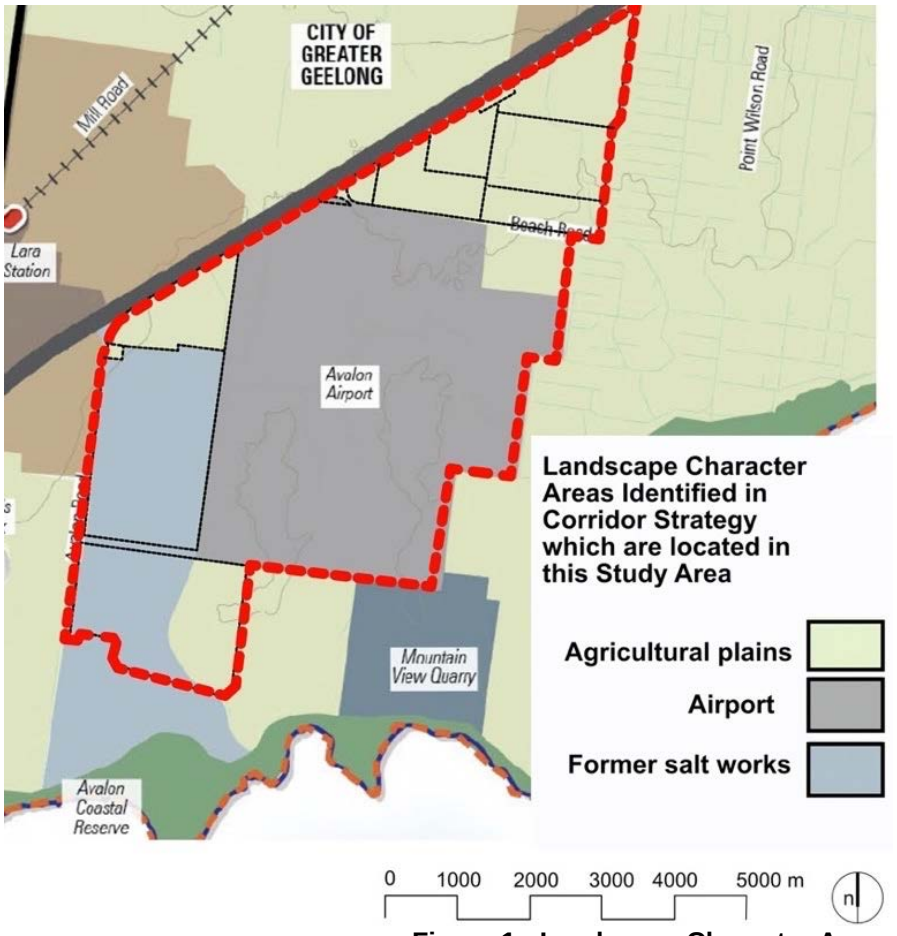

Figure 1 - Landscape Character Areas
(Source: adapted from figure 14 LCA 2021)

2. Strategic Context

The study area is in a region of great strategic significance both locally and at the State Level. It has been the subject of numerous major studies including the Avalon Corridor Strategy 2022 (ACS 2022). One of the recommendations of the ACS was the preparation of the Greater Avalon Employment Precinct Structure Plan which requires supporting background studies including this Landscape and Visual Impact Assessment. Key elements of the Strategic Context which impact on the preparation of this study include:

2.1 Avalon Corridor Strategy (2022)

> "The Avalon Corridor is an area of approximately 30,000 hectares of land between Geelong and Melbourne, which contains a number of state and regionally significant assets such as Avalon Airport and the Melbourne Water Western Treatment Plant (WTP). It encompasses the township of Little River and parts of Lara and accommodates a wealth of biodiversity values and landscapes of environmental and cultural importance." (ACS 2022 page 4)

The key guiding principles from the ACS which will underpin the GAEP and which are of direct relevance to this study include:

i. *Maintain and reinforce a green break between Geelong (regional Victoria) and Werribee (metropolitan Melbourne).*
ii. *Protect green wedge and rural landscapes, as well as cultural and environmental features of identified value.*
iii. *Protect ongoing and future operations of the Western Treatment Plant.*
iv. *Protect ongoing and future expanded functional operations of Avalon Airport as per Avalon Airport, Master Plan.*
v. *Focus appropriate commercial and industrial development within and surrounding Avalon Airport, as per the Framework Plan.*
vi. *Protect and enhance traffic movement on major roads (current and proposed) and rail corridors.*
vii. *Avoid residential development within the Avalon Corridor.*
viii. *Protect areas of acknowledged environmental value including coastline and Ramsar wetlands and grasslands*
ix. *Protect Wadawurrung cultural values and areas of known cultural heritage significance, as well as post-contact heritage sites (in addition to undertaking further investigations as part of specific land use change and development proposals).* (ACS 2022 page 4)

2.2 The Greater Geelong Settlement Strategy (GGSS 2020)

This strategy outlines the importance of the non-urban breaks of the municipality including the land in which the study area is located:

> *"Non-urban breaks are critical to the identity of our municipality and individual townships and will also help establish long term settlement boundaries… There are some physical land constraints and uses that, by their nature, help maintain these breaks... However, in other cases, non-urban breaks will need to be more actively managed. Non-urban areas outside the Urban Growth Boundary in Melbourne are known as green wedges and are managed via a Green Wedge Management Plan. This could be an option for managing the non-urban breaks outside long term boundaries in Greater Geelong."* (GGSS 2020 p 78)

The Strategy identifies areas which help maintain a non-urban break between Geelong and Melbourne including:

- Areas reserved for conservation purposes, including the You Yangs Regional Park, part of the Brisbane Ranges National Park, the Serendip Sanctuary and the Mount Rothwell Conservation and Research Centre.
- Areas with landscape value, such as the Barrabool Hills and You Yangs.
- Areas containing infrastructure of regional and state significance such as WTP and Avalon Airport.
- Although all current operations of the airport are concentrated towards the northern end of the site and all flights are currently accommodated on the existing north-south runway, the Avalon Airport Master Plan (2015) outlines future development and land use across the landholding. The Master Plan accommodates a second north-south aligned runway and third east-west aligned runway. Land use and development within the Avalon Corridor must not impact on the ability to develop these additional runways.

2.3 Precinct Structure Planning Guidelines: New Communities in Victoria, (VPA 2021)

The use and implementation of the PSP Guidelines is a significant part of the PSP process:

> *"The Precinct Structure Planning Guidelines: New Communities in Victoria (the Guidelines) are a Victorian Government initiative to ensure the Victorian Planning Authority (VPA) and other planning authorities prepare plans for places that enable best practice, liveable new communities for Victoria."* (VPA 2021 p 2)

The Guidelines provide elements of relevance to GAEP including but are not limited to:

Innovative Place-based Outcomes Approach

An important component of the PSP Guidelines is the encouragement of an Innovative Place-based outcomes approach:

> *"The PSP 2.0 process encourages an innovative and site-responsive approach. It enables meaningful collaboration between stakeholders, guided by a clearly articulated, place-based vision that provides a mission statement for the PSP. Innovation is encouraged in every stage of the process, including through variations to performance targets to take advantage of local opportunities to achieve a place-based vision. However, by identifying innovation opportunities as early as possible, plans can be tailored to embed the innovation and consensus can be built with relevant stakeholders."* (VPA 2021 p17)

Other key elements which must be considered are:

Traditional Owner and Aboriginal community engagement

> *"In all areas of Victoria, including developed areas, Aboriginal cultural heritage continues to exist and thrive. In the growth areas, the structure planning process provides opportunity to investigate and protect both tangible and intangible Aboriginal cultural heritage through a broader landscape approach…Strategic planning for Aboriginal cultural heritage also involves a range of different stakeholders including State Government agencies, local government, developers, landowners and community groups."* (VPA 2021 p iv)
>
> Key principles to consider include:
> *"F 11.2 Aboriginal cultural heritage should be protected and managed in accordance with the Aboriginal Heritage Act 2006."* (VPA 2021 p75)

"F 11.3 Aboriginal cultural and post-contact heritage values and features (including buildings, structure, trees, gardens, historical archaeology sites and relics) should be considered and incorporated into the design of the public realm or otherwise protected or celebrated, where appropriate." (VPA 2021 p76)

A Vision with purpose and place

"*Building on the context and conditions of the area, a vision gives purpose to a PSP and a unique identity to the place that the PSP addresses. The vision and its supporting objectives establish a mission statement for the PSP, based on the opportunities, constraints and aspirations for the precinct*." (VPA 2021 p35)

The public realm and open space network

"*The public realm and open space network are crucial to creating the identity of a neighbourhood, and can have a significant impact on liveability, social cohesiveness, sense of place, the community's health and wellbeing, and the urban heat island effect.*

To plan for best practice outcomes for open space, public realm and sustainability, planning for new communities should ensure:

- *appropriate provision of passive and active open space to meet community needs*
- *diversity in form, function and character of the streetscapes, local parks, and sports and recreation facilities, including through enhancing the role that encumbered or restricted open space plays in the network*
- *a green public realm with increased vegetation and canopy tree cover to contribute to a distinct sense of place, urban cooling, and an enhanced sense of wellbeing*
- *waterways provide valuable open space corridors for walking and cycling paths, cooling and greening, rest and recreation*
- *the preservation and enhancement of biodiversity features, such as natural wetlands, waterway corridors and their parklands, which can help regulate our climate, protect against hazards, provide habitat."* (VPA 2021 p69)

Climate resilient communities

"Early assessment of climate risk is important and can be undertaken as part of the background technical work for Precinct Structure Plan preparation. A Climate Resilience Statement can articulate performance against key measures set out by the Guidelines, along with detailing further interventions proposed to address risk in the context of the precinct's unique urban setting, future urban outcomes, demographics and natural features. Key interventions that support climate resilience for the precinct, ranging from those that are implemented via the future urban structure and those that could be delivered as part of the subsequent development process, can be articulated in the Climate Resilience Statement to support implementation by the relevant councils, delivery authorities, property developers and builders…

The Guidelines provide a series of principles and targets that will further embed Climate Resilience measures into a Precinct Structure Plan, including the UN Sustainable Development Goals. Precinct Structure Plans will improve Climate Resilience of new communities by seeking outcomes that achieve nominated targets in the following focus areas…

- *providing street layouts and road cross sections that maximise active*

transport, walkability and increase connectivity to key destinations
- *maximising canopy tree planting on public land in streets, local parks and public places through the PSP to support amenity objectives and improve resilience during extreme heat events with shading and cooling*
- *ensuring best practice integrated water management and water sensitive urban design outcomes are built into the planning and design of land uses and infrastructure mitigating the risk of natural hazards, incorporating consideration climate change. In particular manage bushfire hazards through appropriate setbacks, vegetation breaks, use of water infrastructure and setting appropriate residential design and densities.*
- *mitigating and adapting to flood risks will also be addressed through siting, design and infrastructure responses supporting the protection and integration of local habitat, biodiversity, natural systems and ecological communities."* (VPA 2021 p71)

Key principles to consider include:

"F 11. Green streets and spaces
Treatment of the public realm (including public infrastructure) that creates a safe, comfortable, high amenity and resilient environment." (VPA 2021 p75)
"F 11.1 Design of the public realm, public infrastructure amenity and open space should:
- *support climate change adaptation and integrated water management opportunities (for example, greening and tree canopy for cooling and shade and to manage urban heat island effect, integrated use of water resources, renewable energy infrastructure, etc.)*
- *be responsive to the land use context and interfaces (e.g. types of uses, intensity of uses, etc.)*
- *identify opportunities for alternative street engineering design to achieve high amenity outcomes*
- *be sensitive and responsive to interfaces with valuable rural landscapes, waterways and green wedges*
- *be designed to encourage passive surveillance by adjoining land uses and activity*
- *be responsive to the different needs of the forecast future community*
- *consider the movement and place function of roads and streets*
- *identify opportunities to incorporate productive vegetation, community gardens or urban agriculture where possible*
- *identify opportunities to incorporate existing healthy and safe canopy trees where possible."* (VPA 2021 p75)

"F 11.3 Aboriginal cultural and post-contact heritage values and features (including buildings, structure, trees, gardens, historical archaeology sites and relics) should be considered and incorporated into the design of the public realm or otherwise protected or celebrated, where appropriate." (VPA 2021 p76)

"F 12. Environmental and biodiversity value
Protected and enhanced areas of significant environmental and biodiversity value, such as native vegetation, waterway corridors, natural wetlands and grasslands." (VPA 2021 p79)

2.4 Other relevant strategies and studies

Other studies which were reviewed for this investigation include:

- Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan (DELWP, 2018)
- Western Rail Plan (Victorian Government, 2018)
- South West Victoria Landscape Assessment Study - Regional Overview Report: 2013
- West Growth Corridor Plan (Growth Area Authority, 2012)

2.5 City of Greater Geelong Planning Policy

Of relevance to the planning for the GAEP areas are the following clauses of the City of Greater Geelong Planning Scheme:

- 12.03 Water bodies and wetlands
- 12.03-1S River and riparian corridors, waterways, lakes, wetlands and billabongs
- 12.03-1L River corridors, waterways, lakes and wetlands
- 12.05-1S Significant environments and landscapes
- 12.05-2S Landscapes
- 15.01-1S Urban design
- 15.01-6S Design for rural areas

These policies seek to protect and enhance the municipality's landscape values including important waterways, corridors and significant landscapes. They promote good urban design practices and rural design practices to create urban and rural environments that contribute to a sense of place and cultural identity for residents and visitors.

2.6 Zones

The key zones in and around study area and their implications for this study are:

Special Use Zones

SUZ1 in the Greater Geelong Planning Scheme relates to Environmental Wetlands, Salt Production and Land Based Aquaculture Activities, and applies to the former Cheetham Saltworks site west of Avalon Airport.

SUZ11 in the Greater Geelong Planning Scheme relates to the Avalon Airport precinct and contains the following specific purposes:

- To provide for an operational airport and associated activities.
- To provide for a range of employment generating land uses which do not adversely interfere with the operation of the airport.
- To provide for use and development that facilitates the vision and development objectives contained in any approved Master Plan for the airport.
- To provide for a range of commercial, industrial and retail facilities which add to the diversity of economic generating activities.
- To ensure the use and development of the site are compatible with existing uses in the vicinity.
- To ensure that land uses have consideration of environmental attributes of the area.

Farming Zone

The FZ in and around the study area applies to land north of the Princes Freeway extending from Lara through to Little River, as well as land south of the Princes Freeway to the west of Avalon Airport. The purpose of the FZ is to prioritise and protect agricultural uses, but also allow complementary activities such as tourism. Minimum lot sizes apply to subdivision and development within FZ land.

PCRZ Zone

The Public Conservation & Resource Zone (PCRZ) applies to land south-west of the WTP along the coastline including the Spit Wildfire Reserve. The PCRZ provides for the protection of environmentally sensitive landscapes while also allowing for some nature-based recreation activities or accommodation.

PUZ Zone

The Public Use Zone (PUZ) recognises public land use for community services and facilities. It applies to publicly owned land and includes a variety of uses as outlined in the relevant Schedule.

PUZ1 applies to land containing services and utilities. Within the Avalon Corridor, this includes the WTP, which extends across Geelong and Wyndham.

Rural Living Zone

Rural Living Zone (RLZ) land adjacent to the study area is located on the edge of Lara, on the west side of Avalon Road. The RLZ is a residential zone that provides for small scale hobby farming and dwellings.

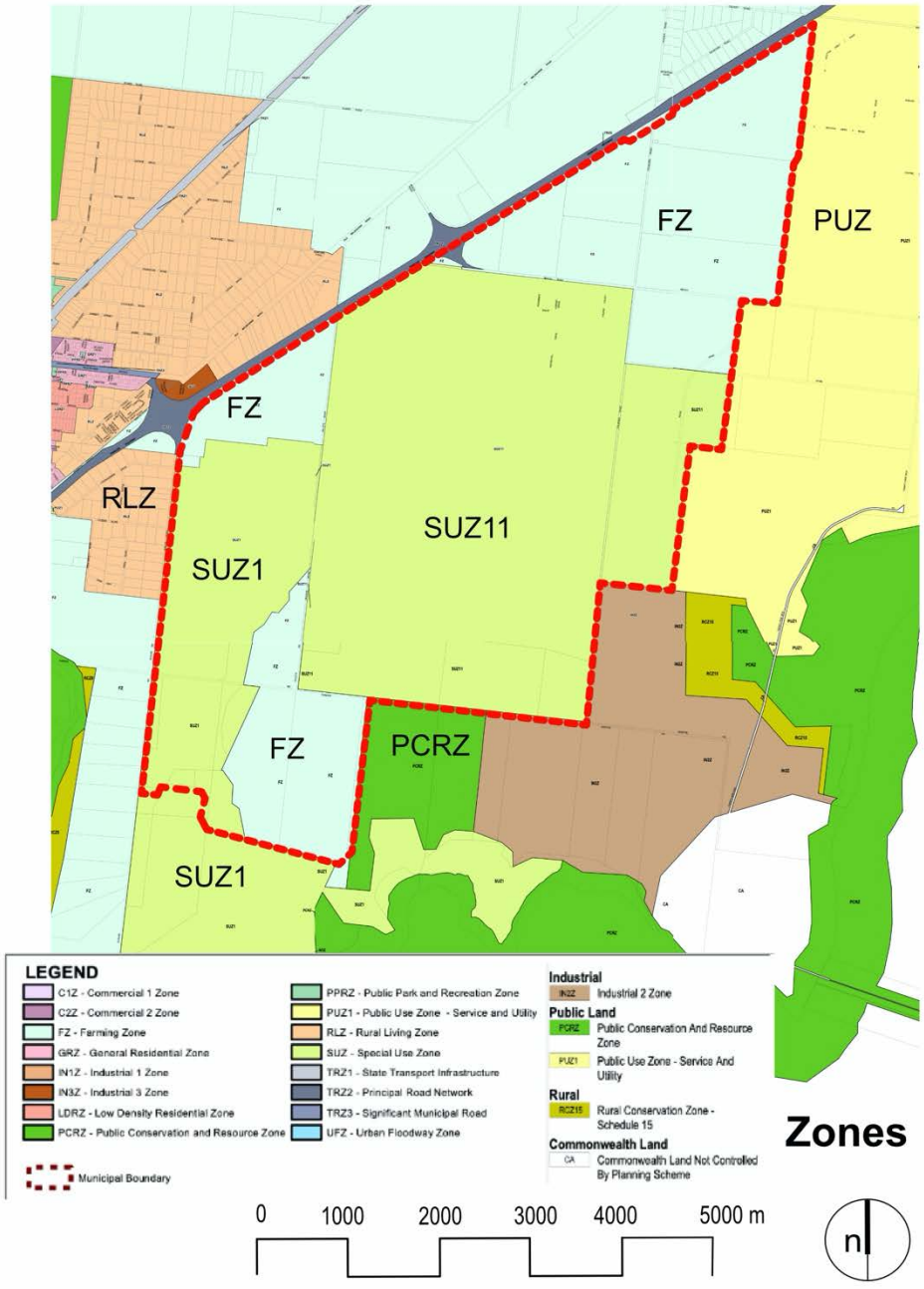

Figure 2 - Zones
(Source: Vic Map)

2.7 Overlays

There are several Overlays which impact on land uses in the study area including:

ESO Environmental Significance Overlay

The Environmental Significance Overlay (ESO) serves to ensure that development "is compatible with identified environmental values." Land within GAEP is affected by ESO2 and ESO4. Each Schedule sets out the permit triggers and environmental objectives to be achieved on affected sites.

ESO2 in Greater Geelong relates to "High Value Wetlands and Associated Habitat Protection" and applies broadly along the coastal environs and the WTP land within the GAEP. ESO4 in Greater Geelong and ESO5 in Wyndham City Council were introduced to protect areas of Natural Temperate Grassland of the Victorian Volcanic Plain – a critically

endangered ecological community and matter of national environmental significance. The presence of ESO4 represents a significant commitment and obligation of the Victorian Government to secure grassland protection outcomes.

LSIO Land Subject to Inundation Overlay

The Land Subject to Inundation Overlay (LSIO) is a floodway overlay aimed to ensure the protection of water quality and reduce the impact of development. It also aims to ensure that the free passage and flow of floodwaters is not restricted.

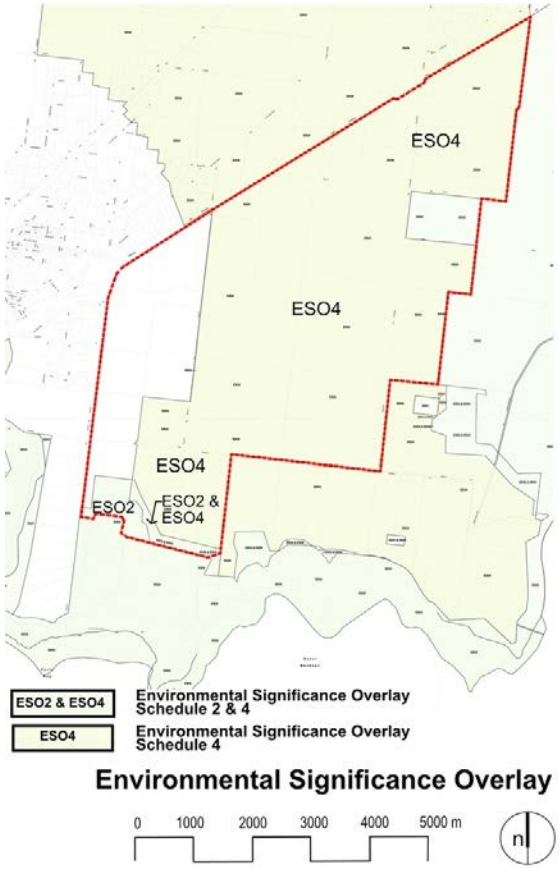

Figure 3 - Environmental Significance Overlay
(Source: Vic Map)

Figure 4 - Land Subject to Inundation Overlay
(Source: Vic Map)

PAO Public Acquisition Overlay

The Public Acquisition Overlay (PAO) affects land that has been designated for a future project and will need to be acquired. PAO14 applies within CoGG and relates to land put aside for transport infrastructure associated with the alignment of the potential Avalon Airport Rail Link.

VPO Vegetation Protection Overlay

The Vegetation Protection Overlay (VPO) affects land with identified significant vegetation and aims to prevent further loss. VPO1 is located within CoGG and relates to “Significant Roadsides and Linear Reserves” including Gillets Road on the western boundary of Avalon Airport. Tree Logic note that:

"Indigenous (remnant) vegetation was rare within the study area and was identified in only three small areas: in Gillets Road approximately 1.2km north of Dandos Road (14 trees), a solitary remnant tree and a patch of approximately 50 trees at the western end of the boundary between 35 & 175 Pousties Road, and a trio of trees in the household yard of 40-80 Pousties Road. Eucalyptus camaldulensis was the only indigenous species identified in the study area (based on local EVCs)."
(Tree Logic 2023 p 6)

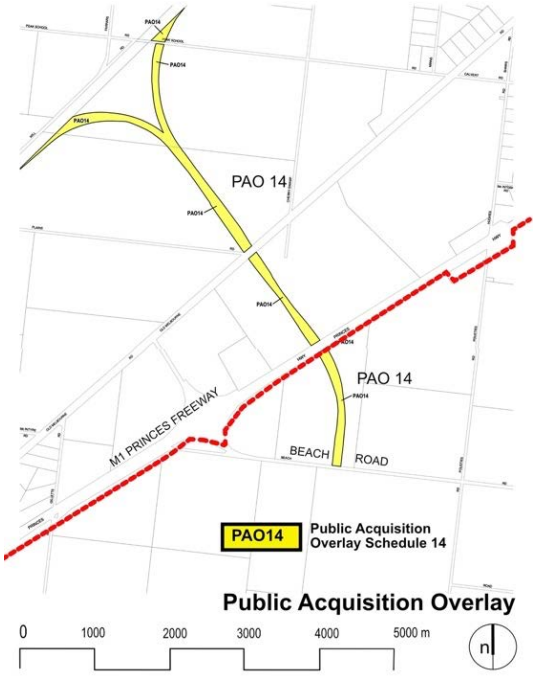

Figure 5 - Public Acquisition Overlay
(Source: Vic Map)

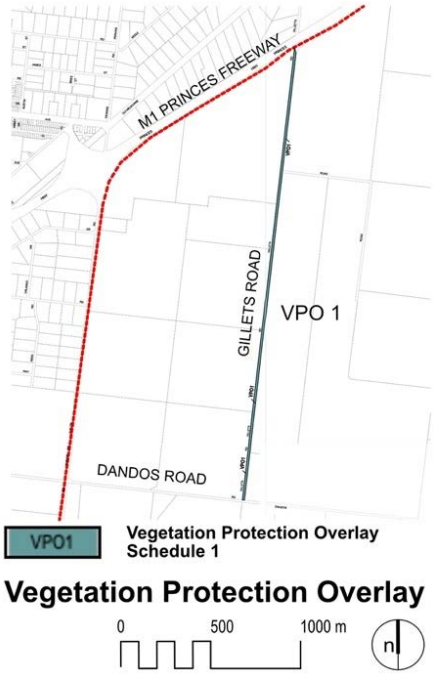

Figure 6 - Vegetation Protection Overlay
(Source: Vic Map)

2.8 Summary of Strategic Context

Following a review of the ACS and supporting strategic land use studies and planning policies, the key strategic considerations for the GAEP area are:

- Management of ongoing airport activities, and facilitation of major future expansion to a full-scale international airport.
- Consideration of the future land uses and activity in and around Avalon Airport for compatible land uses such as commercial, industrial, agricultural and tourism.
- Importance of environmental protection for key flora, fauna, ecological communities and habitats such as the Western Grasslands Reserve and Ramsar site.
- Land use buffers - for sites such as the WTP and quarries.
- Wurdi Youang / the You Yangs - as a prominent landscape feature and visual backdrop, as well as a site of cultural significance. Limited protection for the foothills of the You Yangs is currently offered by the Significant Landscape Overlay (SLO1).
- EIIAs, WAs and SERAs - a number of extractive industry values and operating quarries are present in the Avalon Corridor. These are protected through different planning and land use controls.
- Flood risks - which are associated with the low-lying coastal wetland interface of the Avalon Corridor. Flood risk will increase because of climate change, sea level rise and coastal erosion.

- Embedding the PSP 2.0 process and principles including a place-based outcomes approach with:
    - Traditional Owner and Aboriginal community engagement
    - Development of a Vision with purpose and place
    - Focus on a high-quality public realm and open space
    - Embedding climate resilience in the Precinct Structure Plan
- Embedding the site's history pre and post contact:
    - Recognition of traditional owners
    - Acknowledgement of former uses (saltworks etc)
- Recognition of the Ramsar wetlands.

3. Physical Site Context

3.1 Site Analysis Desktop Study

The desktop study included a review of relevant published documents in relation to landscape conditions and visual amenity at a state, regional and local level for the Study Area. These elements included:

I. Existing Landscape Conditions (identified both in the field and desktop)
- Land use
- Topography landform and slope
- Cultural significance
- Hydrology - Water / Drainage
- Geology and soils
- Vegetation - trees
- Ecological assessment
- Vertical elements
- Significant built form

II. Existing Visual Conditions (identified both in the field and desktop, with photographic inventory)
- Views to, from and within the PSP area
- Views of significant landscape elements
- Views from sensitive visual receptors
- Views identified in the ACS by the Wadawurrung identifying the key view lines from the You Yangs to the sea

III. Existing Interface Conditions (identified both in the field and desktop, with photographic inventory
- Sensitive interface conditions

The following data sets were reviewed:

- Aerial Photographs
- Contours - 1 metre intervals
- Slope analysis
- Significant flora and fauna
- Areas of native vegetation
- Trees - layers from Arboricultural report
- Road Networks
- Water Courses

Planning Controls
- Planning zones
- Planning overlays
- Heritage Areas

- Local Government Area (LGA) boundaries

3.2 Location/Description of Study Area

The study area which includes the GAEP area is defined in the Avalon Corridor Strategy (ACS). It includes three major precincts:

- Precinct 1) Avalon Airport
- Precinct 2) Western Precinct
- Precinct 3) Northern Precinct

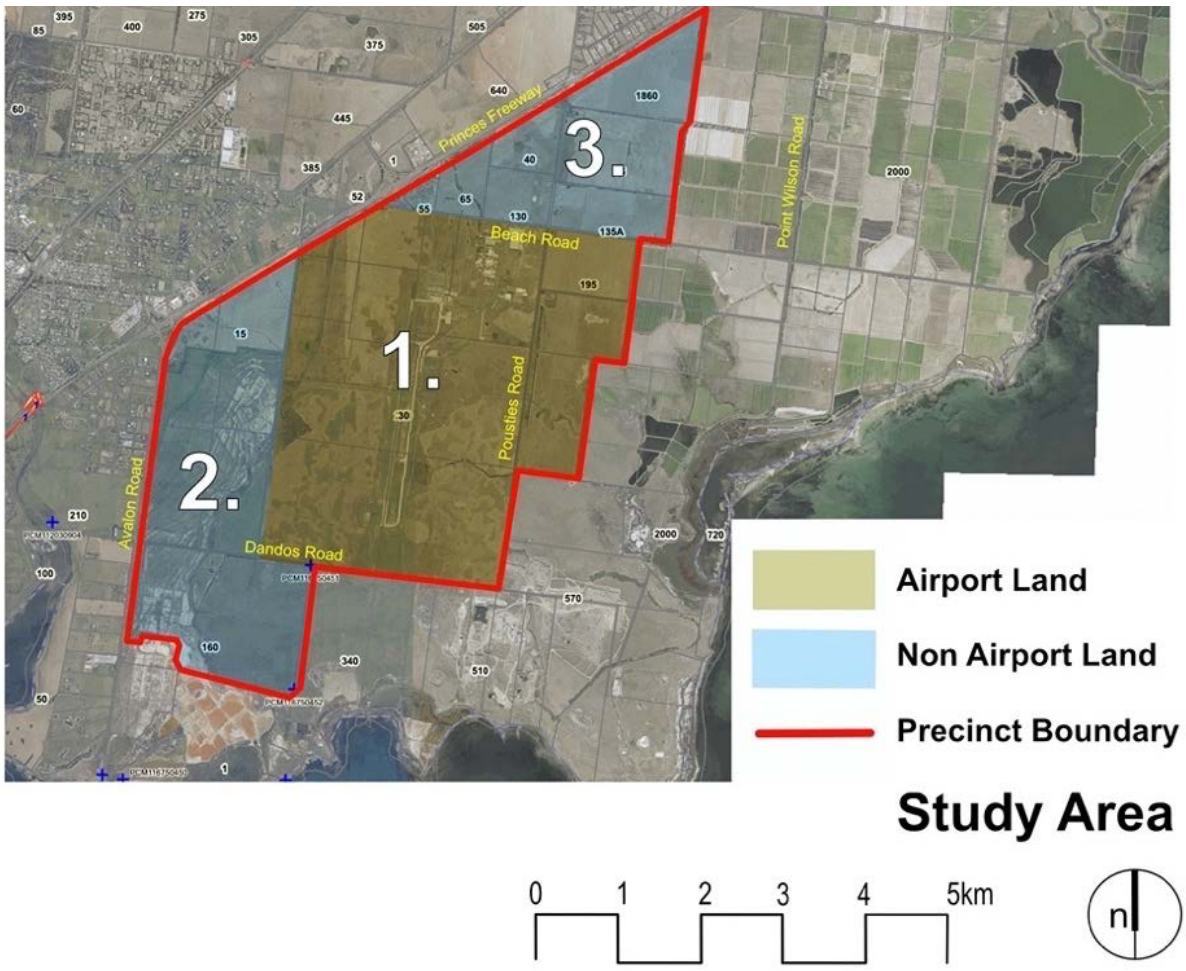

Figure 7 - Study Area
(Source: Vic Map)

3.2.1 Precinct 1 - Avalon Airport

While the Avalon Airport precinct is not included in this analysis, it has a strong impact on the landscape character of the adjoining precincts. This is due to the large land holdings required for airport operations, buffers and the airport facilities and complementary adjoining uses within the airport surrounds including a growing logistics and manufacturing precinct which fronts Beach Road. It is nearly 1900 hectares in size.

3.2.2 Precinct 2 – (Western Precinct) land bounded by Avalon Beach Road to the west and Airport to east, M1 Princes Freeway to north and former saltworks to south

Precinct 2 includes land fronting the rural residential area to the west of Avalon Road, the former Cheetham Salt Works south of Dandos Road, to the east by Avalon Airport and to the

north by the M1 Princes Freeway. It is nearly 930 hectares in size.

3.2.3 Precinct 3 - (Northern Precinct) l

land bounded north by the M1 Princes Freeway to the north and northwest south by Avalon Airport and Beach Road and to the east by the Western Treatment Plant.

Precinct 3 includes land fronting the M1 Princes Freeway from west of Point Wilson Road to Beach Road. The precinct is bounded to the south by Avalon Airport and Beach Road and to the east by the Western Treatment Plant. It is nearly 620 hectares in size.

3.3 Regional Context

The site sits on the western edge of the Avalon Corridor, south east of the culturally significant and visually dominant Wurdi Youang / the You Yangs. The Western Treatment Plant forms a significant open space (non-urban) break between Werribee and Little River south of the M1 Princes Freeway. The other significant landscape feature is the former saltworks along Port Phillip and Corio Bay. The township of Lara is located immediately to the north and west and Little River is to the northeast.

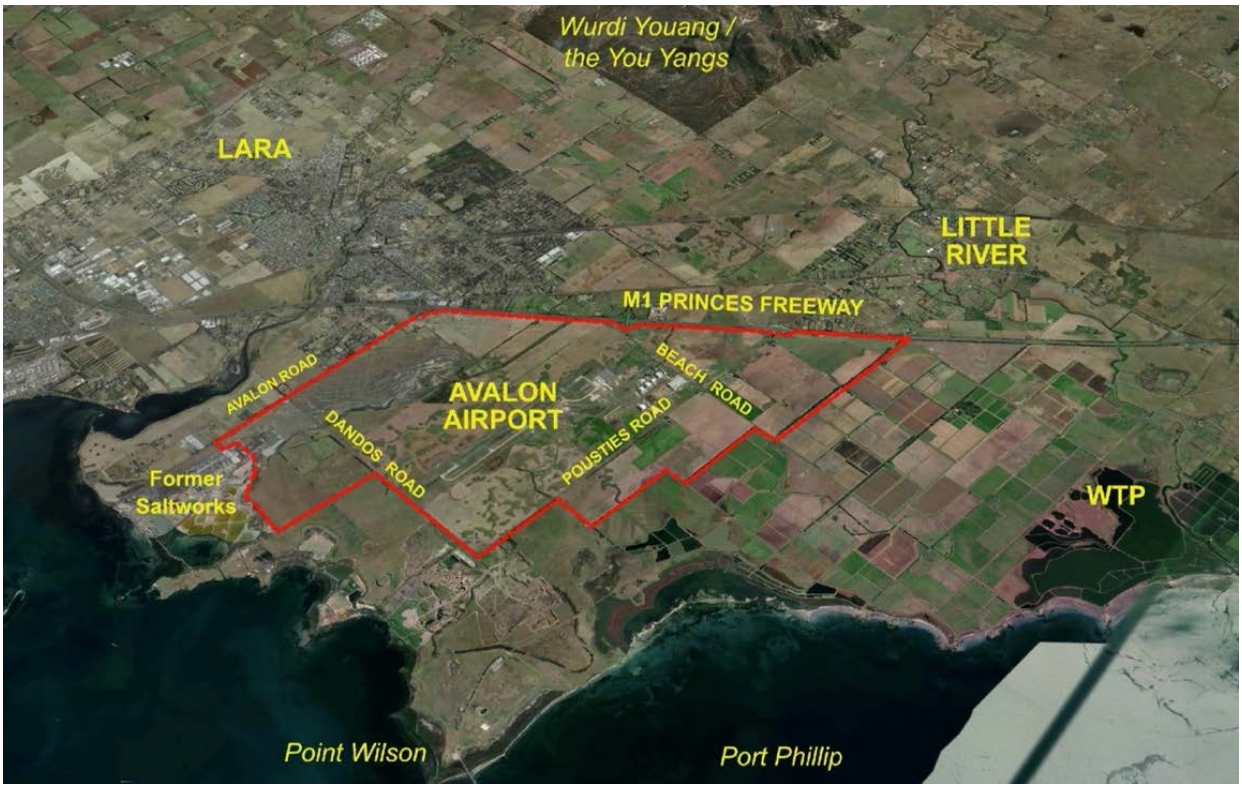

Figure 8 - Regional Context Oblique Aerial
(Source: Apple Maps 2023)

Figure 9 - Regional Context Map
(Map adapted from Emergency Management Victoria 2023)

3.4 Ramsar Wetlands in the study area

The Werribee /Avalon block is one of the six component areas of the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Sites. This site is significant for its diverse ecosystem and is one of the most important sites in Victoria for migratory shorebirds.

According to the Department of Environment, Land, Water and Planning:

> *"Ramsar sites are wetlands that are recognised as having international importance under the 'Ramsar Convention on Wetlands'…listing a wetland as a Ramsar site carries with it certain obligations, including managing the site to maintain its 'ecological character' and to have procedures in place to detect if any threats are likely to, or have altered 'ecological character."* DELWP (2018).

Avalon Airport, which is within the study area is included in the Ramsar site, but according to biodiversity consultants Ecosure:

> *"There is some debate as to whether the inclusion of Avalon Airport as a Ramsar site is merited. This is primarily due to the generally low habitat quality present on the airport. This is reflected in the exclusion of Avalon Airport from the Murtcaim Wildlife Reserve, the Spit Nature Reserve and the Australian Heritage Commission National Estate Point Wilson/Avalon Coastal Reserve Despite this assertion, [Avalon Airport Australia's] restoration efforts at Lodges Wetland ensure that habitat has been improved."* Ecosure (2019)

The Existing Ecological Conditions for Greater Avalon Employment Precinct, Avalon, Victoria, Ecology and Heritage Partners Pty Ltd (2024) report, (Draft EEC 2024) notes further investigations are required in order to determine potential impacts of the development of the GAEP on the Ramsar site.

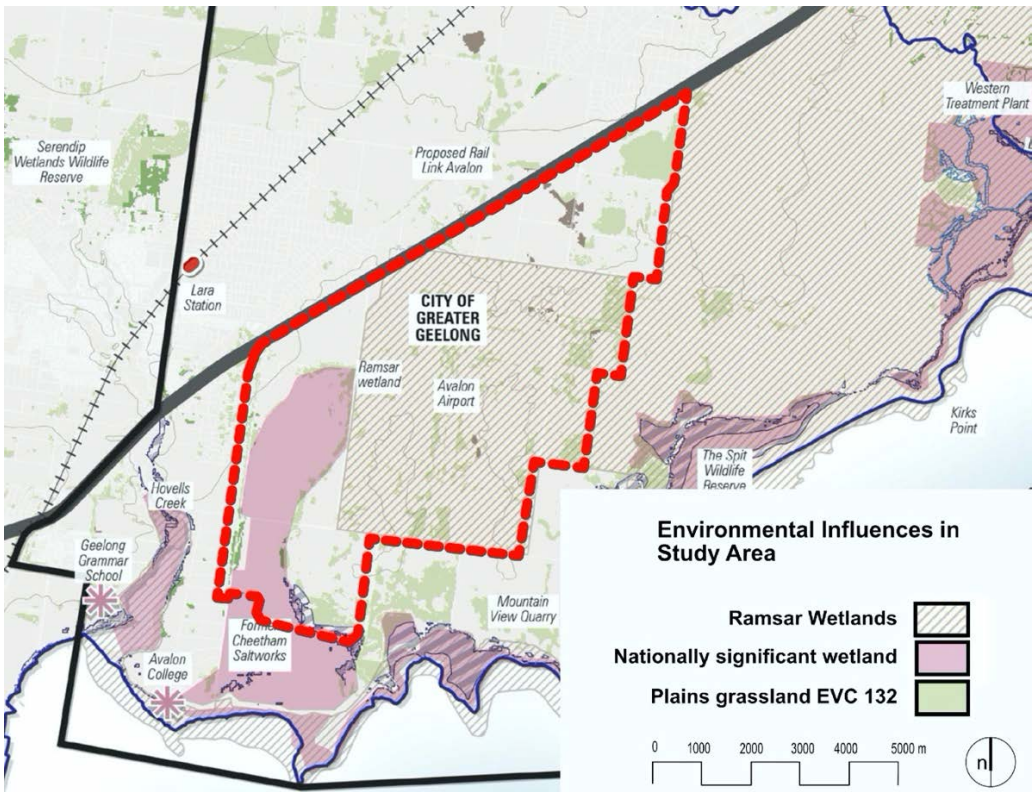

Figure 10 - Environmental Influences in the Study Area
(Source: adapted from Figure 15 ACS 2022)

4. Existing landscape conditions

The following section provides an overview of the existing physical conditions within the study area including land use, topography, landform and slope, cultural significance, hydrology - water and drainage, geology and soils, vegetation, vertical elements, significant built form and ecological conditions.

4.1 Land Use

Precinct 1 - Avalon Airport (which is outside the study area, but which has a major influence on the study area) is dominated by Avalon Airport facilities and buffer areas. The south side of Beach Road in this precinct is dominated by an emerging industrial/logistics precinct adjacent to the airport itself. This includes:

- The new Hanwha Armoured Vehicle Centre of Excellence (H-ACE), Cotton On Distribution Centre, Petstock Distribution Centre and Australia Post Parcel Facility Centre.
- The airport features the passenger terminal, large hangar buildings and the control tower visible from adjoining areas.
- Large areas of hardstand associated with runways, taxi areas and storage and car parks.
- Large open fields which feature cropped and uncropped areas.

Precinct 2 - Western Precinct is bounded to the west by developed and/or developing rural residential areas of the Lara township. Land immediately south of the M1 Princes Freeway is currently cropped. To the south of this is a large area dominated by former salt works which is generally vacant and used for grazing north of Dandos Road. The land to the south of Dandos Road contains farmland with limited cropping and grazing and former salt works and marshes. It is predominantly comprised of open fields/former salt works with some cropping in the northernmost properties fronting the M1 Princes Freeway and an area in the eastern part of the property south of Dandos Road. A mixed species buffer planting screens much of the site from Avalon Road and along much of the M1 Princes Freeway boundary and parts of the eastern boundary.

Precinct 3 - Northern Precinct is used for cropping and grazing. The Geelong Motorsport Complex is located at the western end of the precinct adjacent to the Beach Road off ramp from the M1 Princes Freeway. The Western Treatment Plant (WTP) is located to the east. A mixed species buffer planting screens much of the site along much of the M1 Princes Freeway boundary. There are hedgerows on property edges and within some sites. It is dominated by large open fields which feature cropped and uncropped areas and cattle and sheep grazing. The WTP adjoining this precinct also features cropped and uncropped areas and cattle and sheep grazing.

4.2 Topography, landform and slope

The study area is predominately flat with a slope of 0 to 5% across most of the precincts. There are occasional stony rises and the significantly altered landforms of the former salt works create many salt pans and dams bounded by earth bund walls.

This presents both an opportunity for urban development and a constraint as noted previously in Overlays. The Land Subject to Inundation and Flooding Overlay, when combined with the very low topographic relief, presents issues for overland and fluvial flooding along with potential sea level rises which are a constraint to development. Those areas not subject to inundation are less constrained by slope issues.

The post-development scenario should consider that the floodplains may be potentially raised for urban development.

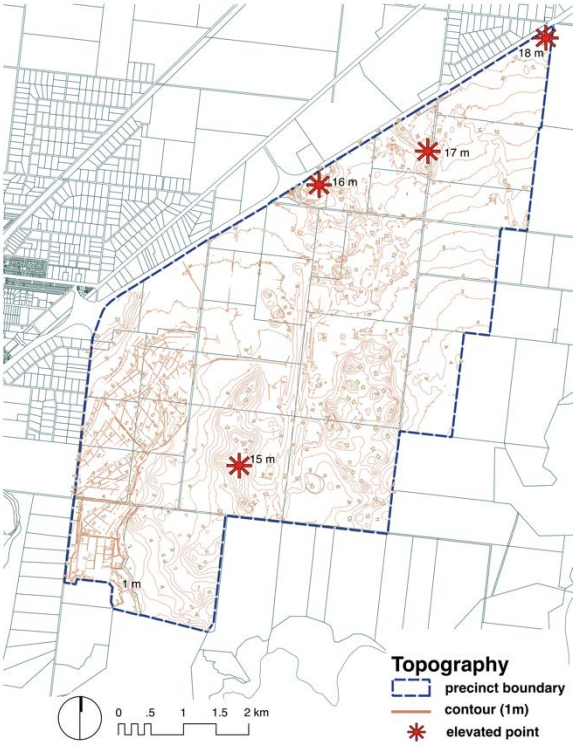

Figure 11 - Topography

(Source: VPA)

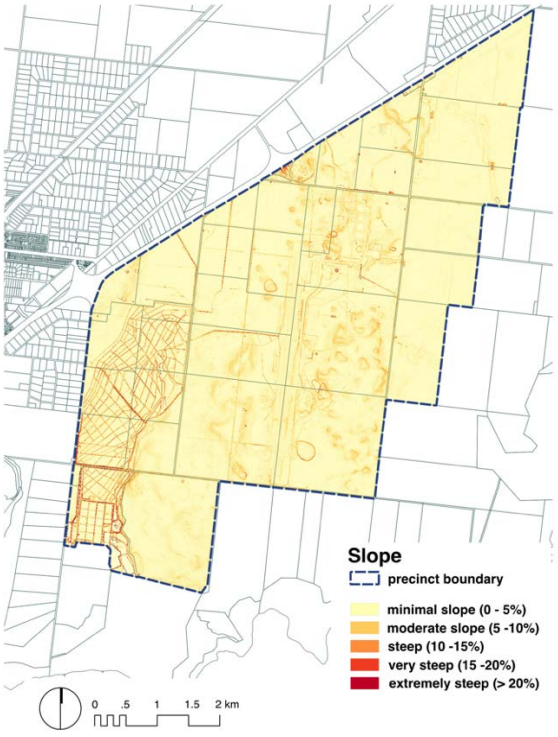

Figure 12 - Slopes

(Source: VPA)

4.3 Cultural significance

The study area and surrounds contain several culturally significant landscape elements of importance to the traditional owners and post contact. Many of these areas will require detailed surveys and consultation with traditional owners to ensure that their significance is protected and enhanced in future developments. This will form an important component in the development of the PSP. (Refer **Appendix A - Cultural Significance**)

As illustrated on Figure 12 [in the ACS] large sections of the Avalon Corridor are nominated as being 'areas of cultural heritage sensitivity.' Such areas are defined in the Aboriginal Heritage Regulations (2018) (the Regulations) and relate to landforms and soil types where places of Aboriginal heritage significance are more likely to be located. This generally includes land within 200 metres of named waterways and land within 50 metres of registered Aboriginal cultural heritage sites.

"The function of the designation of 'areas of cultural heritage sensitivity' is to specifically identify when a Cultural Heritage Management Plan (CHMP) must be prepared under the Aboriginal Heritage Act (2006)". (ACS 2022 p79)
"*Secondary natural resource harvest areas include the former Cheetham Saltworks adjoining Avalon Airport, which are included on the VHI and may warrant further investigation prior to any redevelopment."* (ACS 2022 p79)
The area of cultural heritage sensitivity in study area is shown below:

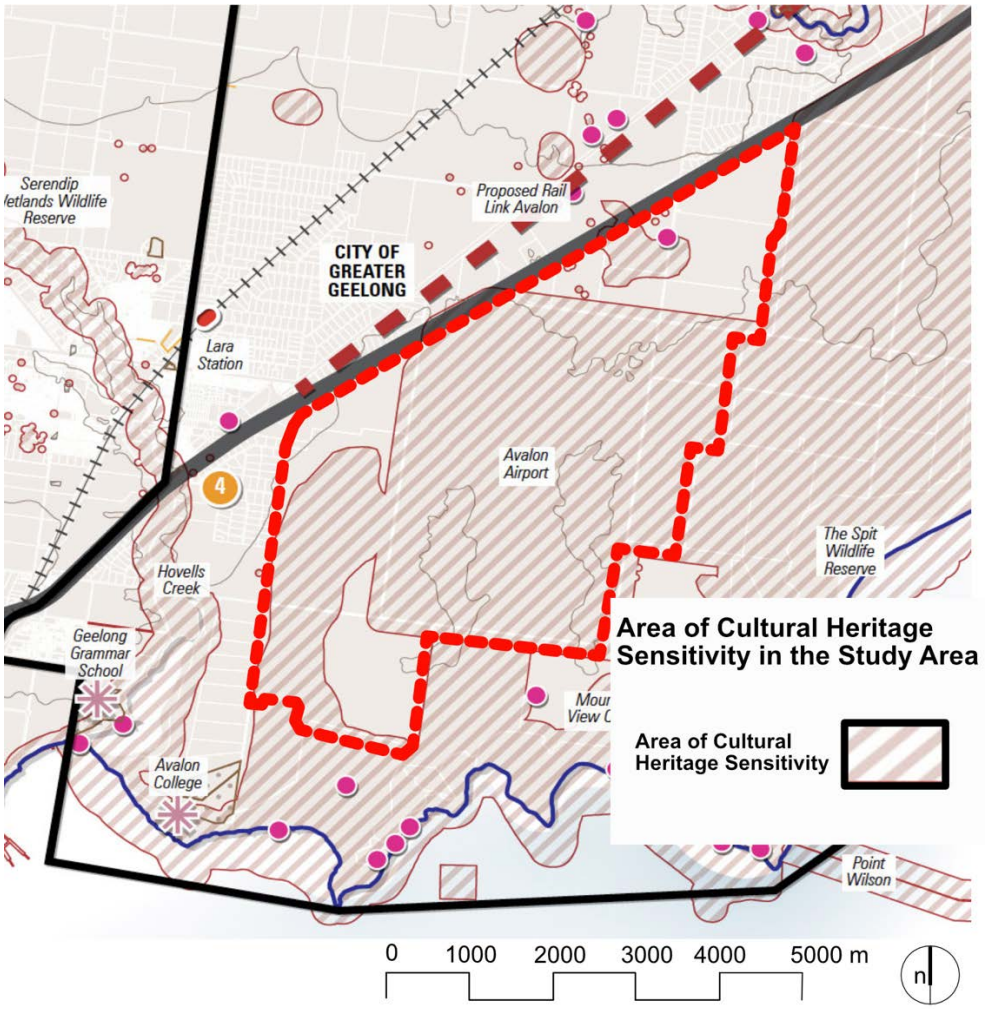

Figure 13 - Area of Cultural Heritage Sensitivity in the Study Area
(Source adapted from ACS figure 12 2021)

4.4 Hydrology - Water / Drainage

There are numerous former salt water works pans, dams and farm dams throughout the precinct. The study area also features large areas subject to inundation in major storm events. Parts of the area are potentially vulnerable to sea level rise in future. The land in the and in the vicinity of the GAEP area slopes with overland flow paths flowing from north to south draining to Port Phillip Bay.

The Land Capability Assessment by Jacobs (2023) identifies the flooding and future sea level rise implications for the study area:

> *"Based on the regional hydrology information…the GAEP area is characterised as being at risk of inundation. The risk of inundation arises from a variety of flooding mechanisms including riverine flooding, flooding from local stormwater, storm surge, and climate change sea level rise impacts.*
> *The site is mostly rural with overland flow paths governing the flow regime. However, detailed drainage information for the area was not available and new drainage asset information may impact this conclusion. Future development may impact on the flood storage, flow path, land imperviousness, access safety and hazard, freeboard of the buildings, and drainage strategy*." (Jacobs 2023 page 62)

It is noted that pre and post-development flood modelling is being undertaken for the PSP but is not yet available at the time of the issue of this report. The post-development scenario should consider that the floodplains are potentially raised for urban developments.

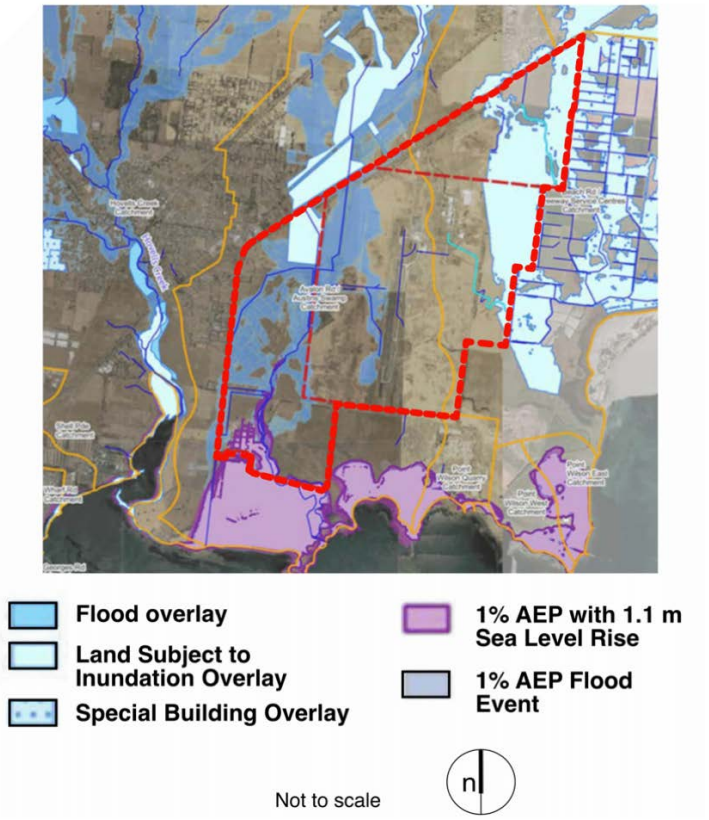

Figure 14 - Flooding and Sea Level Rise Potential in the Study Area
(Source: adapted from Jacobs p20, 2023)

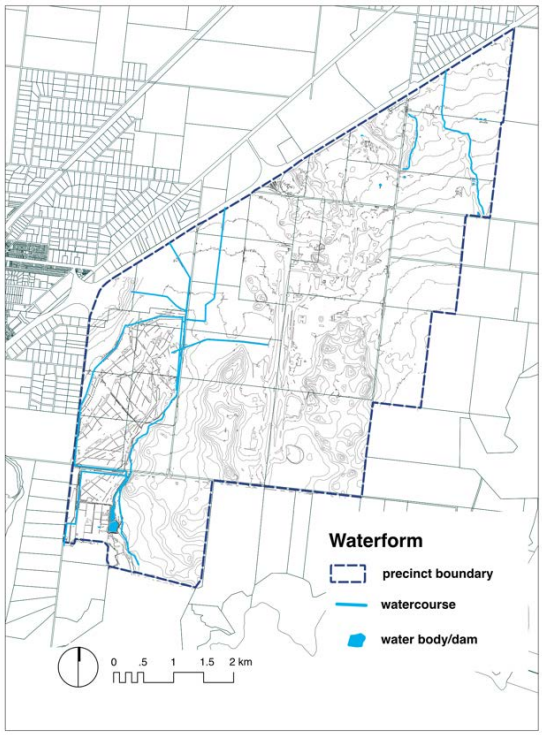

Figure 15 - Waterform
(Source: VPA and Vic Map

4.5 Geology and soils

As noted in the ACS: "The soil profile of the Avalon Corridor aligns with the Newer Volcanics Province, which extends from the west of Melbourne to Mount Gambier. The underlying bedrock is generally characterised by basalts and lavas, with later sedimentary units around waterways and the coastline." (ACS p32) The study area features mostly disturbed and cleared paddocks which feature occasional stony rises which expose the parent basalt material. The You Yangs are a dominant granitic landform which form a significant visual and cultural backdrop to the study area:

> *"The You Yangs are a granitic outcrop that is part of the southern reaches of the Great Dividing Range. The formation is a series of ridges which rise 364m from the flat volcanic plain, creating a distinctive silhouette that dominates the horizon. The landform can be seen clearly from Geelong and sometimes as far away as the Mornington Peninsula across Port Phillip Bay"* (Planisphere 2013 p 225)

4.6 Vegetation - trees

Much of the study area has been cleared for agriculture and the former saltworks. There are

small areas of remnant native vegetation in the study area. Native but non-indigenous species such as Sugar Gums (Eucalyptus cladocalyx) are used as hedge rows throughout the study area. Exotic species such as pine and cypress are also present on the site, often in the form of windbreaks.

Trees have been mapped in significant groups and by individual trees. Groups are generally located along boundaries and adjacent to the PAO overlay within the study area.

The arboricultural ratings used by Tree Logic include:

> *"High: Trees of high quality in good to fair condition. Generally prominent landscape features. Retention of such trees is highly desirable.*
> *Moderate: Trees with a Moderate arboricultural rating are generally suitable for retention and design should attempt to incorporate these trees and provide adequate clearances during development stages where reasonable design intent is not unduly hampered.*
>
> *The following sub-categories relate predominately to age, size and amenity.*
> *A: Moderate to large, maturing tree with pronounced landscape presence.*
> *B: Moderate sized, established tree >50% of attainable age/size. Maturing tree with amenity value but could have identified deficiencies.*
> *C: Small and/or semi-mature tree, established > 5 years in location, without any significant qualities yet, but has potential to grow into a landscape feature; Or a maturing tree with landscape presence but with accumulating deficiencies, trending towards becoming of Low arboricultural value."*
>
> ***In the absence of specific site design plans, it is not appropriate to speculate on which trees are most appropriate for retention beyond the general guide provided by the arboricultural ratings and ULE attributed to each tree feature***. [our highlight] *Retention suitability will be dependent on the proposed landscape setting in which trees are intended to be retained. The following recommendations are provided for consideration in the design process. In terms of arboricultural rating:*
>
> *High and Moderate rated trees are generally most suitable for retention (with Mod-A, Mod-B and Mod-C providing further distinction in terms of tree quality, size and/or amenity value). Sufficient space should be allocated within the design where possible to adequately protect the recommended TPZ and minimise construction encroachment*."
> (Tree Logic 2023 p21)
>
> "*Several groupings of trees of the same species, similar size, age and condition growing in close proximity to one-another existed on the site. The close grown nature of the trees influences the growth habit of each tree and as such the trees are best managed as a group. Fragmentation of the group can expose the individual trees to potential damage from newly exposed forces such as altered wind patterns, sun exposure and soil disturbance."*
> (Tree Logic 2023 p22)

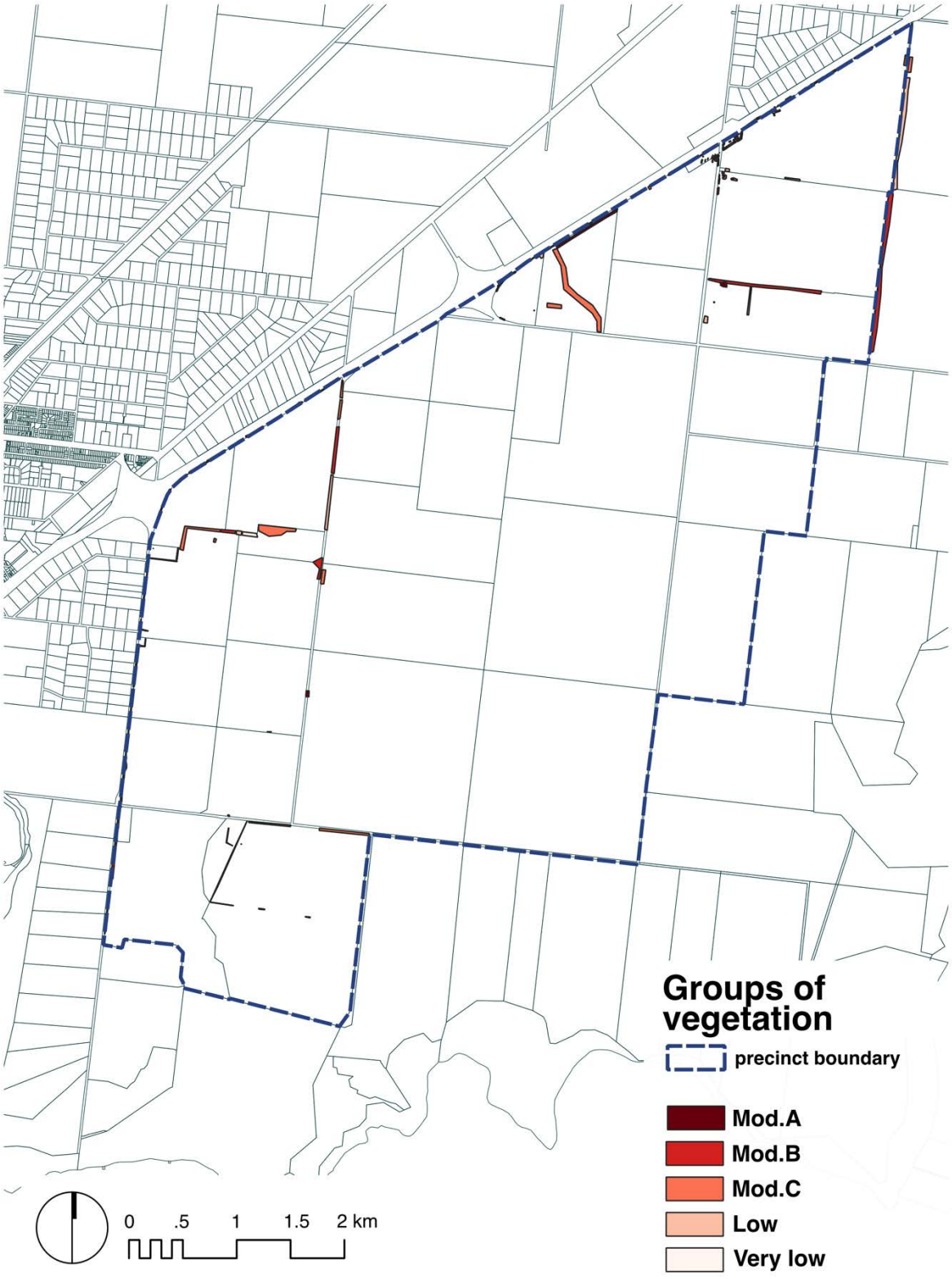

Figure 16 - Groups of Vegetation
(Source: Tree Logic)

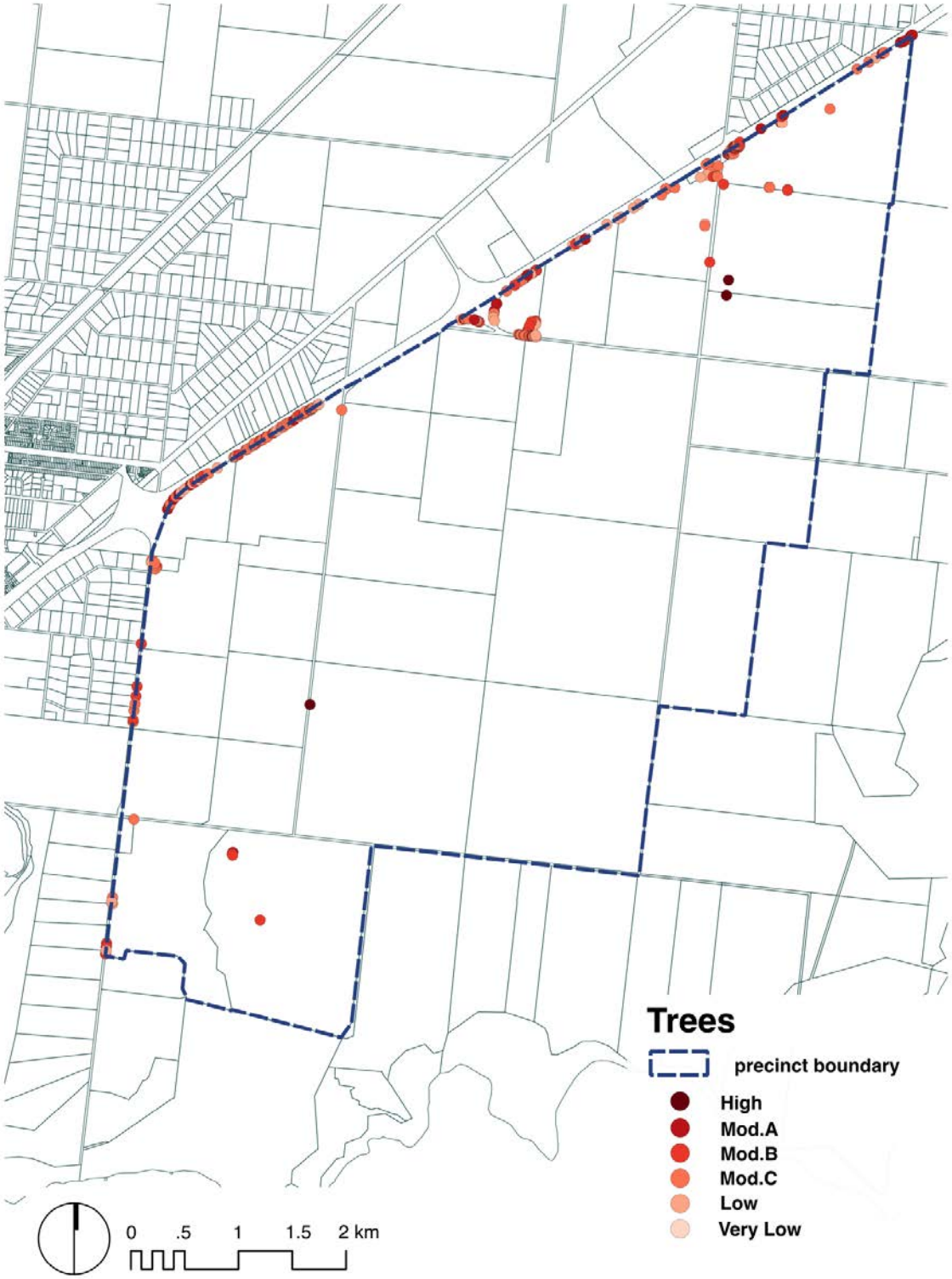

Figure 17 - Trees
(Source: Tree Logic)

4.7 Ecological assessment

The Draft Existing Ecological Conditions for Greater Avalon Employment Precinct, Avalon, Victoria, report by Ecology and Heritage Partners Pty Ltd (2024) (Draft EEC 2024) highlights the species diversity, native vegetation, wetlands, significant ecological communities, significant flora species and significant fauna species of the study area. The implications for this LVIA study are highlighted in the Opportunities and Constraints and Recommendations.

4.8 Vertical elements

There are a limited number of vertical elements in the study area and surrounds including an air traffic control tower, mobile phone towers, sky advertising signs along the M1 Princes Freeway and overhead powerlines along most roadsides.

Mobile phone tower and overhead powerlines on Pousties Road south of M1 Princes Freeway

Avalon Airport Control Tower

Sky Sign on south side of M1 Princes Freeway

4.9 Significant built form

The Avalon Airport precinct includes several major buildings such as the airport hangars and terminal. The large format buildings in the adjoining logistics and manufacturing precinct fronting Beach Road, including the Hanwha Armoured Vehicle Centre of Excellence (H-ACE) and Petstock, Cotton On and Australia Post, are visible from long distances including from the M1 Princes Freeway. The light coloured walls and roofs of the hangars add to their visibility.

Avalon Airport Terminal

Hangars and other airport buildings seen from the north near M1 Princes Freeway

Cotton On at left Petstock in background

Petstock Group

Hanwha Armoured Vehicle Centre of Excellence (H-ACE)

Australia Post

Northwest of the study area are several large industrial facilities which are visible from the M1 Princes Freeway and the northern parts of the study area in Precinct 2 including:

- Ridley Agriproducts
- Riordan Grain Services
- Sycle Avalon waste and resource recovery centre

Ridley Agriproducts

Riordan Grain Services

Sycle Avalon waste and resource recovery centre

To the east of Beach Road overpass on the north side of the M1 Princes Freeway, a large building on the Sycle's Avalon waste and resource recovery centre is visible from the M1 Princes Freeway and parts of Precinct 3.

5. Landscape Character Areas and Visual Quality

Visual quality, as noted in the "Landscape Character Types of Victoria – with frames of reference for scenic quality assessment' by Mike Leonard and Richard Hammond, is linked to the following features:

- *"Degree of uniqueness and naturalness*
- *Diversity in topography*
- *Variety of vegetation types and patterns"*

It should be noted that not all these qualities are applicable to the GAEP study area.
The Landscape Character Areas within the study area identified in the LCA study include:

- Airport
- Former saltworks
- Agricultural Plains

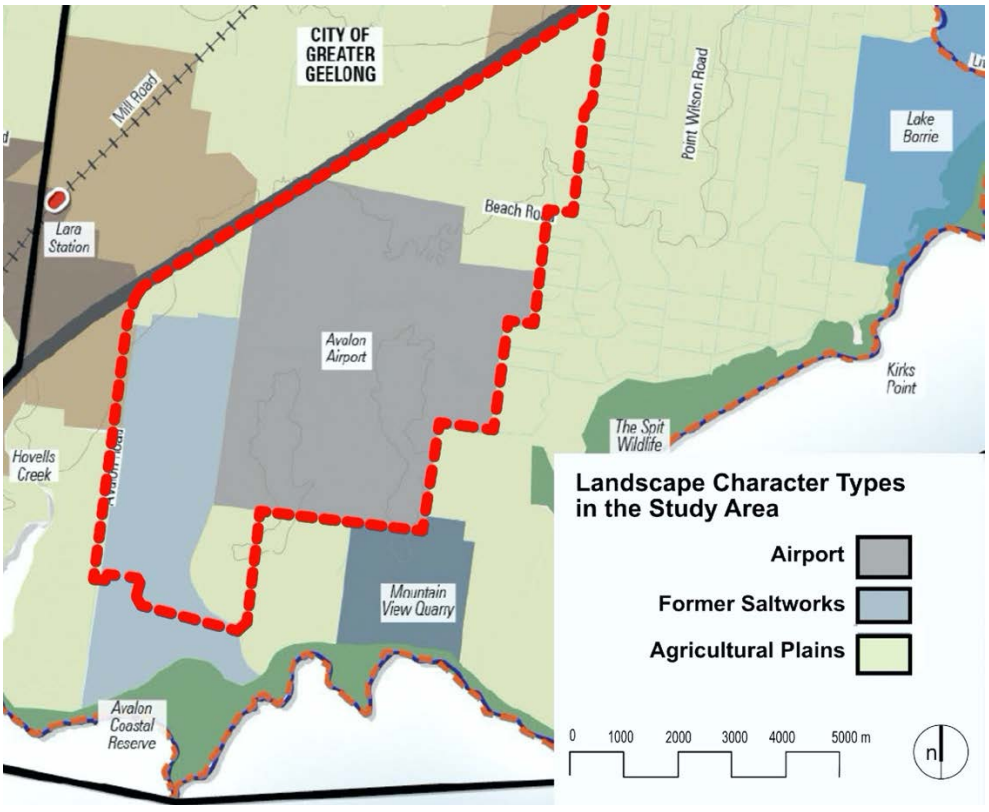

Figure 18 - Landscape Character Areas in the Study Area
(Source: adapted from figure 14 ACS 2022)

The Landscape Character Areas within the study area identified in the LCA study are described as follows:

Agricultural Plains:
"The Agricultural Plains landscape character area refers to the expansive low-lying terrain which encompasses much of the study area, and to a degree defines much of the landscape of the wider region.

- *Topography is consistently flat and low-lying, with a gradual fall towards Port Philip Bay. Topographical variation is limited to the incised river channel of Little River (with steeply sloping sides and a narrow channel) and a gentle rise in land towards the foothills of the You Yangs.*
- *Canopy vegetation in this area is typically sparse. Where present it generally lines property edges or road reserves, with some trees scattered throughout pasture areas, accompanying waterways or appearing in small clumps. It is notionally comprised of native species, with some exotic species typically present as either windbreaks / screens or near property entrances.*
- *Agricultural grassland and crops typically comprise the ground plane of this area and are a distinctive character element in combination with the consistently flat topography. Patches of remnant native grasslands are also present, often in locations protected by rocky outcrops and interspersed amongst ploughed and grazed areas.*
- *Field boundaries are typically post and wire fencing.*
- *Transmission lines are present within the character area but generally of low intrusion on the large scale landscape.*
- *Major transport corridors of the Princes Freeway and Melbourne- Geelong rail line cross the character area from north east to south west.*
- *Small scale dwellings and miscellaneous agricultural structures or facilities are present throughout the area. Their form and density is typically of a limited scale and in keeping with the overarching rural character of the area.*
- *The combination of flat terrain, limited vegetation and open agricultural land use allows for expansive views to distant areas when within this character area. This includes often open views towards the regionally significant highpoint of the You Yangs, as outlined in the Planning Scheme (SLO1), which provide a high level of visual contrast to the plains."*

  (LCA 2021 p 22)

Airport:
"The built character of the Airport is distinctive within the study area, particularly due to the style and scale of built form.

- *Built form comprises airport hangers and sheds, generally constructed from corrugated steel in pale grey colours, which is out of scale with the surrounding rural landscape. While there is no discernible boundary between the airport fields and adjacent agricultural fields, the airport buildings create a significant change in landscape character. Airport infrastructure including the runway, car parks and roadways are not visible from outside the airport.*
- *Topography is flat, as a continuation of the agricultural plains landscape, and vegetation is sparse with canopy trees limited to the entrance area close to Beach Road. Property boundaries to the airport are defined by post and wire fencing, and wire mesh fencing to the main entrance area.*
- *The airport buildings are clearly visible from Flinders Peak, the high point of the You Yangs."* (LCA 2021 p 27)

Former saltworks:
"The character area of Former Salt Works forms a transition between the Agricultural Plains

and the Coastal Fringe. This character area is specific to one location within the study area, the former Cheetham Salt Works.

- *Topography is flat, as a continuation of the agricultural plains landscape, but has been significantly modified for the salt works. The hollows of former salt pans are still clearly visible between areas of scrubby vegetation recolonising the landscape.*
- *There is no canopy vegetation, and all vegetation is limited to low growing scrubby shrubs, grasses and ground covers which are tolerant of highly saline conditions. It is an ephemeral landscape which is partially subject to inundation from Port Philip Bay. These factors create a wild and unmaintained character, while surrounded by a highly controlled rural landscape.*
- *The flat topography and minimal vegetation provides open and expansive views, both inland to the You Yangs, and to the coast of Port Philip Bay and Bellarine Peninsula beyond."* (LCA 2021 p 28)

5.1 Observations made in field

Our field observations confirm the general descriptions of the Landscape Character Units within the study area identified in the LCA study. The scenic quality classification and Landscape Character Values used in this study are based on the work of Leonard and Hammond as well the LCA by Hansen which are described in detail in **Appendix B Scenic Quality Classification & Landscape Character Values.**

5.2 Application of the assessment criteria

The LCA study developed a landscape value assessment to formulate the basis for an objective assessment of landscape values within the study area and its context. For this section of the report the landscape character areas, previously identified, were further utilised as the areas where landscape values were evaluated:

- Based on the landscape character preference indicators identified previously, the landscape character areas were categorised as either rural or built landscape typologies.
- Least preferred or most preferred features were identified and listed and assessed relative to other character areas.

This resulted in assignment of an overall landscape value, whether low, moderate or high.

The following map extracted from the LCA shows that the assigned Landscape Values for the Landscape Character Areas of this LVIA study area are:

- Agricultural Plains – Moderate
- Airport – Low
- Former Salt Works – Low

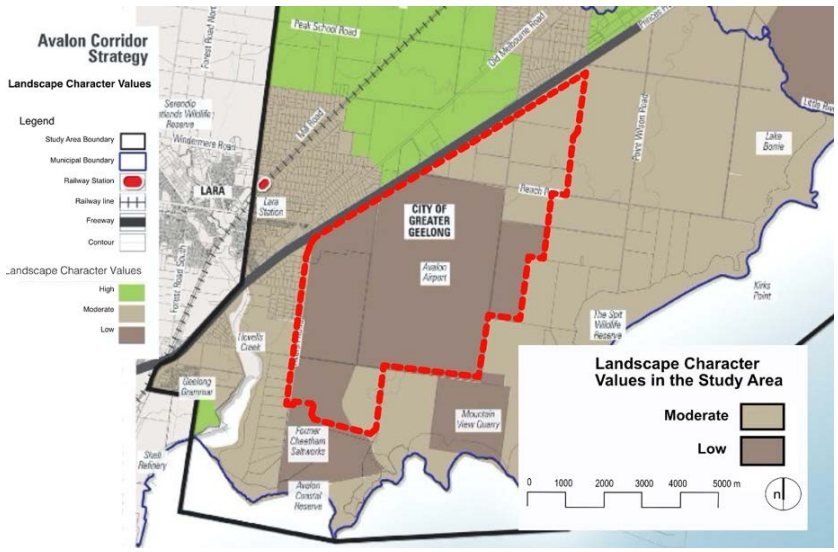

Figure 19 - Landscape Character Values in this LVIA Study Area
(Adapted from figure 8 ACS 2022)

5.3 Key views identified in the LCA

The LCA identified several key views within its study area, all of which are outside the boundary of the LVIA GAEP study area except for the views from the M1 Princes Freeway corridor. These views are all focused on the You Yangs, located on the north west fringe of the study area including journey segments on the Princes Freeway and Melbourne-Geelong rail line with landmark views towards the You Yangs (identified in the South West Victoria Landscape Assessment Study). Our observations from the midway point and top of the You Yangs towards the Study area of this LVIA was that the views from the You Yangs are so distant that the only discernible elements as seen from these points are the large hangars and associated buildings of the Airport and surrounds. Conversely there are numerous opportunities throughout the study area where views to the You Yangs can be obtained.

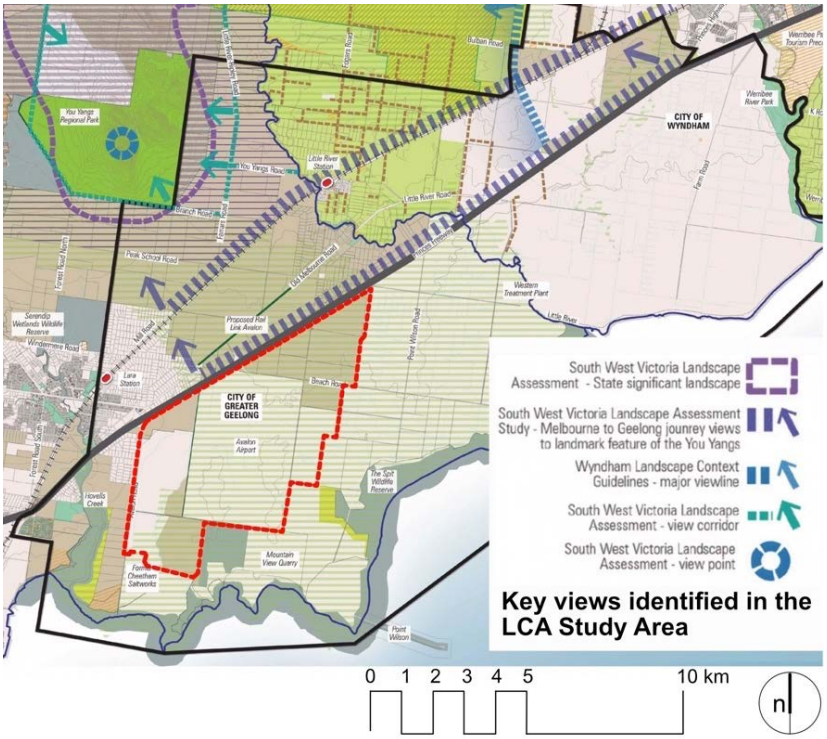

Figure 20 - Key views identified in the LCA
(Base Map Source: adapted from figure 6 LCA 2021)

6. Site Survey and Photographic Inventory

The site survey was undertaken in January 2024 by two Registered Landscape Architects who viewed the Study Area from all accessible roads and other public viewpoints as well as within land parcels made available for access by landowners. (photographs are located in **Appendix C Photographic Inventory** of key landscape and visual elements)

The site survey was undertaken to:

- Verify the Landscape Character and the Landscape Character Units described by the Landscape Character Assessment (2021) Hansen Partnership
- Verify the desktop study
- Photographically record the Study Area
- Record landscape areas and/or views/view corridors of value to the area
- Observe and document how the landscape may be viewed

6.1 Key views identified in site survey and photographic inventory in the GAEP

Our site investigations and analysis revealed the following key views:

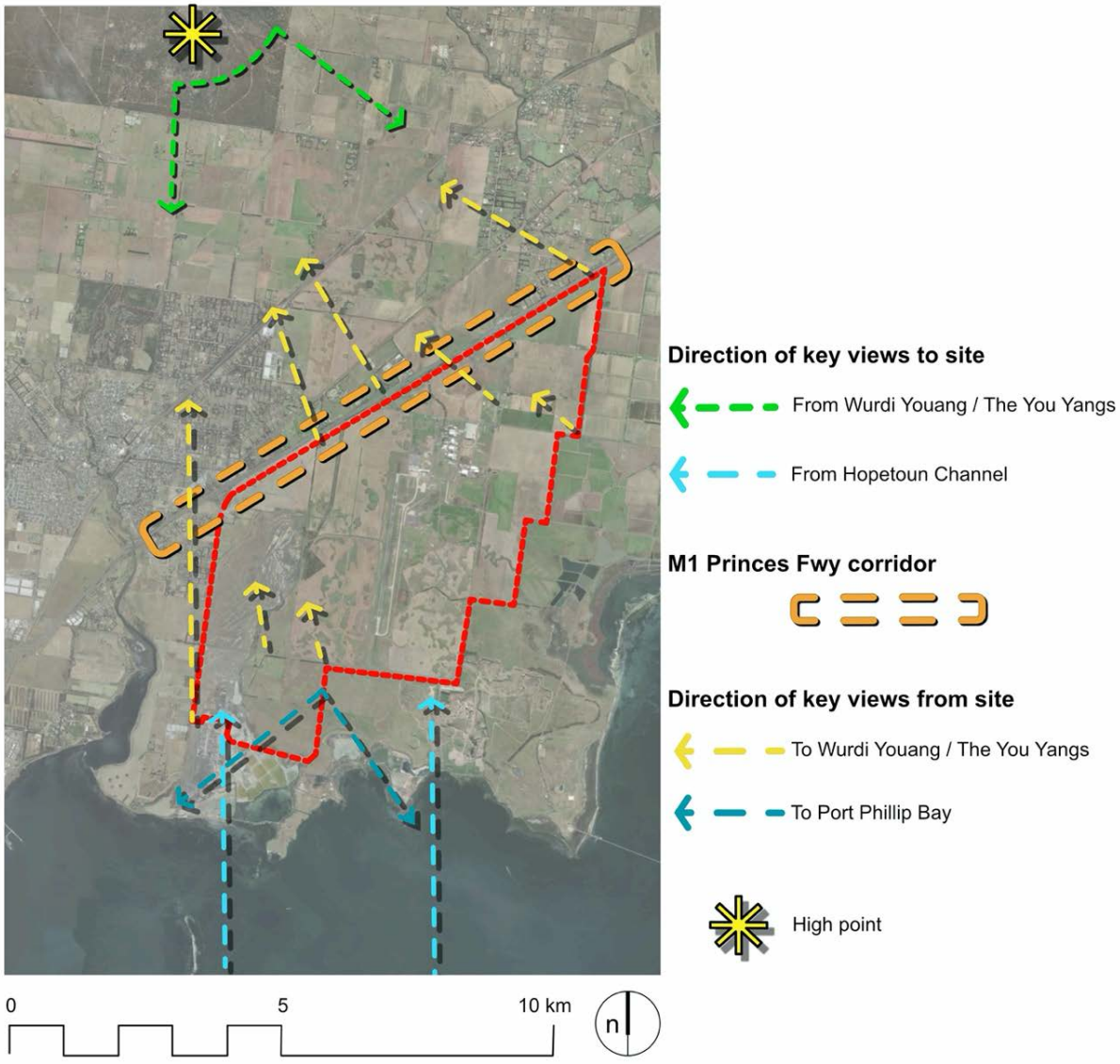

Figure 21 - Key views identified in the study area

6.1.1 Key views to the study area.

Views from the You Yangs

Views which must be considered when developing design controls for visual mitigation in the study area are those from the You Yangs, particularly from Flinders Peak and nearby which are important due to cultural heritage considerations. These views are described in Appendix C, viewpoints 74, 75 and 76.

View towards the site and Port Phillip Bay from car park area near Flinders Peak in the You Yangs

Water based views

Another important viewpoint to the study area is the Hopetoun Channel that carries all marine traffic travelling to and from Geelong including the Spirit of Tasmania which has around 450,000 passengers per year (TT_Line, 2023) and the Geelong and Portarlington Services of Port Phillip Ferries which runs 4 ferry trips each day with a capacity of approximately 400 people each (PPF 2024). This view (shown below) is described in Appendix C, viewpoint 82.

The "Spirit of Tasmania" at the North Geelong Ferry Terminal (December 2023)

The "Geelong Flyer" (Port Phillip Ferries) at its Geelong terminal (December 2023)

View towards site and the You Yangs from the Hopetoun Channel

6.1.2 Key views from the study area.

Almost all parts of the study area potentially have views to the You Yangs, except where obscured by buildings or trees.

View to the You Yangs from Beach Road within the study site. Flinders Peak (to the left) is the highest point.

Examples of these views are shown in photos in Appendix C for the following viewpoints: 3, 5, 14, 16, 36, 49, 61, 62, 64, 66, 67, 69 and 71. All development proposals should consider how best to retain and protect these views where possible. The line of sight to the You Yangs and in particular, to Flinders Peak should be shown on each application plan for reference. Because of the relatively flat topography, buildings and trees can readily obscure these views as shown in the photograph below.

Riordan Grain Services buildings, substantially obscuring a view to the You Yangs from the study area

Views to Port Phillip Bay

While not mentioned in the LCA, our field observations note that there are expansive views to Port Phillip Bay from the southern portion of the study area across the Agricultural Plains, Former Salt Works and Quarry to the east which may suggest a localised higher landscape value. These views and others are described in the site survey and photographic inventory.

As described in Appendix C, Viewpoint 68 is shown below. This is a localised but key view in the study area which marks a viewshed change at a local high point as shown on Figure 22. Efforts should be made to maintain and enhance this in the Precinct Structure Plan and subsequent individual development plans as an important visual gateway.

View south in private road south of 242 Dandos Road at local high point (see Figure 22)

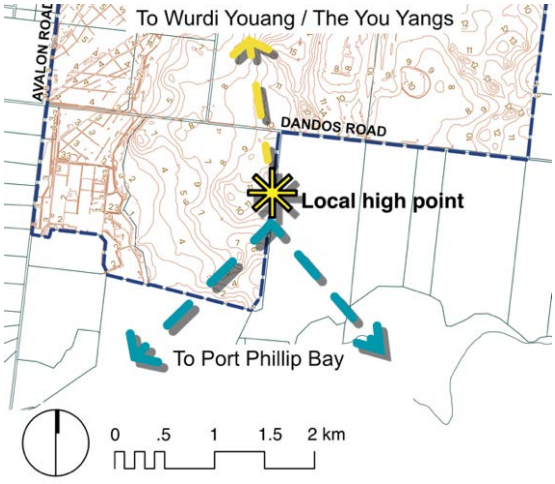

Figure 22 - Viewshed break in the southern portion of the Study Area (Viewpoint 68)

6.2 M1 Princes Freeway visual corridor

The M1 Princes Freeway corridor is an important visual corridor due to the high number of visual receptors - motorists and passengers (two-way traffic: 70,000 VPD DOT 2023). However, the speed limit in the study area limits the length of time of views, and factors such as field of vision at speed limits the impact of views from the freeway. This is an important consideration in the development of interface treatments in this location.

6.3 Implications of the Landscape Character Values for the GAEP

The preceding analysis of the LCA findings and the desktop study and fieldwork for this LVIA reveals that the Landscape Character Values in the three Landscape Character areas of the study area features low to moderate assigned landscape value influenced by adjoining areas of high landscape value, namely the You Yangs. These corridor level observations were ground tested in more detail in each property of the future GAEP.

For this field testing, key viewpoint locations were identified, recorded and photographs were viewed online and screen captures were made. Viewpoints were chosen to represent a range of typical views possible from that locality. In addition, the viewpoints were selected to:

- Represent views of particular landscape and /or visual feature/s of importance
- Represent views from key visual receptors (existing residents, community facilities and road users) The Princes Freeway has two-way traffic volumes of more than 70,000 vehicles per day (DOT 2023)
- Locations of major entries to the precinct and
- Others.

An evaluation of key viewing locations and view lines was undertaken to understand how the visual landscape character is viewed and experienced by residents both current and future, motorists, cyclists and pedestrians. These are shown in Appendix C – Photographic Inventory of key landscape and visual elements.
This study concurs with much of the findings of the LCA but with a more focussed examination of each part of the study area it has been possible to observe a finer level of detail which reveals that while the general study area features low to moderate assigned landscape values, within each character area there are variations which demonstrate higher values which may be captured in the preparation of the GAEP. This is discussed further in:

- 7 Edge and Interface Conditions
- 8 Opportunities and Constraints
- 9 Objectives and Recommendations

7. Edge and Interface Conditions

The GAEP forms part of the eastern edge of the Lara township and is bordered by the western edge of Melbourne's Water's Western Treatment Plant. Avalon Airport forms the precinct's main focal point. The way these interfaces or 'edges' are treated will be an important consideration for the planning and urban design of this precinct.
To minimise the impact of new development on the existing rural landscape to the north and east it will be important to maintain a softer transitional character along the urban- rural interfaces. Several important interfaces have been identified:

- M1 Princes Freeway interface
- Airport Interface
- WTP Western Treatment Plant Interface
- Avalon Road interface to adjacent rural residential
- Interface to coastal wetlands

- Watercourse interfaces (Note that new watercourse interfaces will be developed when the drainage network is developed)

It is noted that the Avalon Airport masterplan seeks to extend the existing runway south of Dandos Road. If this proceeds the adjoining boundary identified as "interface to coastal wetlands" may instead require an "airport interface" treatment in this location.

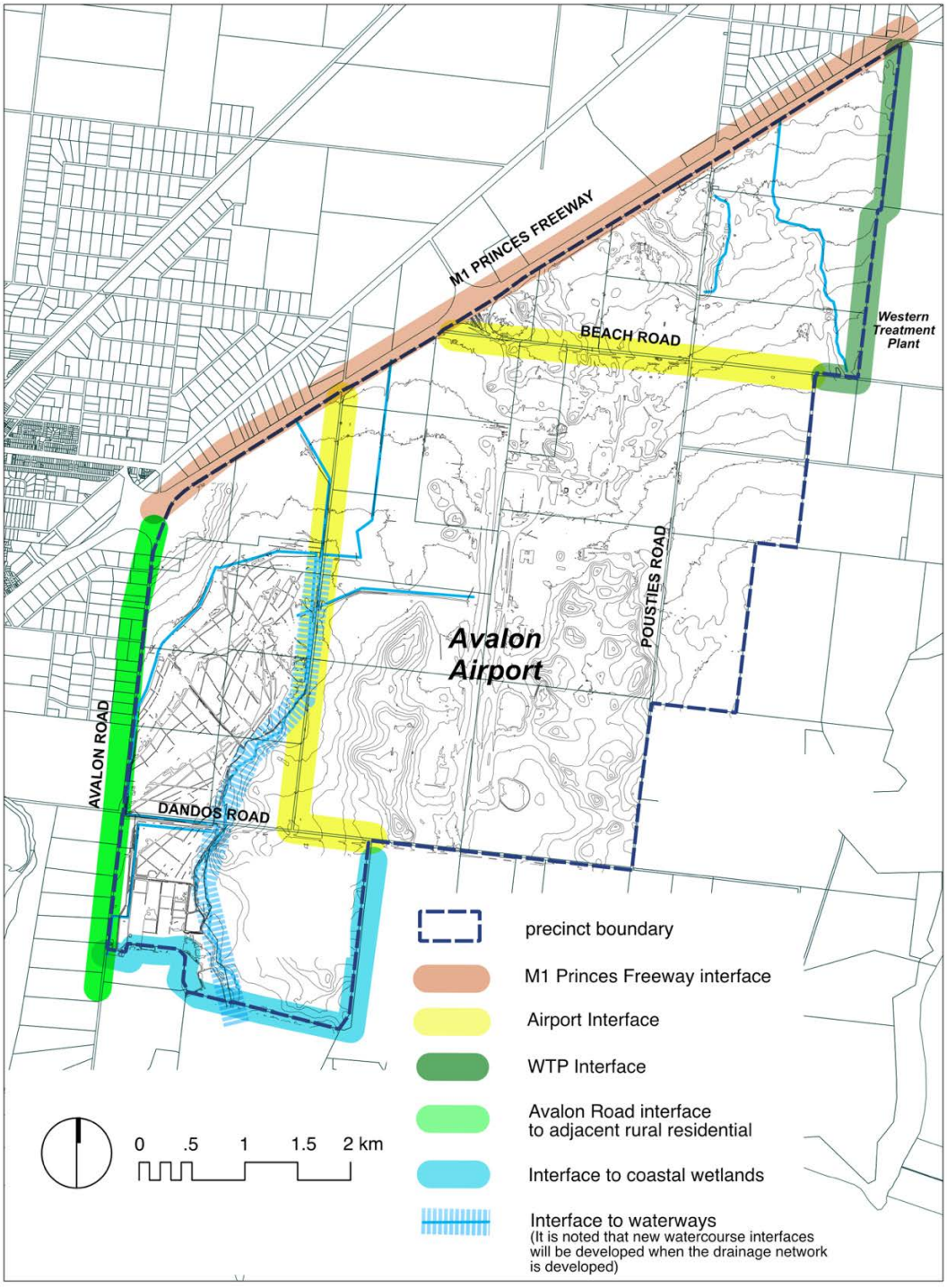

Figure 23 - Edge and Interface Conditions
(Source: VPA GIS data and study team analysis)

A series of recommendations and suggestions have been developed in section **10 - Key Recommendations** for potential incorporation into the GAEP to inform key appropriate planning controls and ensure the future urban design for these areas is sensitive to and

integrates with, the adjacent airport, rural residential, rural landscapes and the existing Lara and Little River townships.

8. Opportunities and Constraints

8.1 Opportunities

The following opportunities could be considered in the development of recommendations for the PSP:

- To create opportunities for the natural features of the study area (trees, water forms, subtle topography) and adjoining landscape to be easily understood and "read" by future users and visitors through careful design and siting of development.
- To retain and protect existing views within the precinct toward the You Yangs as well as views from You Yangs toward the precinct.
- Highlight views to Port Phillip Bay.
- To retain and protect existing significant trees (as identified in the arborist's assessment) by incorporating trees into open space, road reserves, widened road medians or easements where possible including northern part of Gillets Road, Avalon Road and similar.
- Potential to retain larger existing dams as part of Water Sensitive Urban Design (WSUD) for the precinct.
- To link pockets of retained trees and other significant landscape elements with existing conservation areas to provide greater connectivity for fauna and flora and improve the conservation value of the area.
- To use the necessary water retention basins and channels as urban greening opportunities and to create a linear open space network and potential visual links to the You Yangs.
- Create opportunities for Gateway Treatments including landscape, signage, lighting public art etc at key entrances to precinct from the M1 Princes Freeway and the north of the Freeway.
- Interfaces provide opportunities for visual openings for view lines, open space and linkages.
- Freeway interfaces provide opportunities for visual "marketing" of the precinct with landform, public art and others.
- Integrate development outcomes where industrial/commercial uses adjoin similar uses on airport land.

8.2 Constraints

The following constraints (others will be explored) will be considered in the development of recommendations in the PSP:

- Airport land use and operational constraints including protecting the future runway vertical clearance requirements for the airport.
- Ensuring that new development does not create habitats which may increase aircraft strike by nesting and migrating birds.
- Glare and glint considerations.
- Designated conservation areas and areas of required vegetation protection, while a constraint to development, can provide an opportunity to preserve the natural character of the site and provide placemaking opportunities.
- Consideration of sea level rise and flooding impacts.
- Ensuring that Water Sensitive Urban Design (WSUD) proposals consider groundwater and salinity issues associated with the former saltworks.
- Providing appropriate interfaces to existing and future urban development along key edges and interfaces while not limiting development opportunities within the GAEP.

- Ensuring appropriate bush and grass fire protection buffers.
- Consideration of Ramsar Wetlands, and other ecological recommendations in the study area as per Existing Ecological Conditions for Greater Avalon Employment Precinct, Avalon, Victoria, Ecology and Heritage Partners Pty Ltd (2024) report. (Draft EEC 2024)

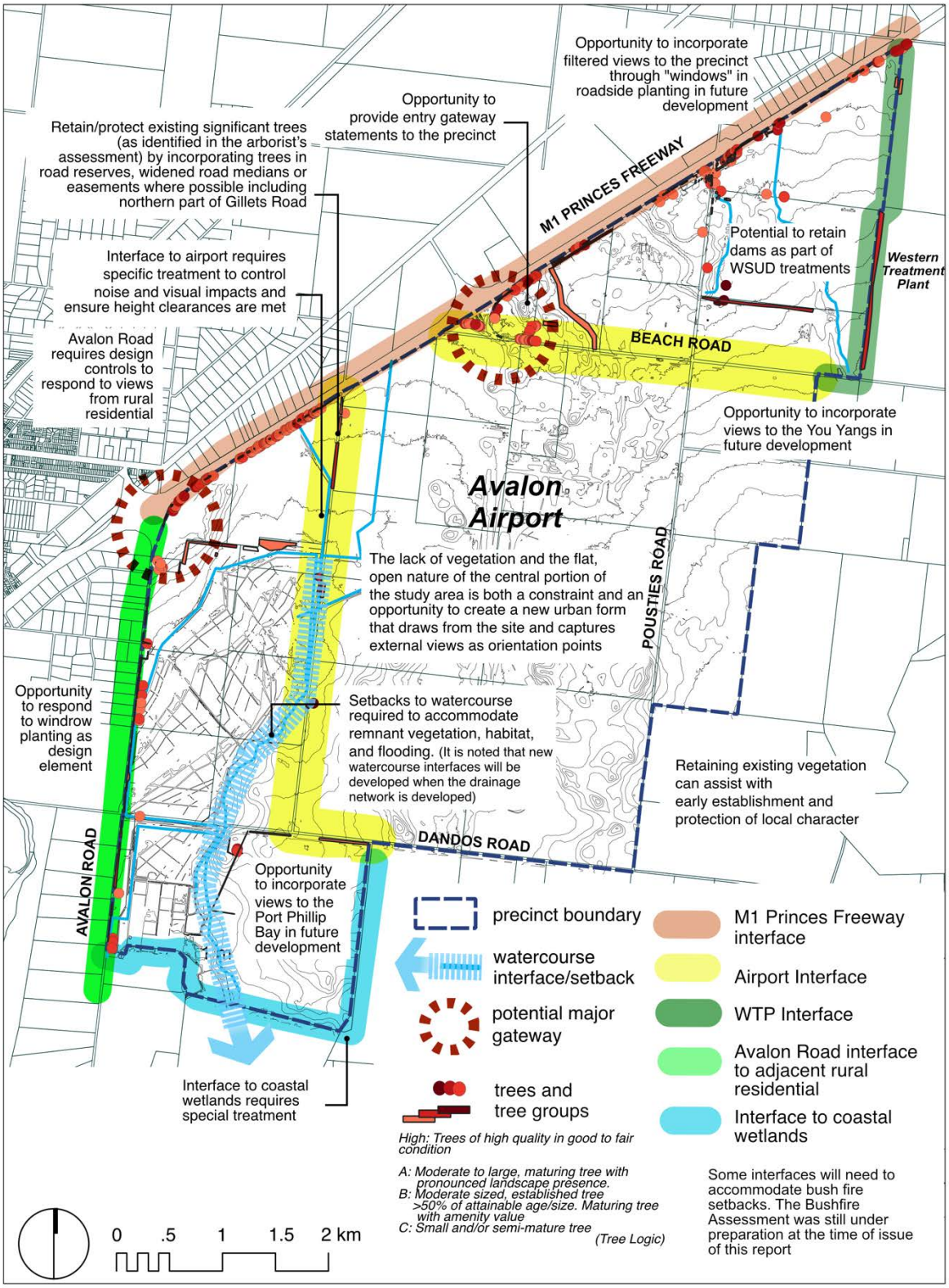

Figure 24 - Opportunities and Constraints
Source: VPA GIS data and study team analysis

9. Objectives and Recommendations

Objectives have been developed to help protect and enhance the landscape character of the GAEP when it is developed and ensure that a strong local sense of place and identity is established in this process.

The objectives listed below describe the desired outcome to be achieved as the precinct is developed and should be considered in the preparation of the guidelines and requirements for inclusion in the PSP.

The accompanying recommendations have been developed to provide a means of achieving the objectives. They aim to minimise the loss of existing landscape character elements, enhance the future landscape and visual amenity of the precinct and help to facilitate appropriate urban development.

Objectives and recommendations have been derived from:

- The desktop analysis of available GIS data including site contours, slope, drainage, significant vegetation and aerial photography
- The field survey
- Other background studies
- The opportunities and constraints of the site as identified earlier
- A review of relevant case studies as noted in this report

9.1 Landscape Character

Objective	Recommendations/guidelines

Help establish a sense of place by retaining and enhancing key features/characteristics of the Agricultural Plains landscape character type.	▪ Align the layout of major roads, block patterns and open space to retain, protect and enhance elements such as significant vegetation, water courses, and high points (subject to WSUD requirements).
	  ▪ Future development in this area should be assessed against possible flood risk.
	  ▪ Where limited development is approved, windrow-like treed buffers should be included to maintain a visual link to the area's agricultural uses.
	▪ Consider the local palette of materials from retained site rock, timber and colours in designs.

Enhance the amenity, habitat quality, cultural value and recreational value of drainage and waterway corridors.	▪ Protect and enhance the amenity, habitat quality and recreational value of drainage and waterway corridors with naturalisation where possible and planting and revegetation with indigenous species as per Draft EEC report 2024. ▪ Preserve views to and from future waterway corridors, through placement of perimeter roads, shared paths and adjoining open space. ▪ Provide recreation spaces adjacent to corridors (These can assist with creation of fire buffer setbacks to development). ▪ Minimise or prohibit the backing or siding of lots onto open spaces.
Protect and enhance panoramic and long-distance views to significant landmarks, such as the You Yangs.	▪ Key roads and drainage lines should be oriented to highpoints for wayfinding (subject to WSUD requirements).

Protect and enhance the significant landscape elements of the character types in open space. Provide linear landscape connections between character elements.	▪ Provide linear connections between open space reserves along watercourses, road reserves, easements and others.

9.2 Cultural Significance

Objective	Recommendations/guidelines
Help establish a sense of place by retaining and enhancing key elements of cultural significance including the retention of and enhancement of key features/characteristics of the places of Aboriginal cultural significance and post contact.	▪ The objectives and recommendations have not considered the landscape and visual interests of the Aboriginal cultural significance in the precinct. This should be updated upon the completion of the CVA. ▪ *"The WTOAC/RAP recommends that any future planning scheme amendment or land use or development inside the Corridor needs to embody statutory provisions that require respect of the unalienable spiritual and visual relationship that Wurdi Youang has upon this living cultural landscape*." (ACS 2022 p76) ▪ Areas of post settlement cultural significance should be identified and considered in the PSP process as placemaking opportunities.

9.3 Views

Objective	Recommendations/guidelines
Help establish a sense of place by protecting and enhancing key view lines.	▪ Protect key views to major on-site and off-site features such as the You Yangs and Port Phillip Bay through placement of road alignments, open space corridors and built form controls.

9.4 Built Form

Objective	Recommendations/guidelines
Help establish a sense of place by developing high quality built form controls.	▪ Consider impacts of built form from high visibility and high traffic routes. ▪ Use low reflectivity materials. ▪ Avoid the use of large areas of highly contrasting colour. ▪ Break up large surface areas with modulation and texture. ▪ Consider opportunities to create "windows" between built form elements to key views. ▪ Protect views (at the key viewpoints) from the visual impact/intrusion of flues, plant and related elements. ▪ Create a human scale and design at entry and key address points to buildings and sites. ▪ Ensure built form complies with Airport height controls.

9.5 Glint and Glare

Objective	Recommendations/guidelines
Control impacts of glint and glare from solar facilities and other similar installations. *"Glint which is the momentary flashes*	▪ Follow the "*Solar Energy Facilities Design and Development Guideline*". (DELWP 2022)

of light, and glare which is continuous, excessive brightness, can affect nearby sensitive land uses under particular conditions. 'Receptors' of glint and glare from a solar energy facility can include residents in surrounding dwellings, road users and aviation service providers including pilots and air traffic controllers." (DELWP 2022 p 23)	

9.6 Interface/Edge Treatments

Objective	Recommendations/guidelines
Develop interface treatments which are sensitive to the prevailing edge conditions.	▪ Create an appropriate interface to Avalon Airport, which provides security surveillance opportunities while also protecting amenity of adjoining uses and users. ▪ Create an appropriate interface to Avalon Road, which provides surveillance opportunities while also protecting amenity of residents and users. ▪ Create an appropriate interface to the Western Treatment Plant, which provides surveillance opportunities while also protecting amenity of uses and users. ▪ Protect, enhance and incorporate roadside and windbreak vegetation in all road cross sections including Avalon Road, Beach Road and Pousties Road. ▪ Along the M1 Princes Freeway corridor future acoustic treatment (if provided) should incorporate local landscape character elements and palette and allowance for sufficient setbacks to allow visual softening of walls with vegetation. ▪ Develop appropriate connections to the existing open space networks and paths in Lara township and Lara Station. ▪ Create an appropriate interface to waterways which protects habitat links while providing surveillance opportunities and also protecting the amenity of users. ▪ Create an appropriate landscaped buffer to the wetland and coastal interface to maximise the opportunity to incorporate views to Port Philip Bay in future development. ▪ The setback of new buildings should respond to their particular context. Building setbacks should be consistent with the setbacks of abutting buildings. ▪ The public facing elements of sites should be designed to create a sense of address to the street.

	▪ High structures should be appropriately setback from frontages to minimise dominance on the site and public realm. ▪ The height of buildings and works should consider their proximity to roads, public open space, waterways / courses, conservation areas and residential properties. ▪ The height of buildings and works opposite or adjacent to houses should consider the scale of the houses in relation to the street. ▪ Setbacks where significant roadside vegetation is retained should provide appropriate separation and root protection zones. ▪ For the Avalon Road, Western Treatment Plant, and coastal wetlands interfaces the reserve width should be based on the ability to provide sufficient space for the establishment of significant trees where desirable, at minimum 5 metres from a boundary. ▪ All of the above be further refined in the preparation of more site specific Urban Design Guidelines for the future PSP area in collaboration with the relevant authorities.

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9.7 Vegetation

Objective	Recommendations/guidelines
Retain significant vegetation to help protect the landscape character of the precinct. *Retaining existing vegetation can assist with early establishment and protection of local character.*	▪ Trees assessed as having high and moderate arboriculture retention value (refer Arboricultural Report) should be prioritised for retention and should be incorporated into the public realm, open space, road reserves, widened road medians or easements where possible. This includes significant tree groups. ▪ Retain areas of native vegetation and/or significant vegetation along water corridors. ▪ Areas identified as having high quality and/or significant ecological value should also be retained. Maintenance of contiguous whole areas of native vegetation should be considered over individual trees where possible. ▪ Minimise clearing of roadside vegetation where feasible and subject to fire protection setbacks. As noted by Tree Logic Indigenous (remnant) vegetation was rare within the study area and was identified in only three small areas including Gillets Road approximately 1.2km north of Dandos Road (14 trees). Further detail of this area is outlined in the Draft EEC recommendations.

9.8 Climate resilience and sustainability

Objective	Recommendations/guidelines
Plan and design the landscape treatments of GAEP and surrounding	▪ Provide opportunities for increased planting of canopy trees wherever possible. Large industrial

areas in consideration of climate resilience and sustainability. *Key measures of climate resilience and sustainability are to reduce greenhouse gases in the design and construction of sites and adaptation, which is about responding to changes anticipated with rising temperatures, sea levels and other climate change impacts.*	sites often have large curtilage areas which are typically grassed. These areas lend themselves to mass tree plantings. ▪ Maximise permeability of surfaces. ▪ Retain and improve site water. ▪ Reduce potable water use. ▪ Prepare designs that respond to more intense rainfall events as well as extended periods of low rainfall. ▪ Use nature-based solutions to leverage ecology and natural systems to manage climate impacts at large scales. ▪ Design for projected sea level rise. As noted in **Section 10.9 Cut and Fill,** there may be a need to raise critical infrastructure and built form while leaving other parts of low-lying sites to accommodate a more biophilic approach to drainage and canopy planting. ▪ Design to buffer against biodiversity loss and bioclimatic shifts. (adapted from AILA 2022 p59)

10. Key Recommendations

The following is a series of the key location - specific recommendations derived and applied from the preceding section:

10.1 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. Design considerations include:

- Noting that for a large-scaled future industrial area this edge is an important "marketing" opportunity. This requires a sensitive approach which maximises visual exposure of the gateway approaches and entry sequences to the precinct while maintaining a high level of visual amenity for the precinct and surrounds.
- Maintaining continuity of major remnant exotic and indigenous vegetation with infill planting in gaps and "windows" to development at key locations.

Figure 25 - Sketch plan view of potential M1 Princes Freeway interface

- Consideration of bushfire attack separation requirements.
- Creation of a linear open space with shared walking/cycling trails where possible.

- Enhancing active surveillance opportunities to and from edge treatments including design of buildings and site landscapes to incorporate areas of direct and casual visual access and avoiding creation of under surveilled areas.
- Incorporating WSUD treatment on edge to provide a further separation.
- Protecting, enhancing and incorporating roadside vegetation in Freeway cross sections.
- Allowing for future acoustic treatment (if required) which should incorporate local landscape character elements and palette and allowance for sufficient setbacks for visual softening of freeway walls with vegetation.

10.2 Development at Avalon Road interface

Development at this road upgrade interface should protect the rural residential character to the west. Design considerations include:

Figure 26 - Sketch plan view of Avalon Road interface to rural residential area

- Consideration of the residential amenity opposite.
- Ensuring continuity of major remnant exotic and indigenous vegetation with infill planting in gaps.
- Protection, enhancement and incorporation of roadside vegetation in road cross sections.
- Consideration of bushfire attack separation requirements.
- Creation of a linear open space with shared walking/cycling trails on edges.
- Enhancing active surveillance opportunities to and from edge treatments including design of buildings and site landscapes to incorporate areas of direct and casual visual access and avoiding creation of under-surveilled areas.
- Incorporating WSUD treatment on edge to provide a further separation.

10.3 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. Design considerations include:

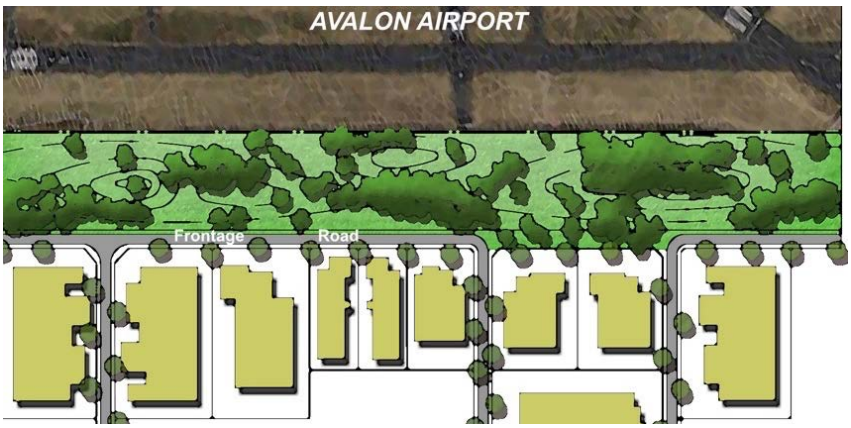


Figure 27 - Sketch plan view of interface to Airport

- Follow the Glint and Glare Guidelines for solar installations.
- Create opportunities where feasible for linear open spaces with shared walking/cycling trails on edges.
- Consideration of bushfire attack separation requirements.
- Enhancing active surveillance opportunities to and from edge treatments including design of buildings and site landscapes to incorporate areas of direct and casual visual access and avoiding creation of under-surveilled areas.
- These spaces can form part of the precinct linear open space network and the noise separation set back.

10.4 Development at Western Treatment Plant (WTP) interface

A key consideration for development at this interface is to protect WTP operations from encroachment. Design considerations include

- The boundary can form part of the precinct linear open space network and the odour separation setback as per **Appendix F - Buffer Separation and Amenity Management**.
- Ensuring continuity of major remnant exotic and indigenous vegetation with infill planting in gaps.

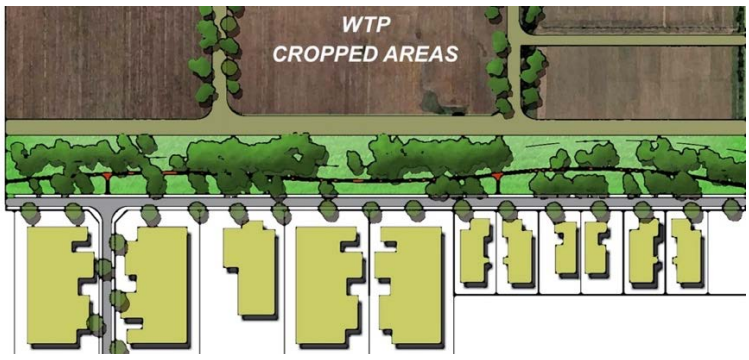


Figure 28 - Sketch plan view of industrial interface to WTP

- Creation of a linear open space with shared walking/cycling trails on edges.
- Consideration of bushfire attack separation requirements.
- Enhancing active surveillance opportunities to and from edge treatments including design of buildings and site landscapes to incorporate areas of direct and casual visual access and avoiding creation of under-surveilled areas.
- Protection, enhancement and incorporation of roadside vegetation in road cross sections.

10.5 Development at wetland and coastal interfaces

A key consideration for development at this interface is to protect and enhance the natural areas. Design considerations include:

- Subject to environmental authority requirements.
- Enhancing active surveillance opportunities to and from edge treatments including design of buildings and site landscapes to incorporate areas of direct and casual visual access and avoiding creation of under-surveilled areas.
- Provision of active road frontages along the majority of wetland frontage.
- Protection, enhancement and incorporation of roadside vegetation in road cross sections.

Figure 29 - Sketch plan view of industrial interface to wetland and coastal interfaces

- Consideration of bushfire attack separation requirements.
- Creation of a linear open space with shared walking/cycling trails on edges.

10.6 Development at watercourse interface

Development at this interface must allow for ease of overland flow while utilising the space created to highlight key views to local and distant features such as the You Yangs. Design considerations include:

Figure 30 - Sketch plan view of watercourse interfaces

- The distance from building footprints to a watercourse is determined by the waterway type as designated by the drainage authority. An example of this is:

  "*The setback that applies to a waterway at a particular location depends on the position of the site in the stream channel network. The underlying principle is that smaller waterways require a smaller setback to meet waterway health objectives, larger streams require a larger setback and major waterways require the largest setback*." (Melbourne Water 2013, p10)

- Provision of active road frontages along the majority of watercourse frontage.
- Protection of conservation areas.
- Creation of a linear open space with shared walking/cycling trails on edges.
- Enhancing active surveillance opportunities to and from edge treatments including design of buildings and site landscapes to incorporate areas of direct and casual visual access and avoiding creation of under-surveilled areas.
- Consideration of bushfire attack separation requirements.

10.7 Built form heights - airport related

A key consideration for development in this area is the Avalon Airport Protection of Visual Operations – Obstacle Limitation Surfaces (OLS which will be determined in the Airport Master Plan:

> *The Obstacle Limitation Surfaces (OLS) are a series of plans associated with each runway that define the desirable limits to which objects may project into the airspace around the airport so that aircraft operations may be conducted safely. They are prepared in accordance with strict criteria defined by CASA. An OLS has been prepared for Avalon Airport based on the existing north-south runway. AAA will prepare an Ultimate Design State OLS prior to the issue of the next Master Plan. This Ultimate Design State OLS will be used to inform the preparation of a Design and Development Overlay (DDO) for introduction into the Greater Geelong Planning Scheme for all existing and future runways*." (Airport MP page 40)

Jet landing - approaching airport with Hanwha Armoured Vehicle Centre of Excellence (H-ACE in foreground)

10.8 Protecting aviation facilities - Communication, Navigation and Surveillance (CNS)

Reference should be made to the National Airports Safeguarding Framework (NASF) Guideline G to better protect Communication, Navigation and Surveillance (CNS) facilities *"which support the systems and processes in place by Airservices Australia (Airservices), the Department of Defence (Defence) or other agencies under contract with the Australian Government, to safely manage the flow of aircraft into, out of and across Australian airspace."* (NASF Guideline G via infrastructure.gov.au)

A Building Restricted Area (BRA) surrounds a CNS Facility. It is defined as *"a space where development has the potential to cause unacceptable interference to CNS facilities. However, the BRA of a CNS facility can extend up to 15 kilometres from a facility in some instances, increasing the potential for new development to adversely impact on its effectiveness."* (DITRDCA, NASF Guideline G, 2003 via infrastructure.gov.au)

10.9 Cut and fill

A key consideration for development in this area will be the requirement for areas of fill to accommodate the effects of future sea level rise. The design of this will be subject to

detailed engineering and must also consider and not be limited to the impact on cultural values, biodiversity and visual factors.

Design considerations will likely include:

- Understanding which areas will require raising at a precinct level using a whole of catchment approach including consideration of impacts of fill on adjacent sites by displacement of water and other off-site impacts.
- There may be a need to raise critical infrastructure and built form while leaving other parts of low-lying sites to accommodate a more biophilic approach to drainage design and canopy planting.

10.10 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.

10.11 Investigations and actions required as part of the PSP process, and those required at other stages of the development process.

The PSP process is an iterative design and planning process. The background investigations provide a sound evidence-based multidisciplinary approach. The key findings of each investigation will influence the development of the PSP in assisting with determining which factors will become requirements in the PSP and provide practical guidance as to how they can be achieved. It is not practical or necessary to resolve every issue or eventuality at the PSP stage. The GAEP is based around an existing airport and ancillary uses which have evolved over time. It is a given that the requirement for a functioning airport is the key focus of this area, allowing it to evolve into a significant employment area while maintaining and enhancing the natural and cultural values that make it unique. PSP specific actions may include but are not limited to:

- During the PSP process Design Guidelines should be prepared to address factors such as concerns about super lots potentially covering entire site, with landscape requirements/site coverage controls for a range of lot sizes.
- Other elements include:
    - Height restrictions on built form
    - Cut and fill
    - Sea level rise
    - Responses to cultural heritage requirements
    - Responses to biodiversity requirements
    - Responses to updated Airport Master Plan
    - Reponses to the EEC Precinct Design Principles (Draft EEC 2024)

Appendix A - Cultural Significance

The area is rich in First Nations and post contact cultural significance from landscapes: *"In the shadows of Anakie Youang / The Anakies and Wurdi Youang / You Yangs down to the waters and former grasslands of Nerm / Port Phillip Bay and Corio Bay, this is a special place for Wadawurrung People and their animals, plants, birds, waters and skies; a place to care for and nurture."* (Wadawurrung Traditional Owners Aboriginal Corporation ACS 2022)

"The Aboriginal community of Wathaurong have camped and hunted on the open, grassy plains for thousands of years. They set fire to the grass to encourage new growth and attract animals to the area for hunting. The area supported kangaroos, dingoes, tiger cats, bandicoots, gliders and native grasslands with abundant wildflowers. Amongst the boulders of the You Yangs Range Wathaurong people enlarged natural hollows in the rocks to form wells that held water in a climate that was quite dry.

Explorer Matthew Flinders was the first European to visit the You Yangs Ranges. On 1 May 1802, he and three of his men climbed to the highest point. He named it Station Peak, but this was later changed to Flinders Peak in his honour.

The uniqueness of the You Yangs has attracted artists to paint them. One of Australia's greatest artists, Fred Williams, spent much of the 1960s painting the You Yangs Ranges as rugged, dramatic, and sparse but unquestionably of the Australian bush.
The You Yangs Regional Park also has a geoglyph constructed by the Australian artist, Andrew Roberts. It depicts Bunjil, the Wathaurong creator spirit, represented by an eagle. It commemorates the Commonwealth Games held in Melbourne in 2006. The geoglyph has a wing span of 100 metres and 1500 tonnes of rock was used to construct it.' Today, Wathaurong people continue to live, practice and strengthen their culture in the Greater Geelong area. The Wathaurong Aboriginal Corporation is a Registered Aboriginal Party, representing the traditional owners of the area. They ensure that Wathaurong culture and connection to place is maintained into the future

(Parks Victoria viewed online 2023)

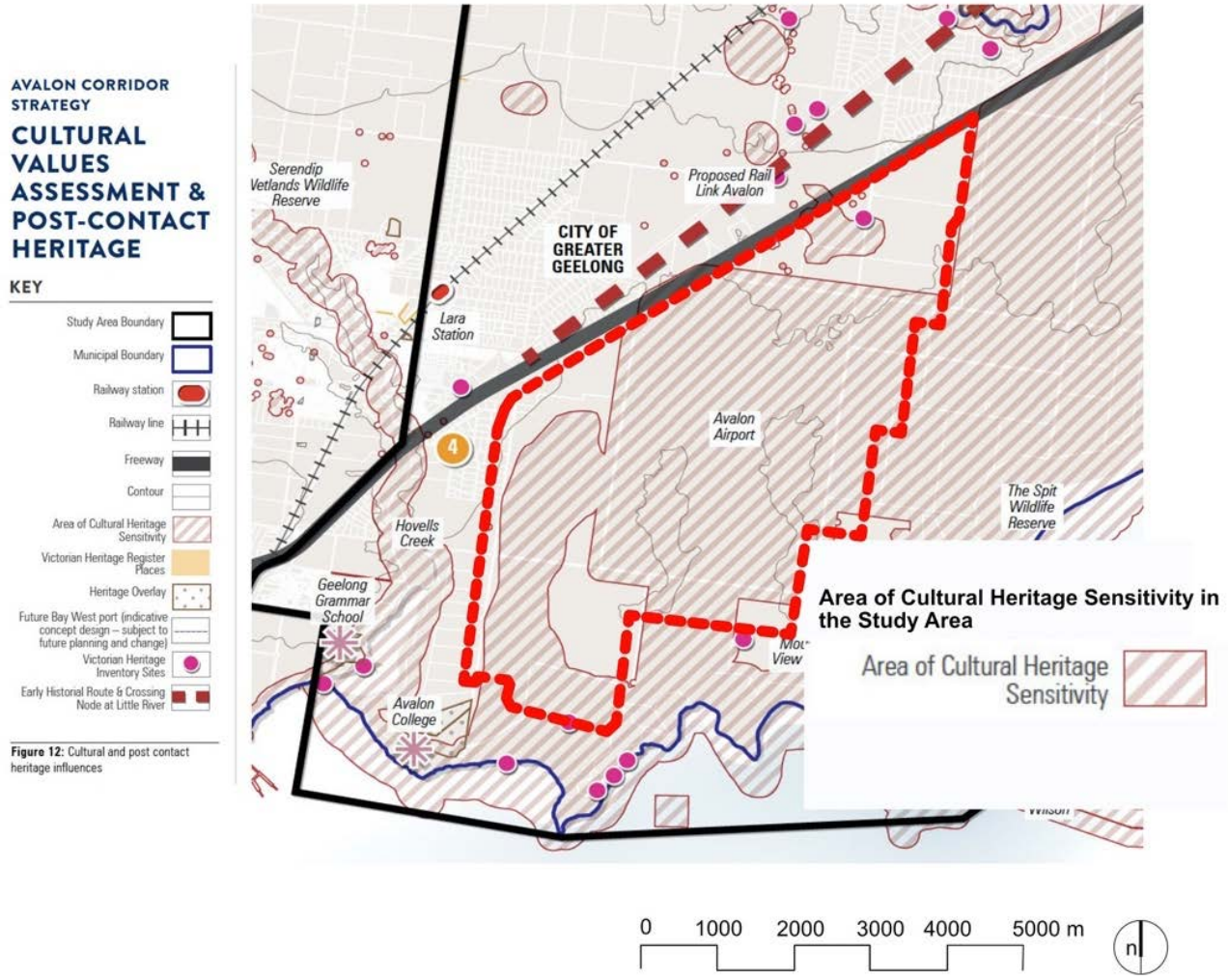
View of Geelong, the Corio Bay and Indented Heads from the southern declivity of Station Peak Source: (c. 1858) Eugene von Guerard, National Gallery of Victoria, Melbourne

Matthew Flinders' 'Station Peak' of 1802, acquired the name of 'Wilanmarnartar' in 1824 by Hamilton Hume, 'Mount Vilumnata' in 1835 on John Wedge's map, however, 'Station Peak' remained predominant until sometime during the 1850's – as by the 1860's the name 'You Yangs' had been adopted.

As is illustrated on Figure 12 [in the ACS] *large sections of the Avalon Corridor are nominated as being 'areas of cultural heritage sensitivity.' Such areas are defined in the Aboriginal Heritage Regulations (2018) (the Regulations) and relate to landforms and soil types where places of Aboriginal heritage significance are more likely to be located. This generally includes land within 200 metres of named waterways and land within 50 metres of registered Aboriginal cultural heritage sites.*

The function of the designation of 'areas of cultural heritage sensitivity' is to specifically identify when a Cultural Heritage Management Plan (CHMP) must be prepared under the Aboriginal Heritage Act (2006). (ACS 2022 p79)

"Secondary natural resource harvest areas include the former Cheetham Saltworks adjoining Avalon Airport, which are included on the VHI and may warrant further investigation prior to any redevelopment." ACS 2022 p79



Area of Cultural Heritage Sensitivity in the Study Area
(Source: adapted from figure 12 ACS 2022)

Appendix B - Scenic Quality Classification & Landscape Character Values

We have used Scenic Quality Classification/Landscape Character Values and visual assessment techniques developed over many years in Australia and overseas. It is noted that there is no legislated guidance or formalised methodology in Victoria for the assessment of landscape character. The assessment for this study has been based on the method for landscape visual assessment and planning outlined in 'Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting and design', and other local and international visual assessment methodologies including the "Landscape Character Types of Victoria – with frames of reference for scenic quality assessment' (1984 Leonard and Hammond). It also includes an assessment of and includes elements derived from the "Landscape Character Assessment" (LCA 2021) which was prepared by Hansen Partnership in 2021 to inform the Avalon Corridor Strategy.

Scenic Quality Classification/Landscape Character Values

"Landscape character types are areas that possess consistent visual features, making comparative quality assessments possible. Visual quality, as noted in the "Landscape Character Types of Victoria – with frames of reference for scenic quality assessment' by Mike Leonard and Richard Hammond, is linked to the following features:

- *Degree of uniqueness and naturalness*
- *Diversity in topography*
- *Variety of vegetation types and patterns*

It should be noted that not all these qualities are applicable to the study area."

The LCA study, used similar assessment techniques to that of the '*Visual Landscape and Planning in Western Australia, a Manual for Evaluation, Assessment, Siting and Design"* (2007) (VLPWA) to describe the characteristics of High, Moderate and Low landscape character values in the study area as follows:

High
Prevalence of landscape features such as native vegetation, water bodies and topographic variety that form a cohesive environment.

Moderate
Some presence of landscape features as native vegetation, water bodies and topographic variety that often for a cohesive environment.

Low
Minor presence of landscape features as native vegetation, water bodies and topographic variety that are at times either degraded or rarely form a cohesive environment.

(LCA 2021 p 34)

The LCA notes that in the VLPWA:

> *"The landscape character preference indicators identified in the …VLPWA Manual have been developed using community preference research and subsequently list landscape features as being either most preferred or least preferred in a generalised landscape typology. These landscape typologies are categorised broadly as being natural, rural or built.*

Much of the [LCA] *study area falls within the rural landscape typology, with some built areas such as the Education character area.* [and the Airport and environs] *There are limited areas of the natural landscape typology, as the study area is generally an environment which has been highly modified by people, such as the coastal nature reserves. As such the broad categories of rural and built typologies have been used for this assessment, as it is recognised the study area is a highly modified landscape. Some character preferences have been included from the natural typology where relevant.*

It was deemed suitable to list all the applicable character preference indicators for the rural and built typologies with some preference indicators from the natural typology to reflect the character of the You Yangs Regional Park, waterways and coastal interface. Adjusting the preference indicators for site specific features is encouraged in the VLPWA Manual and as such Hansen have modified the indicators in recognition of the sites rural context and setting for the You Yangs Regional Park.

The preference indicators provide a structured basis for the landscape values assessment criteria, which is in keeping with the methodology outlined in the VLPWA Manual."
(LCA 2021 p 34)

Rural Landscape Preference Indicators

The **Preferred Rural Landscape Features** identified in the LCA which are generally applicable to this study area include:

- *Unusual diversity in agricultural landscapes (colour and contrast or species diversity of cropping).*
- *Agricultural patterns, colours and textures that complement natural features.*
- *Landform providing a setting or context for a significant topographical feature.**
- *Presence of waterways and water bodies (dams, lakes, inundated areas, drainage lines and creeks) that borrow location, shape, scale and edge configuration for natural elements.*
- *Significant landscape features (established exotic windbreaks in good condition, trees and tree stands, historic relics and areas of topographic variation).**
- *Presence of areas of indigenous / native vegetation including remnant native grassland.**
- *Settlement patterns and individual structures that strengthen the local rural character (water tanks, historic buildings, hay bales and dams).*
- *Building colours complimentary to the rural landscape.**
- *Distinctive remnant or established canopy vegetation located within allotments, along stream sides, roadsides and in paddocks.*
- *Open or expansive landform with expansive views.**
- *Presence of water bodies (waterfalls, rivers, estuaries, oceans, lakes, inundated areas).***
- *Areas or sites frequently prone to ephemeral features (fauna, water or wave conditions, beach erosion scarps, climatic conditions).***

The **Least Preferred Rural Landscape Features** identified in the LCA which are generally applicable to this study area include:

- *Areas of soil salinity/salt scalds or dead, dying or diseased vegetation.*
- *Areas of extensive weed infestation.*
- *Eroded areas*
- *Tips, dumps and landfill areas.*
- *use areas or buildings that contrast significantly from rural landscape characteristics (can include plantations, mines, rural settlement and/or housing, utility towers, roads and fencing).*
- *Run-down areas (dead grass, bare and dead vegetation, derelict housing and/or buildings, abandoned and/or trashed cars).*
- *Abandoned structures, yards or paddocks in a state of disrepair or destruction.*
- *Farm structures and buildings in a state of disrepair.**
- *Unmanaged roads and access tracks in a state of disrepair.*
- *Presence of utilities (towers, transmission line, overhead power lines).**
- *Severed or badly pruned street trees.**
- *Degraded areas prone to depreciative uses and unregulated vehicle activities.**
- *Areas of soil erosion (especially where human-induced).***
- *Water bodies with degraded banks, weed infestations, stagnation, eutrophication, algae or litter.***

- *Evidence of mining (gravel pits, sand mines, limestone).***
- *Building siting, design or materiality which is inappropriate to the rural landscape setting.**
- *Presence of major road transport corridors.**
- *Land uses which have modified the landscape and detract from surrounding landscape or built form character.**
- *Land use which is not integrated into the surrounding rural or coastal setting.**

** Denotes a character preference indicator modified from the VLPWA manual to be specific to the character of the study area.*
*** Denotes a character preference indicator included from the natural typology"*
(LCA 2021 p 35)

Built Landscape Preference Indicators

The **Preferred Built Landscape Features** identified in the LCA which are generally applicable to this study area include:

- *Presence of trees, greenery, parks and gardens, street trees, canopied. streets, median strip vegetation.*
- *Complementary building styles in neighbourhoods.*
- *Diverse building styles in neighbourhoods.*
- *Building styles complimentary to the rural landscape.**
- *Building colours complimentary to the rural landscape.**
- *Built developments that do not impinge on dominant natural features (for example river foreshores and coastal landscapes).*
- *Elevated landforms and undulating terrain.*
- *Distinctive remnant or established canopy vegetation located within allotments, along streamsides, roadsides and in paddocks.**
- *Incorporation of significant cultural and environmental features into urban design.*
- *Presence of waterways and water bodies (dams, lakes, inundated areas, drainage lines and creeks).**
- *Development sites designed so they strengthen local character and promote a sense of community.*
- *Design which takes account of landscape features, vegetation and landform.*
- *Services being underground to reduce cabling and severance of street trees.*
- *Unobtrusive advertising.*
- *Distinctive displays of colour: soils, vegetation or water bodies.**

The **Least Preferred Built Landscape Features** identified in the LCA which are generally applicable to this study area include:

- *Derelict industrial areas (junkyards).*
- *Large carparks without trees.*
- *Intrusive billboards (particularly along roads and railway reserves).*
- *Buildings which are out of scale with the surrounding built character or landscape.**
- *Buildings which contrast sharply from the surrounding built character (industrial infrastructure).*
- *Arterial highways with strip commercial and light industrial developments, lacking trees and other vegetation.*
- *Utilities (towers, transmission line, overhead power lines).*
- *Lack of vegetation.*
- *Areas of extensive weed infestation.*
- *Presence of major road or rail transport corridors.**
- *Presence of a major transport node.**
- *Land uses which have modified the landscape and detract from surrounding landscape or built form character.**

*Land use which is not integrated into the surrounding rural or coastal setting.**
**Denotes a character preference indicator modified from the VLPWA manual to be specific to the character of the study area.* (LCA 2021 p 37)

The Character Areas of the Hansen LCA study area are described as follows:

"Agricultural Plains

Landscape Typology
Rural
Preferred Landscape Features

- *Agricultural patterns, colours and textures that complement natural features.*
- *Landform providing a setting or context for a significant topographical feature.**
- *Settlement patterns and individual structures that strengthen the local rural character (water tanks, historic buildings, hay bales and dams).*
- *Distinctive remnant or established canopy vegetation located within allotments, along streamsides, roadsides and in paddocks.*
- *Presence of areas of indigenous / native vegetation including remnant native grassland.**
- *Open or expansive landform with expansive views.**
- *Built developments that do not impinge on dominant natural features (for example river foreshores and coastal landscapes).**
- *As identified in the South West Victoria Landscape Assessment Study the agricultural landscape of the plains provides a positive contribution to the character of the You Yangs foothills landscape.*

Least Preferred Landscape Features

- *Farm structures and buildings in a state of disrepair.**
- *Presence of utilities (towers, transmission line, overhead power lines).**
- *Water bodies with degraded banks, weed infestations, stagnation, eutrophication, algae or litter.***
- *Presence of major road transport corridors.**
- *Large transmission lines cross this character area, along with the major road transport corridor of the Princes Freeway.*

Overall Relative Landscape Value:

High to Moderate

The agricultural plains south of the Princes Freeway have been determined to have a moderate landscape value as they do not provide such a significant contribution to the character of, and setting for, the You Yangs foothills landscape. The moderate value is supported by Planning Scheme zoning of some areas of Farming Zone and a significant area covered by an Environmental Significance Overlay."

(LCA 2021 Page 40)

"Airport

Landscape Typology
Rural

Preferred Landscape Features

- *Agricultural patterns, colours and textures that complement natural features.*
- *Open or expansive landform with expansive views.**
- *There is little discernible boundary between the airport and surrounding agricultural landscape, which allows much of the airport owned land to merge into the rural context. The clearly built features are the airport hangers, but in balance the Rural preference indicators were used for this character area to take account of the rural context.*

Least Preferred Landscape Features

- *Land use areas or buildings that contrast significantly from rural landscape characteristics (can include plantations, mines, rural settlement and/or housing, utility towers, roads and fencing).*
- *Building siting, design or materiality which is inappropriate to the rural landscape setting.**
- *Built form within the airport is out of scale with the surrounding rural landscape, and the built form creates a significant change in local landscape character.*

Overall Relative Landscape Value

Low" (LCA 2021 Page 41)

"Former saltworks:

Landscape Typology

Rural

Preferred Landscape Features

- *Presence of water bodies.*
- *Areas or sites frequently prone to ephemeral features (fauna, water or wave conditions, beach erosion scarps, climatic conditions).***
- *Rehabilitation of industrial land which supports wildlife habitat.**
- *The former industrial landscape appears to be slowly regenerating without assistance from 'man' and part of the character area supports the Avalon Coastal Reserve, listed as a Ramsar site and providing bird habitat.*

Least Preferred Landscape Features

- *Areas of soil salinity/salt scalds or dead, dying or diseased vegetation.*
- *Eroded areas*
- *Degraded areas prone to depreciative uses and unregulated vehicle activities*.*
- *Land uses which have modified the landscape and detract from surrounding landscape or built form character.**
- *Land use areas or buildings that contrast significantly from rural landscape characteristics (can include plantations, mines, rural settlement and/or housing, utility towers, roads and fencing).*

This is a landscape which has significantly modified topography for industrial use to function as a Salt Works with hollows in the topography to form salt evaporators still clearly visible.

Overall Relative Landscape Value

Low

** Denotes a character preference indicator modified from the VLPWA manual to be specific to the character of the study area.*

*** Denotes a character preference indicator included from the natural typology"*

(LCA 2021 Page 41)

Appendix C - Photographic Inventory of key landscape and visual elements

Key viewpoint locations were identified, recorded and photographs were viewed on-line and screen captures were made from Google Street View. Viewpoints were chosen to represent a range of typical views possible from that locality.

Field inspection was then made on January 11 and 12, 2024. Photographs were taken to ground truth the initially selected viewpoints and additional key viewpoints were identified and photographed during the inspection. Key on-site images were taken with a 50mm focal length lens (the industry standard for landscape and visual assessment) with photographs taken at approximately 1.6 metres above the ground surface (eye level) except in-vehicle images taken on the freeway and while driving elsewhere. Other contextual photographs were taken with varied focal lengths and camera types. Composites were made by "stitching" images for clarity at key locations.

The viewpoints for the photos are shown on the maps below.

Viewpoint Location Maps

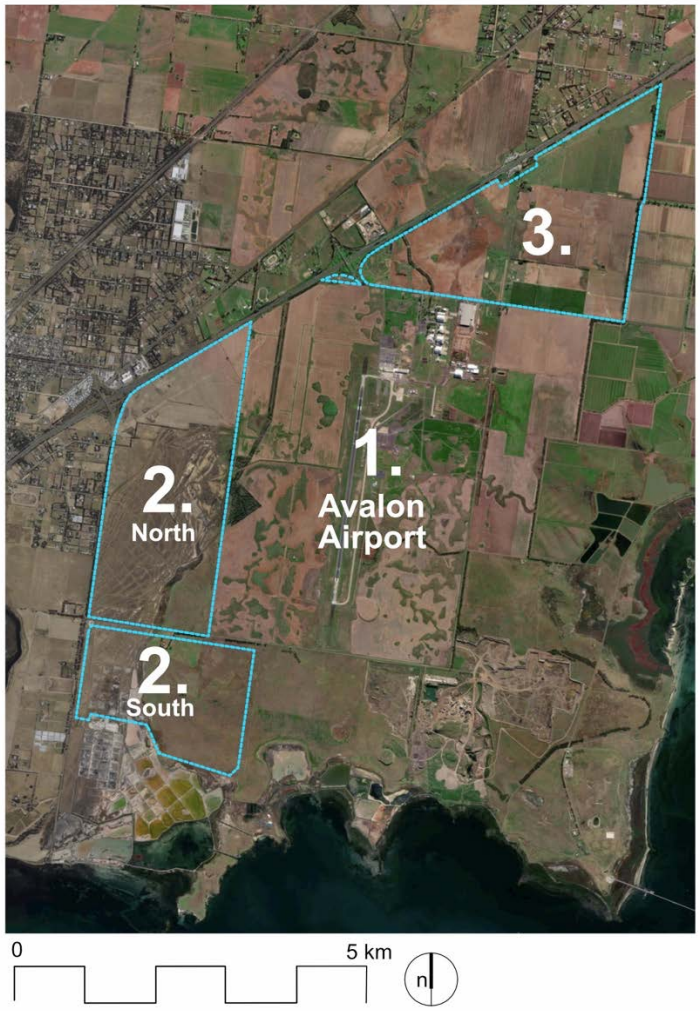


Figure 31 - Precinct locations for viewpoints

Figure 32 - Viewpoint Locations Precinct 2 (Western Precinct) North

Figure 33 - Viewpoint Locations Precinct 2 (Western Precinct) South

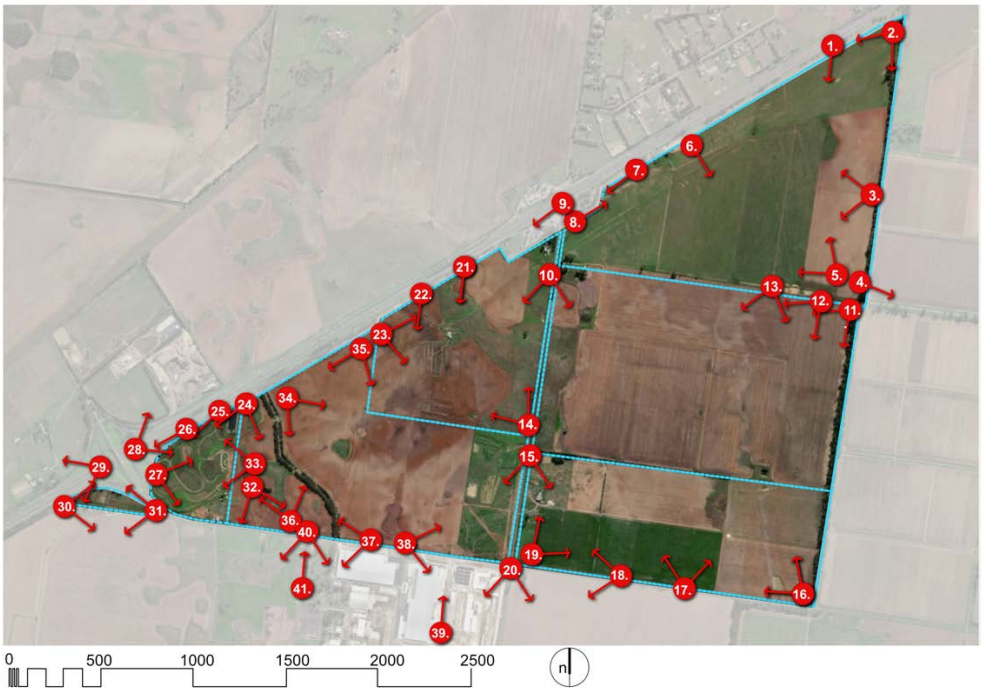


Figure 34 - Viewpoint Locations Precinct 3 (Northern Precinct)

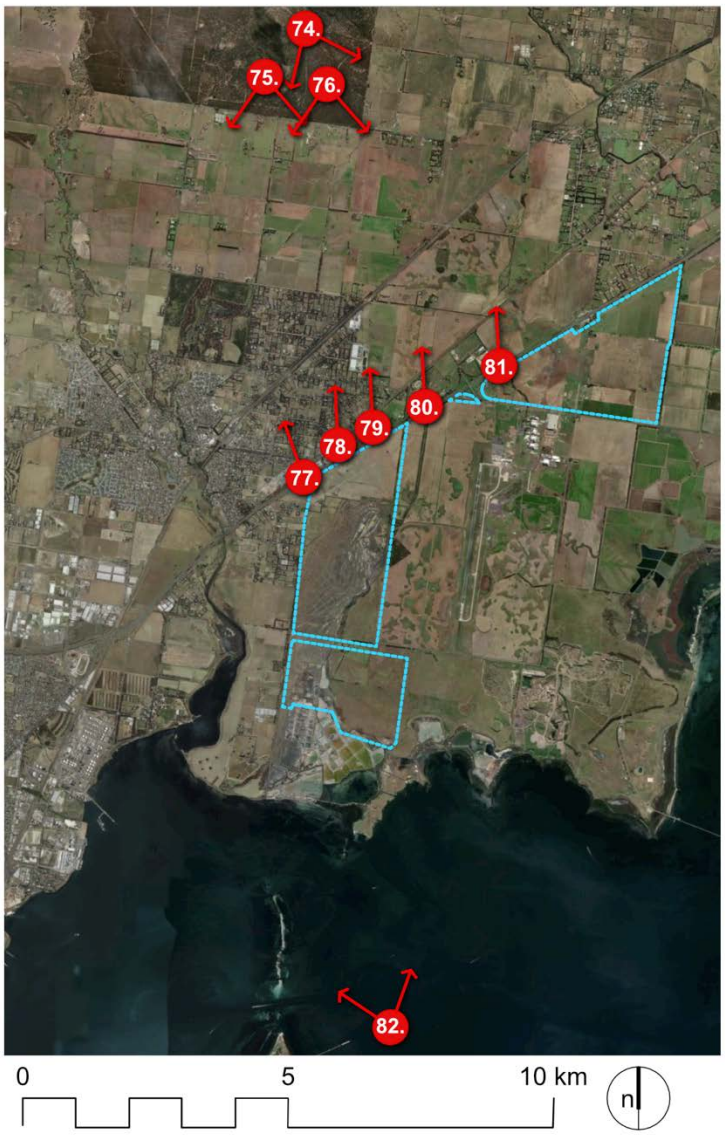


Figure 35 - Viewpoint Locations - Other

Viewpoint 1

Photo Location	Princes Freeway boundary - Precinct 3
Direction	South
Landscape Character Type	Freeway/Agricultural Plains
View Type	Foreground, Middle Ground,
Comments	Low freeway barriers in foreground and scattered trees in middle ground with a windbreak to the left

Viewpoint 2

Photo Location	North-east corner – Precinct 3
Direction	South-west
Landscape Character Type	Agricultural Plains
View Type	Middle Ground
Comments	Windbreak on the left, open paddock with scattered trees

Viewpoint 3

Photo Location	Precinct 3
Direction	West
Landscape Character Type	Agricultural Plains
View Type	Middle Ground, Background
Comments	Windbreak to the left, You Yangs in the distance

Viewpoint 4

Photo Location	Precinct 3
Direction	East
Landscape Character Type	Agricultural Plains
View Type	Middle Ground
Comments	View across Western Road easement to Western Treatment Plant

Viewpoint 5

Photo Location	Precinct 3
Direction	North-west
Landscape Character Type	Agricultural Plains
View Type	Middle Ground, Background
Comments	Dead trees on the left, open paddocks, distant view to You Yangs

Viewpoint 6

Photo Location	Precinct 3– Princes Freeway boundary
Direction	South-east
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with a native windbreak and farm structures in the background

Viewpoint 7

Photo Location	Precinct 3– Princes Freeway boundary
Direction	South-west
Landscape Character Type	Freeway/ Agricultural Plains
View Type	Foreground, Middle Ground
Comments	Low freeway barrier and windbreak planting with gaps along freeway

Viewpoint 8

Photo Location	Precinct 3– Princes Freeway boundary
Direction	North-east
Landscape Character Type	Freeway
View Type	Middle Ground, Background
Comments	Informal freeway rest area with picnic tables

Viewpoint 9

Photo Location	BP Avalon Service Centre – Geelong Bound on Princes Freeway adjoining Precinct 3
Direction	South-west
Landscape Character Type	Freeway
View Type	Middle Ground
Comments	Exit ramp to service centre with Service Station canopy and sign visible framed by native trees

Viewpoint 10

Photo Location	Precinct 3 **-** Pousties Road
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Middle Ground
Comments	Native trees, abandoned homestead and telephone lines on left, and Optus mobile phone tower to right with cypress windbreak

Viewpoint 11

Photo Location	Precinct 3 - north boundary
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Middle
Comments	Mature native tree windbreak to left, open paddocks to right

Viewpoint 12

Photo Location	Precinct 3- north boundary
Direction	West
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Post and wire fence dividing open paddocks to the left and a line of dead trees to the right

Viewpoint 13

Photo Location	Precinct 3- north boundary
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Dam embankment of Property one in the foreground, with post and wire fences and open fields. Native windbreak/ buffer to Western Treatment Plant to left

Viewpoint 14

Photo Location	Property 5
Direction	North-west
Landscape Character Type	Agricultural Plains
View Type	Middle Ground, Background
Comments	Post and wire fence and piled basalt floaters in middle ground and native tree windbreak and You Yangs in background

Viewpoint 15

Photo Location	Precinct 3 -Pousties Road – looking south
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with telephone on the east side of Pousties Road

Viewpoint 16

Photo Location	Precinct 3 - Beach Road boundary at south-east corner of property
Direction	North-west
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open fields with a partial native tree windbreak on the right along the edge of the Western Treatment Plant. You Yangs in the background

Viewpoint 17

Photo Location	Precinct 3 – Beach Road boundary
Direction	East
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open fields and post and wire fence with native tree windbreaks in the background

Viewpoint 18

Photo Location	Precinct 3 - Beach Road boundary
Direction	West
Landscape Character Type	Airport/ Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with Hanwha Armoured Vehicle Centre in background on left

Viewpoint 19

Photo Location	Precinct 3
Direction	North-east
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Post and rail fences, open paddocks and native tree windbreaks in the background

Viewpoint 20

Photo Location	Precinct 3 - Beach Road / Pousties Road intersection
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Middle Ground, Background
Comments	Hanwha Armoured Vehicle Centre to the centre and Petstock warehouse to the right. Telephone lines along the south side of Beach Road and the west side of Pousties Road

Viewpoint 21

Photo Location	Precinct 3 – Princes Freeway boundary
Direction	South
Landscape Character Type	Freeway/Agricultural Plains
View Type	Foreground, Middle Ground, Background
	Low freeway barrier with no vegetation screening, open paddocks in middle ground and buildings in background including Hanwha Armoured Vehicle Centre and Petstock warehouse.

Viewpoint 22

Photo Location	Precinct 3 – Princes Freeway boundary
Direction	South-west
Landscape Character Type	Freeway/ Agricultural Plains
View Type	Foreground. Middle Ground, Background
Comments	Scattered tree planting along freeway boundary, open fields in the middle ground and native tree planting in the background

Viewpoint 23

Photo Location	Precinct 3
Direction	East
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Post and wire fence and open paddocks

Viewpoint 24

Photo Location	Precinct 3
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Posta and wire fence and paved car parking area with scattered native trees

Viewpoint 25

Photo Location	Princes Freeway adjoining Precinct 3
Direction	South-west
Landscape Character Type	Freeway Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Chainwire mesh fence to the left, scattered native trees in the centre, and a low vehicle barrier to the right

Viewpoint 26

Photo Location	Princes Freeway and Beach Road overpass adjoining Precinct 3
Direction	West
Landscape Character Type	Freeway
View Type	Foreground, Middle Ground,
Comments	Broad grassed area between exit ramp and freeway

Viewpoint 27

Photo Location	Beach Road freeway overpass – view to Precinct 3 north-west corner
Direction	South-east
Landscape Character Type	Freeway/ Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	A large area of low shrubs in the middle ground

Viewpoint 28

Photo Location	Princes Freeway north of Precinct 3
Direction	East
Landscape Character Type	Freeway
View Type	Middle Ground, Background
Comments	Princes Freeway with grassed median and areas of native planting either side

Viewpoint 29

Photo Location	Princes Freeway north of Precinct 3
Direction	West
Landscape Character Type	Freeway
View Type	Middle Ground, Background
Comments	Princes Freeway with grassed median and areas of native planting either side

Viewpoint 30

Photo Location	Precinct 3 – north-west comer
Direction	East
Landscape Character Type	Airport/ Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Chainwire fence and bitumen road with scattered trees

Viewpoint 31

Photo Location	Precinct 3 – north-east corner
Direction	West
Landscape Character Type	Airport/Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Chainwire fence and grassed drainage swale and bitumen road with scattered native trees

Viewpoint 32

Photo Location	Precinct 3 – north-west corner
Direction	West
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddock with scattered native trees.

Viewpoint 33

Photo Location	Precinct 3
Direction	East
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open cropped area with scattered native trees and farm buildings in the background

Viewpoint 34

Photo Location	Precinct 3
Direction	West
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with native tree windbreaks on boundaries

Viewpoint 35

Photo Location	Precinct 3
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with native tree windbreaks on boundaries

Viewpoint 36

Photo Location	Precinct 3 from Beach Road near airport entrance
Direction	North-west
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with native tree windbreaks and You Yangs in background

Viewpoint 37

Photo Location	Beach Road south of Precinct 3
Direction	West
Landscape Character Type	Airport/ Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Petstock warehouse and mature native tree planting on left, open paddocks with scattered trees on the right. Telephone line on south side of road

Viewpoint 38

Photo Location	Beach Road south of Precinct 3
Direction	East
Landscape Character Type	Agricultural Plains/Airport
View Type	Foreground, Middle Ground, Background
Comments	Open field with post and wire fence on the left; industrial buildings, vehicle barrier, telephone line and native screen planting on the right

Viewpoint 39

Photo Location	Volplini Court (south of Precinct 3)
Direction	North
Landscape Character Type	Airport
View Type	Foreground, Middle Ground, Background
Comments	Australia Post Parcel Facility on left, light poles on right, Cotton On Distribution Centre at rear

Viewpoint 40

Photo Location	Beach Road at Canberra Drive intersection (south of Precinct 3)
Direction	South
Landscape Character Type	Airport
View Type	Foreground, Middle Ground, Background
Comments	Entrance Road to Avalon in foreground with flags and light poles, with mature trees in background

Viewpoint 41

Photo Location	Canberra Drive - south of Precinct 3
Direction	North
Landscape Character Type	Airport/ Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Entrance Road to Avalon in foreground with flags and light poles. Open paddock with windbreak in background.

Viewpoint 42

Photo Location	Precinct 2 from Princes Freeway
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	View from the Princes Freeway looking across paddock with low vehicle barrier in foreground

Viewpoint 43

Photo Location	Princes Freeway - north of Precinct 2
Direction	South-west
Landscape Character Type	Agricultural Plains / Freeway
View Type	Foreground, Middle Ground
Comments	Freeway barrier in foreground with screen planting (with gaps), open paddocks to left

Viewpoint 44

Photo Location	Avalon Road northwest of Precinct 2
Direction	South-west
Landscape Character Type	Freeway
View Type	Middle Ground
Comments	Vehicle barriers in foreground, open paddocks and light poles in middle ground, mature trees in background

Viewpoint 45

Photo Location	Avalon Road northwest of Precinct 2
Direction	South
Landscape Character Type	Freeway
View Type	Middle Ground, Background
Comments	Low traffic barriers and light poles in foreground, sheds in middle ground, scattered mature trees in background

Viewpoint 46

Photo Location	Precinct 2 North
Direction	South-east
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	View of open paddocks, windbreaks in background

Viewpoint 47

Photo Location	Precinct 2 North
Direction	North
Landscape Character Type	Agricultural Plains
View Type	Middle Ground, Background
Comments	View across paddocks, swampy area in foreground, Windbreaks in background and on right. Riordan Grain Services and Ridley Agriproducts in background with Flinders Peak directly behind.

Viewpoint 48

Photo Location	Precinct 2 North
Direction	East
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Grassy paddocks with post and wire fence to left. Mature trees in background.

Viewpoint 49

Photo Location	Precinct 2 North
Direction	North
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with Riordan Grain Services and mature tree windbreaks in background

Viewpoint 50

Photo Location	Precinct 2 North
Direction	East
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Native windbreak on left and grassy paddocks on right

Viewpoint 51

Photo Location	Precinct 2 North
Direction	South
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with scattered, sparse trees

Viewpoint 52

Photo Location	Precinct 2 North
Direction	North-east
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with post and wire fence and windbreak planting to right

Viewpoint 53

Photo Location	Precinct 2 North
Direction	North-west
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Post and wire fence to the left, open paddock with some standing water on the right. You Yangs in the background

Viewpoint 54

Photo Location	Precinct 2 North
Direction	South-west
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks

Viewpoint 55

Photo Location	Avalon Road north of Coonawarra Road intersection (Precinct 2 North on right)
Direction	North
Landscape Character Type	Former Salt Works / Rural Dwelling
View Type	Foreground, Middle Ground
Comments	Low screening shrubs to left, cultivated plants and large trees on Rural Residential land to right. Telephone line on west site of Avalon Road. Freeway interchange in background

Viewpoint 56

Photo Location	Precinct 2 North - west boundary on Avalon Road
Direction	South
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Dense windbreak of mixed species on left

Viewpoint 57

Photo Location	Avalon Road near Cozens Road intersection
Direction	South-east
Landscape Character Type	Rural Dwelling
View Type	Foreground, Middle Ground
Comments	Cypress tree, telephone pole and post and wire fence in foreground. Grassed fields in middle ground. Pine trees and native trees in background

Viewpoint 58

Photo Location	Precinct 2 North adjoining Avalon Road near Cozens Road intersection
Direction	East
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Native tree windbreak and telephone lines in foreground, open paddocks in background

Viewpoint 59

Photo Location	Cozens Road near intersection with Avalon Road
Direction	East
Landscape Character Type	Rural Dwelling
View Type	Foreground, Middle Ground
Comments	Cypress trees framing limited views to Precinct 2 North

Viewpoint 60

Photo Location	Precinct 2 North
Direction	East
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with sporadic small trees

Viewpoint 61

Photo Location	Precinct 2 North – Avalon Road boundary (north of Dandos Road)
Direction	North/north-west
Landscape Character Type	Agricultural Plains/Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with post and wire fence on left, native tree windbreak on right. Flinders Peak visible on horizon

Viewpoint 62

Photo Location	Precinct 2 North at Avalon Road/Dandos Road intersection
Direction	North
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Boundary planting and bund screen view into Precinct 2 north. Flinders Peak visible on horizon at left

Viewpoint 63

Photo Location	Precinct 2 North southern boundary at drainage line from Dandos Road
Direction	North
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Post and wire fence with gate in foreground, open paddocks with salt-affected area in middle ground with small scattered trees

Viewpoint 64

Photo Location	Precinct 2 North southern boundary from Dandos Road
Direction	North
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Post and wire fence in the foreground, open paddocks in the middle ground and the You Yangs on the distant horizon

Viewpoint 65

Photo Location	Precinct 2 South from Dandos Road on creek alignment
Direction	South
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Post and wire fence in the foreground

Viewpoint 66

Photo Location	Precinct 2 North from south-west corner of site
Direction	Northwest
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Salt pan in foreground – You Yangs in distance

Viewpoint 67

Photo Location	Precinct 2 South on internal road
Direction	North
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Gravel road with post and wire fence on the left and telephone lines on the right, Scattered trees and the You Yangs on the horizon

Viewpoint 68

Photo Location	Precinct 2 South on internal road from crest of hill
Direction	South
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Gravel road with open paddocks either side. Telephone line on the left and post and wire fence on the right. Port Phillip Bay and Bellarine Peninsula in the distance.

Viewpoint 69

Photo Location	Precinct 2 South
Direction	West/Northwest **FIX ARROW**
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with windbreaks in the distance on the left and right, and along the right of the road. You Yangs visible in the background

Viewpoint 70

Photo Location	Precinct 2 South – inside property
Direction	North-east
Landscape Character Type	Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with a windbreak on the left and on the horizon

Viewpoint 71

Photo Location	Avalon Beach
Direction	North
Landscape Character Type	Coastal Fringe / Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Areas of salt water and sand with low coastal vegetation. You Yangs visible in background

Viewpoint 72

Photo Location	Avalon Road
Direction	North
Landscape Character Type	Agricultural Plains / Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Open paddocks with post and rail fence on right. Telephone lines and scattered trees on left side of road. Windbreak and open paddocks on right side of road.

Viewpoint 73

Photo Location	West boundary of Precinct 2 South
Direction	North-east
Landscape Character Type	Former Salt Works
View Type	Foreground, Middle Ground, Background
Comments	Drainage ditch and native tree windbreak in the foreground, open paddocks in the middle ground, and a windbreak on the horizon

Viewpoint 74

Photo Location	You Yangs
Direction	South
Landscape Character Type	Granite Hills / Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Native trees in foreground and a block of native trees on Serendip Sanctuary is in the middle ground. The open paddocks of the subject area are in the background with Port Phillip Bay and the Bellarine Peninsula on the horizon

Viewpoint 75

Photo Location	You Yangs - walking trail to Flinders Peak
Direction	South
Landscape Character Type	Granite Hills / Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Native trees and granite boulders in foreground and open paddocks are visible in front of a block of native trees in Serendip Sanctuary is in the middle ground. The subject area is in the background with Port Phillip Bay and the Bellarine Peninsula on the horizon

Viewpoint 76

Photo Location	Property 5 – Princes Freeway boundary
Direction	South
Landscape Character Type	Granite Hills / Agricultural Plains
View Type	Foreground, Middle Ground, Background
Comments	Native trees and granite boulder in foreground with the treed area of You Yangs Regional Park below. Flat agricultural land with scattered tree fin middle ground. The subject area is in the background with Port Phillip Bay and the Bellarine Peninsula on the horizon

Viewpoint 77

Photo Location	Riordan Grain Services (Lara) from Princes Freeway (East Bound)
Direction	North
Landscape Character Type	Freeway
View Type	Foreground
Comments	Grassy verge of freeway and low barrier with chain wire fence and Riordan Grain Services building behind

Viewpoint 78

Photo Location	Riordan Grain Services (Lara) from Princes Freeway (East Bound)
Direction	North
Landscape Character Type	Freeway
View Type	Foreground, Middle Ground, Background
Comments	Grassy verge of freeway and low barrier with chain wire fence and Riordan Grain Services building behind

Viewpoint 79

Photo Location	Ridley Agriproducts (Lara) from Princes Freeway (East Bound)
Direction	North
Landscape Character Type	Freeway
View Type	Foreground, Middle Ground,
Comments	Grassy verge of freeway and low barrier with chain wire fence and Ridley buildings and silos behind

Viewpoint 80

Photo Location	Princes Freeway (East Bound)
Direction	North
Landscape Character Type	Freeway
View Type	Foreground, Middle Ground, Background
Comments	Grassy verge of freeway and low barrier with chain wire fence, metal fence and Ridley Agriproducts silos and skysign behind, Mature native trees in background

Viewpoint 81

Photo Location	Sycle building on Princes Freeway (East Bound)
Direction	North
Landscape Character Type	Freeway
View Type	Foreground, Middle Ground
Comments	Grassy verge of freeway and low barrier with chain wire fence and Sycle building behind

Viewpoint 82

Photo date: 10/12/2023

Photo Location	Port Phillip Bay (Wilson Split Shipping Channel) from Geelong-Docklands Ferry
Direction	North
Landscape Character Type	Port Phillip Bay / Coastal Fringe
View Type	Foreground, Middle Ground, Background
Comments	Port Phillip Bay in foreground looking across subject site to the You Yangs in the background

Appendix D – Precinct Design Principles – Ecological Considerations

The Existing Ecological Conditions for Greater Avalon Employment Precinct, Avalon, Victoria, Ecology and Heritage Partners Pty Ltd (2024) outlines principles for inclusion at the precinct design level:

"At a broad scale, the following measures should be considered as part of the detailed design process for the future PSP within the GAEP:

- *Retain areas of high conservation value. High value conservation areas are defined as:*
    - *Areas supporting confirmed/suitable habitat for matters of NES and associated buffer areas;*
    - *Patches of native vegetation; and,*
    - *Large trees and scattered trees.*
- *Large areas of native vegetation should be protected in habitat nodes;*
- *Provide a variety of flora and fauna habitats to promote and retain biodiversity;*
- *Undertake habitat creation (i.e. waterways, drainage lines and designated revegetation areas);*
- *Provide linear corridors of vegetation along walking/cycling tracks;*
- *Create linear habitat corridors along waterways/drainage lines/tributaries whilst implementing Water Sensitive Urban Design whilst ensuring no off-site impacts;*
- *Incorporating drainage lines into habitat corridors and open public spaces;*
- *Interpret/educate residents about values of grasslands through signage;*
- *Undertake feral pest animal and plant control;*
- *Retain native trees in urban active and passive open space areas;*
- *Feature waterways/landscaping combination of a series of smaller connected basins rather than one large isolated basin.*
- *Investigate methods to interconnect spaces through Open Space Links to create more complete habitat;*
- *Rehabilitate and protect significant native vegetation;*
- *Ensure stormwater treatment is designed to provide habitat(s) for significant flora and fauna species;*
- *Investigate options to achieve additional canopy coverage on public (open space areas) and private land (residential dwellings* (sic), [Commercial/industrial], nature strips) to achieve urban greening; and
- *Connect biodiversity sites with parks/open spaces so they are separated from development.* (Draft EEC 2024)

Specific Mitigation Measures outlined in the Draft EEC include:

- Protection of Retained Ecological Values
- Creation of Conservation Reserves and Biolinks
- Revegetation and Enhancement [Plains Grassland]
- Habitat Creation

.

Appendix E - Case Studies

Relevant local, national and international case studies were reviewed and summarised that demonstrate incorporation of desired landscape character elements within an urban context that will assist the preparation of the future GAEP. These have been sourced from this study's authors professional experience on sites across the metropolitan region and elsewhere as well as from a review of techniques used in other jurisdictions. These demonstrate projects which have successfully incorporated desired visual character elements into an urban context.

Adelaide Airport Master Plan 2014 (AAMP 2014)

Adelaide Airport sits between the city and the St Vincent Gulf beaches. A key component of the Airport Master Plan of direct relevance to Avalon is in relation to interfaces and amenity:

"Amenity

8. Development will be acoustically treated to suit forecast noise levels from aircraft operations.

9. Enhancement of the visual and environmental quality of Adelaide Airport through: quality buildings of contemporary design;

- *the provision of aesthetic and screening landscaping;*
- *the establishment of landscaped and grassed swales*
- *or detention basins where appropriate on-site stormwater management; and*
- *sustainable development practices.*

10. Development designed and sited to conserve energy and minimise waste.

11. Development located, designed and operated to minimise adverse impact and conflict between land uses, both on the airport and on surrounding areas.

12. The amenity of land and development enhanced with appropriate planting and other landscaping works, using locally indigenous plant species where possible.

13. Development incorporating the principles of water sensitive urban design.

14. Adoption of adequate separation distances between non-aviation and aviation development on airport land, and between development on airport land and off-airport uses, consistent with Airports (Environment Protection) Regulations 1997.

15. A safe, secure, crime resistant environment"

(AAMP 2014p 110)

"Form of Development

6. Development should not be undertaken unless it is consistent with the desired character for the zone.

7. Development may be staged, having regard to infrastructure requirements.

Office Development

13. Office development should provide suitable services and be of a size and scale commensurate to the airport's major business enterprise role, and employ sustainable initiatives suited for the age, scale, size and operational efficiency of the facility.

Industrial Development

14. Industrial development should have an emphasis toward transport and distribution activities, warehousing and storage in appropriate areas, with a focus on interrelationship with aviation, freight, engineering and transport networks, and employ suitable sustainable initiatives such as solar energy, natural light and sunshading as appropriate.

15. Industrial development should be compatible with other industrial developments in adjoining zones or precincts and occur without adverse effects on the health and amenity of occupiers of those adjoining zones or precincts."

(AAMP 2014 p111-112)

Cairns Airport Master Plan 2015

Cairns Airport sits between the city and the mangrove wetlands and beaches. A key component of the Airport Master Plan of direct relevance to Avalon is in relation to scenic amenity:

> ***"3.7.6 Element – Scenic amenity***
> *3.7.6.1 Specific outcomes*
> *(1) Key backdrops and vistas are integrated into development, including:*
> *(a) the adjacent wetlands which provide a unique visual buffer and natural setting to the east/seaward from the airport;*
> *(b) the adjacent Whitfield Range which provide a visually attractive backdrop to the south- west; and*
> *(c) airport infrastructure which provides 'reference points' or 'visual markers' when viewed from the external road network.*
> *(2) Airport Avenue is an important contributor to the arrival experience in tropical Far North Queensland and is reinforced as a scenic route between the airport and the city.*
> *(3) Landscaping treatments reflect the tropical climate of Cairns. Where landscaping is to be provided it complements the airport's important gateway function."*

Vancouver Airport

YVR Land Development Manual Vancouver Airport Authority (2019)

Vancouver International Airport is located on Sea Island in the Fraser River on the edge of Georgia Strait, an arm of the Pacific Ocean. Key components of the Land Development Manual of direct relevance to Avalon is in relation to building and structure heights, landscape planting and wildlife.

> ***"2.1 Building and Structure Heights***
> *The following principles govern the allowable height of buildings and structures:*
> *"Avoiding penetration of Obstacle Limitation Surfaces, which are pre-existing and established to limit the height of objects associated with an aerodrome in order to ensure a required level of safety and current and future usability of the aerodrome;*
> *· Avoiding interference with signals or communications to/from aircraft;*
> *· Protection of telecommunications and electronic systems; and*
> *· Conformance to line of sight requirements for Vancouver International Airport, i.e. avoiding any impact on aircraft navigation.*
>
> ***Landscape/Planting***
> *The landscaping at Vancouver International Airport forms a significant part of the impression a visitor has of our region of Canada. Developers are encouraged to ensure that both a high level of quality and an appropriate consistency are maintained.*
>
> ***2.4.6 Wildlife***
> *During design, consideration must be given to eliminating nesting or roosting areas for birds. Plant material chosen should not provide a food source for birds or other wildlife."*

Industrial Interfaces/settings - Logis

WSUD features such as swales in nature strips add additional planting areas

Streetscape with a built form sleeve with a high-quality façade and streetscape treatment masks larger built form.

Location aerial photo (East Link at left) west of Dandenong Creek which has been reconstructed. Greens Road at centre

Detail location aerial photo south of Greens Road

Wetland with bbq and recreation area is an important element of the site while performing a vital WSUD function

Location – Logis - Dandenong

Logis is a demonstration of an integrated open space network and public realm in an “Eco” industrial estate. The loading and parking areas are located behind office and administrative functions at the front of the property. Water Sensitive Design techniques are employed at the site, street, and estate level. The interface to Dandenong Creek is an attractive open space link. The incorporation/retention of established trees creates a strong placemaking element.

Industrial siting/locational attributes - Merrifield

At full build out it will occupy much of the site with some green “spines” and the wetlands offering some open space opportunities. It is largely built on cleared pasture adjacent to a large retarding basin. Wide streets with footpaths and extensive tree plantings are being implemented across the site, but it still not a pedestrian oriented development at this early stage.

Location aerial photo current state of development (Hume Freeway at right)

Detail location on aerial photo north of Donnybrook Road from project website

Future wetland area is an important element of the site.

Location – Merrifield Business Park – Donnybrook Rd & Hume Freeway

Comments

Merrifield is a large developing business park on the northern fringe of Melbourne. It is over 415 ha in size.

- It has attracted companies requiring large format super lots with access to existing and future major road and rail connections.
- It has high exposure to the Hume Freeway and is near the future Outer Metropolitan Ring Road.
- It is adjacent to a future town centre to the west.
- It provides access to recycled water.

Restoration of creek/wetlands

(Whittlesea 2014)

Findon Creek has been embellished in this location, forming wetlands and a technical drainage function.

(Whittlesea 2014)

A pedestrian bridge has been provided across the creek in this location.

Development fronts the creek separated by local roads.

Aerial of precinct

A network of shared paths is located along both sides of the creek maximising connectivity.

Location

Findon Creek, Hayston Boulevard, Epping North

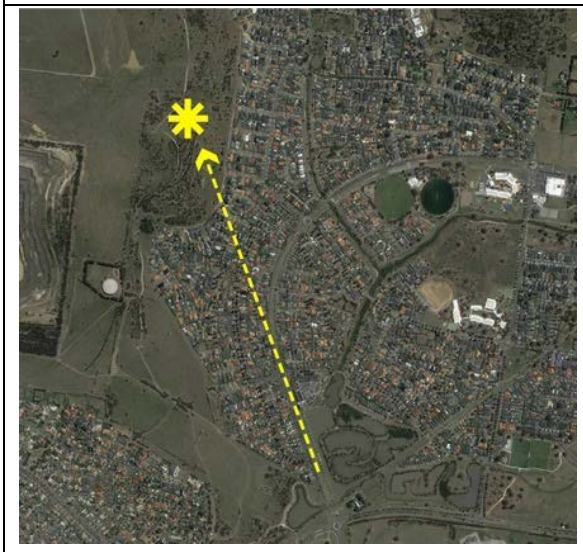
Findon Creek has been embellished at this point by the creation of wetlands and the addition of a BBQ shelter and bridge. River Red Gums have been retained which add to the amenity created around the restored creek.

Comments

A restored creek increases habitat value, provides active and passive recreation and linear movement network and enhanced water quality and urban runoff control. Dwellings and footpaths provide active surveillance to creek.

Streets oriented to maximise views / landmarks – provide orientation

Views have been maximised by aligning streets along significant view lines. In this example the exotic upright poplars further enhance the framed view to the Quarry Hills providing a strong point of orientation.



Aerial of Mill Park Lakes Estate

The designers of Mill Park Lakes Estate have also utilised the topography of the site in the valley at the foot of the Quarry Hills.
The boulevard lines up with one of several highpoints.

Zoom view along Lakes Boulevard to Quarry Hills Regional Park.

Location – Street orientation to views Mill Park Lakes Estate, South Morang

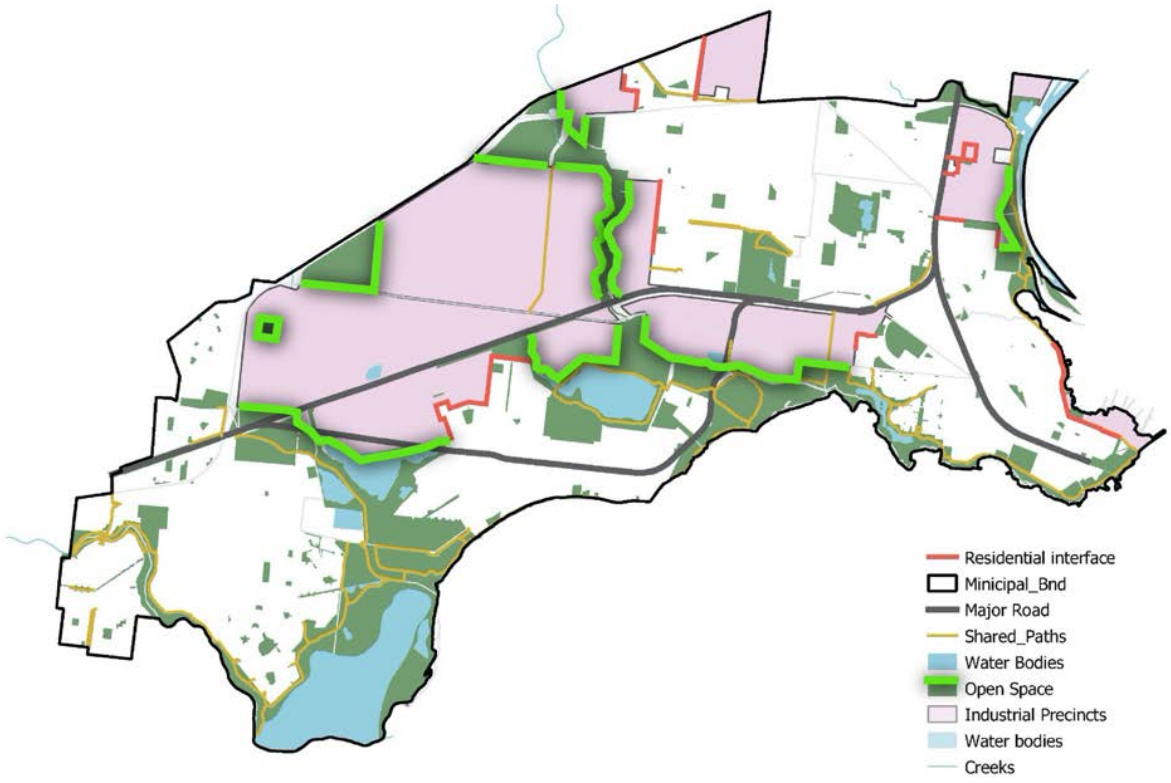
This case study shows how streets can positively interface with open space can be oriented to views – in this case to the landmark Quarry Hills.

Comments

Views to the You Yangs can be highlighted in a similar manner.

Industrial interfaces to areas of environmental significance - City of Hobsons Bay (2024)

Industrial interfaces to areas of environmental significance (grasslands or waterway corridors) In Hobsons Bay City Council (Summary) Background to "*Industrial Design Guidelines 2023-38*"



Conservation / open space/waterway interfaces to industrial map

The City of Hobsons Bay features a unique juxtaposition of industrial areas abutting numerous waterways, significant remnant grasslands and coastal wetlands. This presents challenges for the preservation and maintenance of these natural assets while allowing significant adjacent industrial employment and revenue generation to thrive. These uses are not incompatible and with careful, siting, setbacks and maintenance regimes they can add to the overall amenity and contribute to the civic imagery of the HBCC area.
Development of the guidelines for these significant interfaces included reviews of applications and of important documents including:

- **"*Start with the grasslands - Design guidelines to support native grasslands in urban areas*"** (Victorian National Parks Association 2013)
- "***Waterway Corridors Guidelines for greenfield development areas within the Port Phillip and Westernport Region*"** (Melbourne Water 2013)
- HBCC Biodiversity Strategy 2024-34
- Open Space Strategy 2019-28

Grasslands

The guidelines for retaining native grasslands were based on the principles outlined in *"Start with the grasslands - Design guidelines to support native grasslands in urban areas*", (Victorian National Parks Association 2013) which offers practical

examples of techniques to protect and help amalgamate patches of grasslands into more viable sizes while protecting both the natural assets and adjoining development with appropriate fire and weed control measures. Burning of grasslands for maintenance of biodiversity means that development must consider how it will interface with the grassland area. The guidelines cover use of hardstand, flammable materials and weed control.
From an urban design perspective, built form which engages with a positive interface and takes advantage of the location is encouraged and will also increase active and passive surveillance of the grasslands.

Waterway Corridors – Melbourne Water (2013)

***Waterway Corridors Guidelines for greenfield development areas within the Port Phillip and Westernport Region*". (Melbourne Water 2013)**

The guidelines for protecting waterways were based on the principles outlined in **"*Waterway Corridors Guidelines for greenfield development areas within the Port Phillip and Westernport Region*". (Melbourne Water 2013)** The guidelines site consider the visual and stormwater runoff impacts of development, as well as the advice and guidance of Melbourne Water as the relevant waterway management authority.

Guidelines have been produced to protect biodiversity while also protecting the assets adjacent to water ways from flooding and negative impacts of urban runoff and spread of weeds.

From an urban design perspective, built form which engages with a positive interface and takes advantage of the location is encouraged and will also increase active and passive surveillance of the waterways.

The waterways also form parts of an important open space network for HBCC so adjacent treatments should not restrict public access or impact on the visual amenity.

> "*Minimum standard setback widths - Three standard setback widths apply to existing waterways in the Port Phillip and Westernport region: 20 m, 30 m and 50 m. These setback widths have been defined following a comprehensive review of waterway management science in Australia and worldwide. They provide a balance between achieving river health and biodiversity objectives, providing for recreation and visual amenity and maximising developable land.*

The setback widths apply to both banks and are measured from a setback reference point as shown in Figure 1 (below). The reference point is generally the Top of Bank (break of slope from the river bank to surrounding land) of the waterway. In some cases top of bank may not be easily defined, and an alternative reference point such as a hydraulic measurement may be required instead. Melbourne Water will provide further direction on how to determine and locate the reference point at specific sites as required. Please contact Melbourne Water on 131722 to request this information."

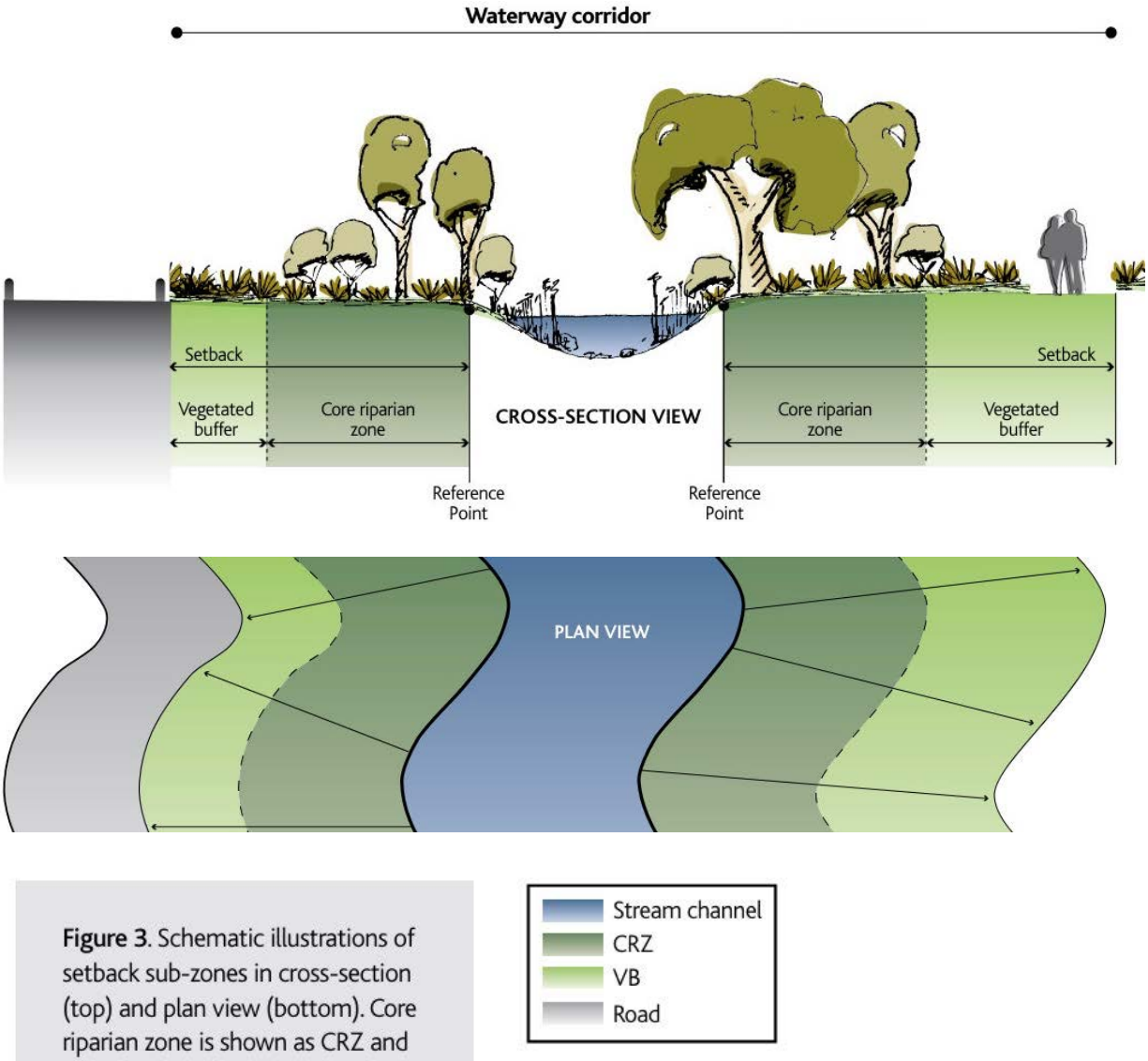


Figure 3. Schematic illustrations of setback sub-zones in cross-section (top) and plan view (bottom). Core riparian zone is shown as CRZ and vegetated buffer as VB.

"Setback sub-zones …, there are two sub-zones within each of the setback widths. The sub-zones have different roles in meeting the overall setback objectives and different activities and infrastructure requirements. The two sub-zones are: • the core riparian zone (CRZ) • the vegetated buffer (VB). The relationship between these sub-zones is shown in Figure 3 The core riparian zone is fully vegetated with native vegetation selected in accordance with the vegetation component of the Healthy Waterways Visions 6 . Depending on various factors such as geographic location, stream form and current condition, the required vegetation type may vary"
(Melbourne Water 2013)

Appendix F - Buffer Separation and Amenity Management

The ACS notes that buffers required for separation of land uses for airport noise and odours from the Western Treatment Plant may be considered as both opportunities and constraints in consideration of Landscape and Visual Impacts. Restrictions on land use may result in limitations on building heights, planting height and species and others.

"Airport Impacts

Avalon Airport has the potential to create amenity impacts through aircraft noise. Aircraft noise is likely to increase in the future as airport operations are expanded to accommodates the possible second and third runways.

Of further relevance, Amendment VC218 (gazetted May 2022) made changes to the VPPs by updating the Planning Policy Framework to further implement the National Airports Safeguarding Framework in Victoria.

***Clause 18.02-7S Airports and airfields** seeks to 'strengthen the role of Victoria's airports and airfields within the state's economic and transport infrastructure, guide their siting and expansion, and safeguard their ongoing, safe and efficient operation.' It contains strategies to protect airports and airfields from incompatible land use and development and lists the current Avalon Airport Master Plan (2015) as a relevant policy document.*
Avalon Airport has yet to submit a revised Master Plan showing its preferred ultimate runway configuration for Commonwealth and Victorian Government approval. Any update to the Master Plan will need to be endorsed by the Commonwealth before Minister for Planning approves a VC amendment to include it in the PPF at Clause 18.02-7S.
Following the preparation and approval of the revised Master Plan, it is recommended that an updated ANEF for the preferred ultimate capacity runway system is adopted into relevant planning schemes and additional controls are pursued, such as:
An Airport Environs Overlay (AEO)
Protections to address other safeguarding matters, such as public safety areas, intrusions into protected airspace and risk of wildlife strike.

Odour Impacts - Western Treatment Plant** (**WTP)

There is potential for odour impacts associated with the WTP. Odour risk during routine operation is generally low due to the large scale of the site and associated buffer distances between treatment plant odour sources and the site boundary. Odour risk increases in association with periodic maintenance activities which can result in complaints. Increasing development encroachment will increase the odour risk profile of the WTP."

(ACS p51)

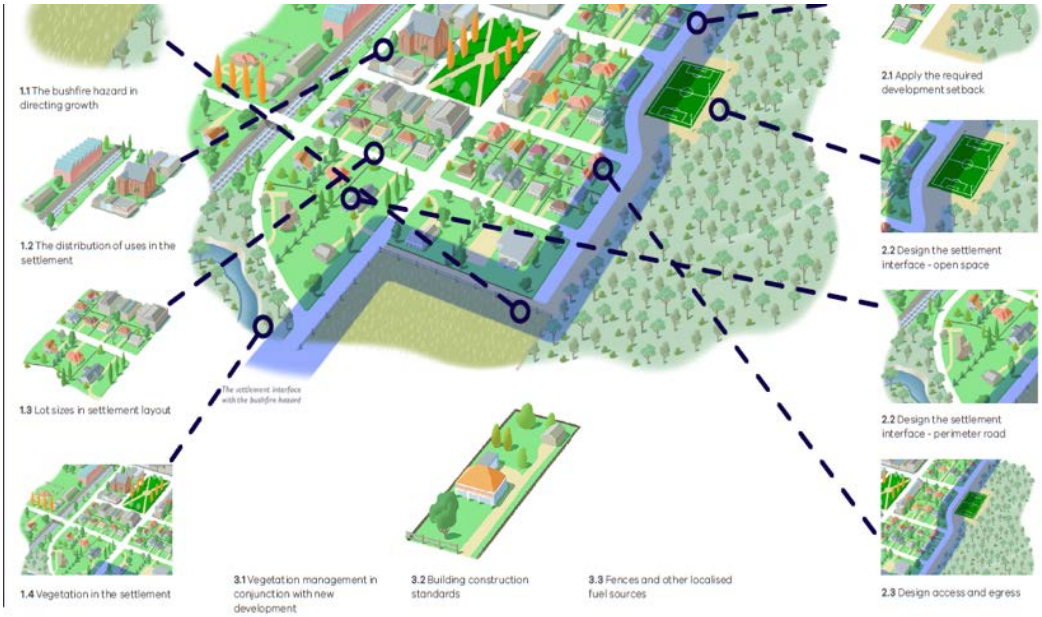
Appendix G - Design Guidelines Settlement Planning at the Bushfire Interface

Department of Environment, Land, Water and Planning July 2020

This is an extract from "*Design Guidelines Settlement Planning at the Bushfire Interface*"
Department of Environment, Land, Water and Planning July 2020

"Bushfire should be considered in the broader planning of the settlement. This enables resilience to be incorporated in the form and structure of the settlement from the outset. Taking these considerations into account early in the settlement planning process optimises implementation along with other settlement planning considerations.

There are four key considerations:
1.1 The bushfire hazard in directing settlement growth
1.2 The distribution of land uses in the settlement
1.3 Lot sizes in settlement layout
1.4 Vegetated areas within a settlement



The settlement interface

Strategic settlement planning should deliver a bushfire ready interface between settlement areas and the bushfire hazard. The purpose of the interface is to create an edge to the hazard where a moving bushfire front will not continue into the settlement. From this edge, development can be setback and designed to mitigate the impacts of bushfire.
There are three key considerations:
2.1 Apply the required development setback
2.2 Design the settlement interface
2.3 Design access and egress
The dynamic nature of bushfire and the unique characteristics of a settlement, including its location in the wider landscape, means that the design considerations are prompts to guide settlement planning. They are to be based on context and analysis at the detailed settlement planning stage.

Perimeter roads

Perimeter roads are the preferred design outcome on the settlement interface and where a site abuts or is near a bushfire hazard. A perimeter road enables a no fuel area to form all or part of the interface. (page 15)

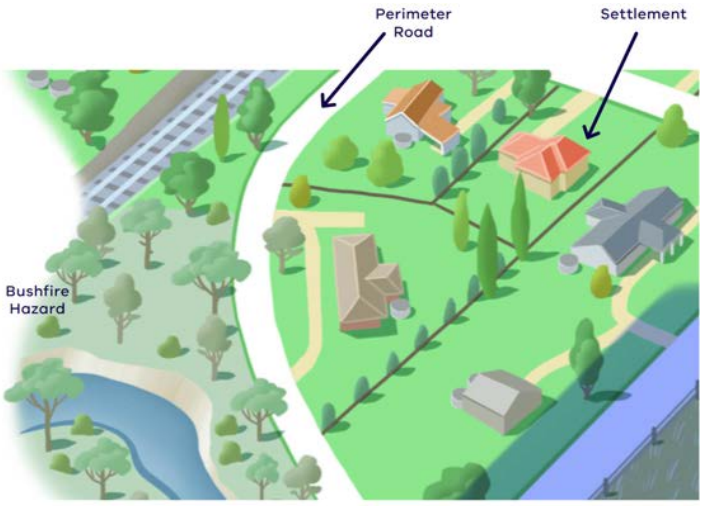


Figure 6: Perimeter roads on the settlement interface

Open space on the settlement interface

Open space can be integrated into the settlement interface and is an important design consideration. Open space excludes buildings that may be permanently occupied (such as houses). (page 16)

Figure 7: Open space in the settlement interface

Setbacks

2.1: Apply the required development setback

New development should be set back from the bushfire hazard. The setback is determined based on the type of vegetation and slope under the vegetation. Permanently occupied development, such as dwellings, are not permitted in the setback area.

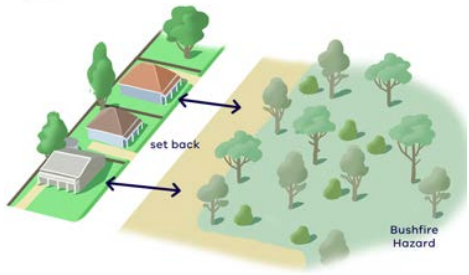


Figure 5: Apply the required setback from the hazard

What setback applies?

Planning scheme provisions specify the setback required between development and the bushfire hazard. The setback varies depending on three factors:

1. Whether the planning proposal forms part of a planning scheme amendment or a planning permit application
2. The type of use proposed - different setback requirements apply for different uses based on the potential vulnerability of future occupants
3. Landscape bushfire considerations where the settlement is subject to Clause 44.06 Bushfire Management Overlay in planning schemes.

It will be important for planning and responsible authorities to identify the setback that applies, using the applicable parts of the planning scheme.

Appendix H - References

Corridor Strategy:

- Avalon Corridor Strategy (2022) Hansen Partnership
- Ecology & Heritage Partners and Cultural Values Assessment (2021) – Unearthed Heritage and Wadawurrung Traditional Owners Aboriginal Corporation

Visual Assessment

- Avalon Corridor Strategy Landscape Character Assessment (2021) - Hansen Partnership
- Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting and design"
- Landscape Character Types of Victoria – with frames of reference for scenic quality assessment Mike Leonard and Richard Hammond
- Google Maps https://www.google.com/maps
- LASSI https://maps.land.vic.gov.au/lassi/
- Map Share https://mapshare.vic.gov.au/mapsharevic/

The Policies, Strategies and Reports reviewed for this report include:

- Precinct Structure Planning Guidelines: New Communities in Victoria, VPA, 2021
- Plan Melbourne 2017-2050, Victorian State Government (2017)
- Melbourne Strategic Assessment Program, Dept Environment Land Water and Planning, (2018)
- Biodiversity Conservation Strategy for Melbourne's Growth Corridors, Dept Environment and Primary Industries (2013)
- Design Guidelines Settlement Planning at the Bushfire Interface
- Department of Environment, Land, Water and Planning July 2020
- The Greater Geelong Settlement Strategy 2020
- DELWP (2018). Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan Summary. Department of Environment, Land, Water and Planning
- (Ecosure (2019) Avalon Airport Environment Strategy 2014-2019, Ecosure, 2014

Reports on the Avalon Precinct for the Victorian Planning Authority

- Arboricultural Assessment and Report, Tree Logic (2023)
- Existing Ecological Conditions for Greater Avalon Employment Precinct, Avalon, Victoria, Ecology and Heritage Partners Pty Ltd (2024)
- Land Capability Assessment, Jacobs (2023)
- Workshop Plans

Other

- Traffic Volumes for Freeways and Highways, Open Data Hub Department of Transport 2023
- Victorian Heritage Database, Heritage Victoria
- Urban Design Guidelines for Victoria https://www.planning.vic.gov.au/policy-and-strategy/urban-design/urban-design-guidelines
- Character Area 2.7 You Yangs, for DPCD Planisphere (2013)
- "AILA (Australian Institute of Landscape Architects) Climate Positive Design - Action Plan for Australian Landscape Architects, Final October 2022
- Avalon Airport Masterplan (2015) Avalon Airport Australia Pty Ltd (AAA)

- Waterway Corridors Guidelines for greenfield development areas within the Port Phillip and Westernport Region Melbourne Water (2013)
- Draft Industrial Guidelines 2023-38, Hobsons Bay City Council 2022
- (TT_Line, 2023) TT-Line Company Pty Ltd Annual Report 2022/23
- Port Phillip Ferries – Our Story at (PPF 2024) www.portphillipferries.com.au/our-story/, accessed 9 May 2024.
- DITRDCA, NASF Guideline G, ,2023, The National Airports Safeguarding Framework
- Solar Energy Facilities Design and Development Guideline, DELWP 2022
- Guideline G: Protecting Aviation Facilities—Communications, Navigation and Surveillance (CNS Department of Infrastructure, Regional Development, Communications and the Arts
- DITRDCA, NASF Guideline C, 2023, The National Airports Safeguarding Framework
- Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports—December 2023 National Airports Safeguarding Framework (NASF), Department of Infrastructure, Regional Development, Communications and the Arts